

Clean Technology Fund (CTF) Investment Plan for Indonesia
Joint ADB, IBRD, and IFC Mission to Indonesia
28 January to 1 February 2013

Terms of Reference

1. Introduction

The Government of Indonesia (GOI) has formally informed the Asian Development Bank (ADB), the International Bank for Reconstruction and Development (IBRD), and the International Finance Corporation (IFC), through a letter dated 12 November 2012 (Annex 1), of their interest to update and revise the Clean Technology Fund (CTF) Investment Plan (CIP) which was endorsed by the CTF Trust Fund Committee in March 2010. The rationale for the proposed changes to the CIP is discussed briefly below. GOI has agreed to host the Joint Mission with ADB as the lead MDB similar to the original CIP from 28 January to 1 February 2013, with the intent to submit the revised CIP for endorsement by March 2013.

2. Country and Sector Context

Indonesia has experienced strong economic growth since 2009, weathering the global financial and economic downturn reasonably well. The sovereign credit ratings are the best since 1997.¹ Gross domestic product (GDP) is projected to grow by more than 6% in 2012, and strong growth is expected for the foreseeable future based on current trends. Energy demand is expected to track GDP growth and greenhouse gas (GHG) emissions will continue to increase unless further large-scale investments are made in low-carbon energy development.

Indonesia's Second National Communication (SNC) to the UNFCCC, released in 2010, projects total GHG emissions to increase from 1,378 million tons of carbon dioxide equivalent per year (MtCO₂e/y) in 2000 (base year) to approximately 2,560 MtCO₂e/y by 2020 under a business-as-usual (BAU) scenario with an average annual growth rate equivalent to 3.7%. Energy-related emissions were approximately 324 MtCO₂e/y in 2000 and 419 MtCO₂e/y in 2005. Consistent with the SNC, the GHG abatement cost curve prepared by McKinsey and Co.² for the National Commission on Climate Change (DNPI) estimates total GHG emissions at 2,134 MtCO₂e/y in 2005 (base year), with energy related emissions estimated at 389 MtCO₂e/y.

The majority of energy-related emissions are from electric power generation, petroleum and gas production, and transport. Emissions from electric power generation may be expected to increase from 110 MtCO₂e/y to 810 MtCO₂e/y under a business-as-usual scenario within the period from 2005 to 2030, due to a higher electricity demand driven by growth in per capita incomes and an increasing dependence on coal. Transport GHG emissions have been likewise projected to increase from 60 MtCO₂e/y to 443 MtCO₂e/y, driven by the rapid growth in the number of personal and commercial vehicles, limited development and utilization of clean fuels, and under investment in mass transport systems. For the petroleum and natural gas sectors, GHG emissions may likely increase in the medium term from 122 MtCO₂e/y in 2005 to 135 MtCO₂e/y in 2020 due to additional refining capacity expected to come online during the period.

¹ For historical ratings, see <http://www.datosmacro.com/en/ratings/indonesia>; accessed on-line on 2 December 2012.

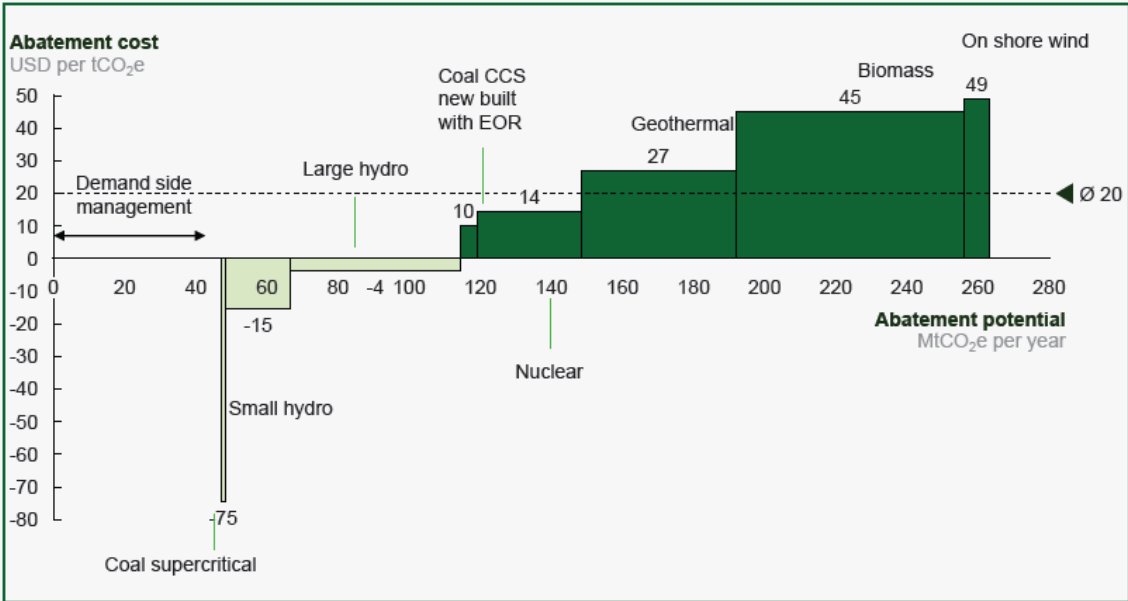
² Government of Indonesia, National Commission on Climate Change (DNPI). 2010. *Indonesia Greenhouse Gas Abatement Cost Curve*. Jakarta.

GOI remains fully committed to its development policy framework for energy security, climate change, environmental management and public health. The general approach and overall objectives for low-carbon development presented in the CIP remain the same. With respect to CTF cofinancing opportunities, the energy sector remains the highest priority with continued emphasis on geothermal power and financial sector transformation for energy efficiency (EE) and small-scale renewable energy (RE) financing.

Figure 1 summarizes the abatement cost curve for the energy sector. Supercritical coal and carbon capture and storage are not being considered for CTF support due to the relatively small scale of abatement potential. Nuclear power is not eligible for multilateral development bank (MDB) funding. Large hydropower is not a high priority as most of the prospective resources are too far from existing transmission networks to be considered economical³ and CTF eligibility is unclear. The substantial opportunities in demand side management and biomass, small hydro and other RE projects are being considered under the financial sector transformation investment programs being developed by ADB’s Private Sector Operations Department (ADB-PSOD) and IFC. Geothermal remains a very high priority for CTF cofinancing due to the additional costs and risks associated with the upfront exploration and resource development; further, geothermal is the best RE resource for baseload power generation.

Figure 1: Energy Sector Opportunities

The power sector could provide approximately 260 MtCO₂e¹ of reduction potential in 2030



¹ Inclusive of demand side reductions in other sectors; currently estimated at 57 TWh

SOURCE: Indonesia GHG Abatement Cost Curve

Note: Demand side management may include buildings, cement, and some transport including electric and hybrid vehicles.

³ According to former ADB Country Director, hydropower economist J. Nugent, most of the prospective large hydro is too far from the grid to be economically viable.

3. GOI Policies and Measures

The policy and sector frameworks and priorities discussed in the original CIP remain in effect (and for the sake of brevity are not repeated here). Since the endorsement of the original CIP, notable changes to the low-carbon development policy framework include the following:

- President Regulation No. 61/2011 - National Action Plan in Reducing Greenhouse Gas Emissions or *Rencana Aksi Penurunan Emisi Gas Rumah Kaca* (RAN-GRK) provides for integrated action plan to reduce GHG emissions in the country, enhance the potential of international funding assistance to Indonesia, and institutionalize national spatial and land use planning. RAN-GRK covers 70 programs for the 26/41% emission reduction plan across several sectors (agriculture, forestry and peat, energy and transport, industry, and waste).
- Presidential Regulation No. 71/2011- National GHG Inventory System provides for the development of a system to periodically update information on the level, status, and trends in GHG emission and absorption effects, including national, and sub-national carbon stock and GHG emission reduction initiatives.
- Presidential Decree No. 4 – Second 10,000MW Fast-Track Program enacted in 2010, the Program aims to increase the generation capacity using RE technologies and resources (geothermal, hydropower, and biomass), as well as increase the participation of the IPPs in cooperation with the GOI and PLN.
- In early 2012, new preferential feed-in tariffs for small biomass power (up to 10 MW per project) were announced: the base price is about \$0.11 / kWh, with additional premiums for outer islands. The new tariff schedule is attractive relative to typical cost of biomass power generation of around \$0.08 – 0.09 / kWh.⁴

Further, GOI intends to improve its public fiscal management by reducing public debt and restraining sovereign guaranteed borrowing from MDB banks and other development partners. With improved sovereign debt ratings (as noted above) public sector entities can raise funds in the market at attractive rates for commercially viable projects, obviating the need for concessional funding of most public sector energy investments. Reducing public debt and public sector borrowing from MDBs further implies that increased private sector investment will be required for infrastructure in general and energy in particular.

4. CTF: Rationale for Revision and Opportunities

The original CIP presented two strategic uses for CTF: (i) scale-up and replication of large-scale geothermal power, through both public and private sector investments; and (ii) acceleration of initiatives to promote EE and smaller-scale RE (particularly biomass cogeneration) through private sector investments. Of the \$400 million endorsed, \$125 million has been approved for an IBRD geothermal power project which is under implementation, \$125 million was allocated for an ADB public sector geothermal project, \$50 million was allocated for private sector geothermal program or projects (with \$25 million each to ADB-PSOD and IFC), and \$100 million was allocated for financial sector transformation for EE and small-scale RE investments (with \$50 million each to ADB-PSOD and IFC). The financial sector transformation programs are under development and are expected to be presented to the TFC for funding approval in 2013. Thus, the remaining \$175 million remains available for geothermal investments.

⁴ Ministerial Decree No. 2/2006 obliges PLN to purchase RE generated electricity from facilities with a capacity falling between 1MW to 10MW and provides for fiscal and non-fiscal incentives.

ADB completed preparation of the proposed public sector geothermal project, but GOI requested deferment of ADB and CTF approval pending further discussion of borrowing modalities. In parallel, ADB-PSOD and IFC have been engaged with various private sector sponsors who are developing about 1,000 MW of new geothermal capacity. Recent MDB scoping missions discussed the possibility of new investment modalities as well as a shift in resources from sovereign guaranteed projects to non-sovereign and private sector projects; such a shift could result in greater leverage of commercial lending by CTF funds than envisioned in the original CIP.

Pursuant to a scoping mission fielded in October 2012 and Aide Memoire dated 25 October 2012, GOI requested a Joint Mission be fielded in early 2013 to review implementation status, discuss possible reallocation within priority sectors, assess the impact of such changes on achieving objectives and targets of the original CIP, and consult with various stakeholders on possible changes to the CIP.

5. Scoping Mission Initial Assessment

The scoping mission's assessment is that (i) the GOI remains committed to low carbon development options, (ii) there is a broad spectrum of opportunities for investment in transformational projects and programs, and (iii) the CTF can play a critical role in supporting investments in low-carbon technologies and systems, especially utility-scale RE including geothermal power.

The MDBs jointly conclude that Indonesia continues to meet the CTF investment guidelines and criteria and that it is timely for a joint mission comprising ADB, IBRD, and IFC to proceed to Indonesia for preparation of the revised CIP.

6. Joint Mission Objectives and Logistics

The joint mission is proposed for 28 January to 1 February 2013 primarily in Jakarta, Indonesia. The objectives of the mission are to: (i) review implementation status of the original CIP, including readiness of all existing components to move forward in a timely fashion; (ii) further assess circumstances and rationale for revising the CIP; (iii) discuss possible reallocation of CTF resources within the existing priority sectors, if necessary, and assessing the impact of such changes on achieving the objectives and targets of the original CIP; and (iv) consult with the Government and other key stakeholders on the proposed changes. A follow-up mission can take place before finalizing the revised IP only if required.

The joint mission will discuss the proposed revised CIP with the relevant government Ministries and other stakeholders including the Ministry of Finance (MOF), the Ministry of Planning (BAPPENAS), the National Council on Climate Change (DNPI), the Ministry of Energy and Mineral Resources, Pertamina Geothermal Energy (PGE), Perusahaan Listrik Negara, the state-owned electricity company (PLN), PT GeoDipa (a geothermal joint venture of PGE and PLN), and private sector developers and investors. The mission will also exchange information and coordinate with other donors engaged in climate change mitigation strategies and implementation.

The proposed estimated budget for the joint mission and completion of the CIP Update is US\$113,500 broken down as follows:

- ADB \$43,500
- IBRD: \$35,000
- IFC: \$35,000

The contact point for the GOI is Mr. Irfa Ampri, Director, Center for Climate Change Financing and Multilateral Policy, Fiscal Policy Agency, Ministry of Finance (irfaampri@yahoo.com). The contact point will be expected to arrange for meetings with key GOI ministries and agencies, convene decision makers to review interim results from the mission, and provide summary briefing and conclusions at Ministerial level.

Contact persons at the MDBs are:

- ADB: Jiwan Acharya, CTF Coordinator (jacharya@adb.org), Don Purka, Principal Investment Specialist (dpurka@adb.org), Pradeep Tharakan, Climate Change Specialist (ptharakan@adb.org)
- IBRD: Gevorg Sargsyan, CTF Coordinator (gsargsyan@worldbank.org), Anh Pham, Senior Energy Specialist (npham@worldbank.org).
- IFC: Joyita Mukherjee, CTF Coordinator (jmukherjee1@ifc.org), Nyoman Yogi, Associate Operations Officer (NYogi@ifc.org),

Annex – 1

Request letter from Ministry of Finance



**MINISTRY OF FINANCE OF THE REPUBLIC OF INDONESIA
FISCAL POLICY AGENCY
CENTER FOR CLIMATE CHANGE FINANCING AND MULTILATERAL
POLICY**

RADIUS PRAWIRO BUILDING 6TH FLOOR JALAN DR. WAHIDIN RAYA NOMOR 1 JAKARTA PUSAT 10710
PHONE : (62 21) 34831676, FAX : (62 21) 34831677; WEBSITE: www.fiskal.depkeu.go.id

Ref: S-217/KF.6/2012

12 November 2012

Ms. Patricia Bliss-Guest
Head, CIF Administrative Unit
CTF Trust Fund Committee
1818 H Street NW
Washington, DC 20433, USA

Subject: Clean Technology Fund (CTF): Revised Investment Plan for Indonesia

Dear CTF Trust Fund Committee members, ✓

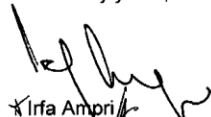
On behalf of the Government of Indonesia (GOI), we would like to express our appreciation for your support on Indonesia CTF Country Investment Plan (CIP) in the amount of \$400 million.

The GOI would like to notify the CTF Trust Fund Committee of its intent to update the CTF Country Investment Plan (CIP) which was endorsed in March 2010. The update is proposed in line with the CTF Guidelines for the Management of Pipelines and Revisions to Investment Plans and will be led by Asian Development Bank (ADB) similar to the original CIP. To this end, GOI would like to invite a joint mission comprised of representatives of ADB, IBRD, and IFC to prepare an update of the CIP with the intent of receiving endorsement of the revised CIP by end March 2013.

The policy and sector frameworks and priorities discussed in the original CIP remain in effect. The energy sector remains the highest priority, with continued emphasis on geothermal power and financial sector transformation for energy efficiency and renewable energy financing. The GOI remains fully committed to its development policy framework for energy security, climate change, environmental management, and public health. The general approach and overall objectives for low-carbon development presented in the CTF Investment Plan remain the same. Transport sector interventions remain a lower priority for a possible second phase of CTF funding in the future.

We look forward to your approval of the update for the CIP and our continuing collaboration for the implementation of these projects. With your continued support and strong partnership, we are expecting a timely and streamlined project preparation and processing, implementation and long-term cooperation with the CTF, World Bank Group, ADB and other stakeholders.

Sincerely yours,


* Irfa Ampri
Vice Chairman

Cc:

1. Chairman, Fiscal Policy Agency, MoF, Indonesia
2. Director, Indonesia Resident Mission, ADB
3. Country Director, Indonesia, WBG

Annex 2

Terms of Reference for Joint MDB mission to Support Revisions of CTF Investment Plan

Pre-mission activities, ongoing or completed

The country teams of ADB, IBRD, and IFC have conducted various desk studies, sector analyses, and project-level feasibility assessments, and have identified sectors and potential projects in Indonesia that meet CTF investment requirements. Short scoping mission of MDBs also took place to discuss the date and TOR for the joint MDB IP Revision mission in January 2013.

Mission objectives, outputs, dates, and composition

The proposed mission dates are 28 January to 1 February 2013 with the following objectives:

- (i) Agree on a strategic-level rationale for the revised CIP which is in line with the GOI strategies for low-carbon development including energy efficiency and renewable energy;
- (ii) Agree on possible reallocation of CTF funds from public to private sector if necessary, and agree on types of priority projects to be included in the revised CIP submitted for CTF financing; and
- (iii) Agree on roles, responsibilities and timeline for finalization of the revised CIP.

Specific mission details

Objectives	Outputs	Dates	Compositions
1. Review implementation status of the original CIP, including readiness of all existing components to move forward in a timely fashion	Status report of original CIP meetings for clarification of GOI mitigation priorities	28-30 January	MDB joint mission team, GOI representatives, project stakeholders
2. Further assess circumstances and rationale for revising the CIP and review MDBs portfolio and pipeline projects that meet CTF criteria	Summary of desk review and discussions with potential project stakeholders	29-30 January	MDB mission team, GOI representative, project stakeholders
3. Discuss possible reallocation of CTF resources within the existing priority sectors, if necessary, and assessing the impact of such changes on achieving the objectives and targets of the original CIP	MDB joint mission Aide-Memoire and draft of Revised CIP	30 January – 1 February	MDB mission team, GOI representatives
4. Consult with the Government, civil society organizations and other key stakeholders on the consultation process and possible changes	Draft of Revised CIP	28-29 January	MDB joint mission team, GOI representatives, private sector representatives, UN agencies and bilateral donors
4. Review of draft Aide Memoire by GOI and discussion with MDB joint mission	Wrap-up meeting	1 February	MDB mission team, GOI representatives

Post mission activities (summary of tasks and timing)

- (i) Consultation on draft revised CIP by mid February 2013
- (ii) Finalization of revised CIP by end of February 2013.
- (iii) Submittal of revised CIP to the Trust Fund Committee in March 2013.

Country institutions involved

Below is the list of institutions that can be involved in mission work:

- Ministry of Finance
- National Planning Agency (BAPPENAS)
- National Council on Climate Change (DNPI)
- Ministry of Environment (MenLH)
- Ministry of Energy and Mineral Resources
- Perusahaan Listrik Negara (PLN, state electricity company)
- Pertamina Geothermal Energy (PGE)
- PT GeoDipa (a geothermal joint venture of PLN and PGE)

Status of coordination with UN agencies and other development partners.

A meeting with all development partners with active programs in climate change, including the UN agencies, will be convened during the mission. Donor agencies in Jakarta regularly convene meetings to exchange information about programs and projects in process.

Annex - 3

CTF Joint Mission Composition and Assignments

Mission member	Agency	Assignment	Expected contribution to mission outputs
1. Jiwan Acharya, Senior Climate Change Specialist	ADB	Co-Mission Leader. Lead preparation and finalization of IP Revision. Provide guidance on CTF procedures. Coordinate consultation with development partners	Ensure completeness and quality of IP. Ensuring consistency of IP with CTF requirements, criteria and modalities. Lead stakeholder consultations.
2. Pradeep Tharakan, Climate Change Specialist	ADB	Coordination of IP development with respect to energy sector status.	Ensure alignment of IP with Country Partnership Strategy for the energy sector, and aligning CTF activities to national priorities in relevant sectors.
3. Don Purka, Principal Investment Specialist (Climate Finance), Regional and Sustainable Development Department	ADB	Co-Mission Leader. Coordination of IP development on ADB side for non-sovereign and private sector projects/programs	Ensure alignment of IP with Country Partnership Strategy for the private sector, and aligning CTF activities to national priorities in relevant sectors.
4. Jackie Surtani, Senior Investment Specialist, Private Sector Operations	ADB	Assist in preparation and finalization of IP with respect to non-sovereign and private sector geothermal projects and financing structures.	Provide analysis/input of ADB's non-sovereign and private sector interventions with respect to CTF criteria and modalities
5. Rainer Hartel, Principal Investment Specialist, Private Sector Operations	ADB	Assist in preparation and finalization of IP with respect to EE/RE financial transformation	Provide analysis/input of ADB's private sector interventions with respect to CTF criteria and modalities
1. Timothy Brown, Natural Resource Economist	IBRD	Support the team on climate change policy and institutional context in Indonesia.	Contribute to IBRD sections of the IP. Participate in discussions with GOI.
2. Anh Pham, Senior Energy Specialist	IBRD	Lead IBRD coordinator for energy	Ensure alignment of IP with Country Partnership Strategy for the energy sector, and aligning CTF activities to national priorities in relevant sectors.
3. Peter Johansen, Senior Energy Specialist	IBRD	Assist in the preparation and finalization of IP with respect to geothermal	Ensure alignment of IP with Country Partnership Strategy for the energy sector, and aligning CTF activities to

		aspects	national priorities in geothermal energy.
4. Xiaoping Wang, Senior Energy Specialist	IBRD	Assist in the preparation and finalization of IP with respect to geothermal aspects	Ensure alignment of IP with Country Partnership Strategy for the energy sector, and aligning CTF activities to national priorities in geothermal energy.
1. Joyita Mukherjee, Principal Operations Officer, Blended Finance Unit	IFC	Lead coordinator for IFC – CTF operations	Ensure completeness and quality of IP. Ensuring consistency of IP with CTF requirements, criteria and modalities.
2. Haruhisa Ohtsuka, Investment Officer, Blended Finance Unit	IFC	Provide guidance on CTF procedures. Contribute to IP sections as required	Ensure completeness and quality of IP
3. Alejandro Perez, Senior Investment Officer	IFC	Assist in revision and update of IP with respect to IFC's private sector geothermal projects and financing	Provide analysis/input about IFC's proposed programs and projects in geothermal
4. Francisco Antonio Lozano, Senior Investment Officer, Financial Markets	IFC	Assist in revision and updating of IP with respect to IFC's EE/RE projects with financial intermediaries	Provide analysis/input about IFC's proposed programs and projects with financial intermediaries
5. Nyoman Yogi, Associate Operations Officer, Access to Finance, IFC Indonesia	IFC	Coordination of financial markets intervention projects of IP on IFC side	Point person on behalf of IFC for the revision of the CIP; Provide analysis/input about IFC's proposed programs and projects with financial intermediaries
6. Nonito Bernardo, Senior Investment Officer	IFC	Coordination of inputs on PPP Advisory	Provide analysis/input about IFC's proposed programs and projects in geothermal

Note: Some mission members specified above may join for only a portion of the mission.

Annex – 4

CTF Investment Plan Budget (US\$)

MDB	Team Members	Total Number of Staff Weeks	Average Staff Week Rate of Team	Total Staff Week Costs	Mission Travel & Subsistence Costs	TOTAL
<i>ADB</i>						
Pre-Mission Mission	5	4	-	-	20,000	20,000
Post-Mission Central Unit costs						
Consultant	1	3	4,500	13,500	10,000	23,500
Sub-Total						43,500
<i>IBRD</i>						
Pre-Mission Mission	4	3		15,000	15,000	30,000
Post-Mission Central Unit costs		1	5,000	5,000		5,000
Sub-Total						35,000
<i>IFC</i>						
Pre-Mission Mission	6	3		15,000	15,000	30,000
Post-Mission Central Unit costs		1	5,000	5,000		5,000
Sub-Total						35,000
Grand Total						113,500