



REQUEST FOR CEO ENDORSEMENT
PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: Market Transformation through Design and Implementation of Appropriate Mitigation Actions in the Energy Sector (MTRE3)			
Country(ies):	Indonesia	GEF Project ID: ¹	5339
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4673
Other Executing Partner(s):	Ministry of Energy and Mineral Resources (MEMR)	Submission Date:	6 May 2016
		Re-Submission Date:	28 Jun 2016
GEF Focal Area (s):	Climate Change	Project Duration(Mos.)	60
Name of Parent Program (if applicable):	➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>	Project Agency Fee (\$):	762,375

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Co-financing (\$)
CCM-2 Promote market transformation for EE in industry and the building sector	<ul style="list-style-type: none"> • Appropriate policy, legal and regulatory frameworks adopted and enforced. • Sustainable financing and delivery mechanisms established and operational. • GHG emissions avoided. 	<ul style="list-style-type: none"> • Energy efficiency policy and regulation in place • Investment mobilized • Energy savings achieved 	GEF TF	802,500	5,300,000
CCM-3 Promote investment in renewable energy (RE) technologies	<ul style="list-style-type: none"> • Favorable policy and regulatory environment created for RE investments. • Investment in RE technologies increased. • GHG emissions avoided 	<ul style="list-style-type: none"> • RE policy and regulation in place • RE capacity installed • Electricity and heat produced from RE 	GEF TF	7,222,500	54,800,000
Total Project Costs				8,025,000	60,100,000

B. PROJECT FRAMEWORK

Project Objective: To support the design and implementation of appropriate climate change mitigation actions in the energy generation and energy end use sectors						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Co-financing (\$)
1. Climate	TA	Prioritized	1.1. Defined and established sectoral	GEFTF	1,816,296	2,100,000

¹Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

Change Mitigation Options for the RE-based Energy Generation and Energy Efficiency.		appropriate mitigation actions in the RE-based energy generation and energy efficiency.	and sub-national reference baselines for RE-based energy generation and for energy efficiency in commercial buildings in pilot provinces. 1.2. Developed and published detailed GHG marginal abatement cost curves for renewable energy and energy efficiency options in the pilot provinces. 1.3. Selected appropriate and prioritized climate change mitigation options that are integrated into national and provincial development plans. 1.4. At least two projects designed, each for the implementation of selected prioritized climate change mitigation actions in RE-based energy generation and energy efficiency in commercial buildings.			
2. Market Transformation through Implementation of Appropriate Mitigation Actions in the RE-based Energy Generation and Energy Efficiency.	Inv	Enhanced and sustainable market diffusion of renewable energy and energy efficiency technologies	2.1. Established Integrated Market Service Center (IMSC) in the pilot provinces. 2.2. Established technical support system for capacity development for local technical service companies on the operation and maintenance of systems or infrastructures employing RE & EE technologies including MRV aspects of projects. 2.3. Implemented improved financing mechanisms for investments in climate change mitigation projects. 2.4. Implemented and operational (2 RE and 2 EE) demo Nationally Appropriate Mitigation Actions (NAMAs) projects (Output 1.3) through public-private partnership and supported by conducive environment for sustainable investment.	GEFTF	4,952,900	54,750,000
3. MRV System and National Registry for Mitigation Actions in the RE-based Energy Generation and Energy Efficiency.	TA	Accurate measurement and accounting of actual GHG emission reductions from mitigation actions in the RE-based energy generation and energy efficiency.	3.1. Improved and operational registry mechanism for climate change mitigation actions in the energy generation and energy end use sectors. 3.2. Developed Measurement, Reporting and Verification (MRV) guidelines and standard methodologies for projects on RE-based energy generation and energy efficiency in commercial building sectors. 3.3 Implemented MRV system for selected appropriate mitigation actions in RE-based energy	GEFTF	873,700	3,150,000

		generation and energy efficiency in commercial building sectors.			
Subtotal				7,642,896	60,000,000
Project management Cost (PMC) ³			GEFTF	382,104	100,000
Total project costs				8,025,000 ⁴	60,100,000

C. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Ministry of Energy and Mineral Resources	Grants	7,000,000
Recipient Government	Ministry of Energy and Mineral Resources	In-kind	1,000,000
Private Sector	PT. Pasadena Engineering Indonesia	Grants	10,000,000
Private Sector	PT. Daun Biru	Grants	40,000,000
Private Sector	PT. Multifab	Grants	2,000,000
GEF Agency	UNDP	Grants	100,000
Total Co-financing			60,100,000

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹: N.A.

¹In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table.

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Co-financing (\$)	Project Total (\$)
International Consultants	115,896	420,000	535,896
National/Local Consultants	1,940,000	1,152,000	3,092,000

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF⁵: N.A

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

The Government of Indonesia (GoI) has enacted a number of sustainable energy policies and regulations in line with the Energy Law. These include, Government Regulation No.79/2014 on National Energy Policy, which sets 2 targets to be by 2025: (a) 23% contribution from renewable energy (RE) in the national primary energy mix; and, (b) average of 1% annual reduction in final energy intensity through

³MC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

⁴ Please refer to Section of the Project Document (Part II, Sec. 11) for the allocation of the GEF budgets for CCM-2 (EE) and CCM-3 (RE) activities.

⁵For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

various energy efficiency and energy conservation measures. The recently issued Presidential Regulation No. 02/2015 on the Medium-term National Development Plan (RPJMN) 2015-2019 also emphasizes the importance of contribution of renewable energy, energy efficiency and access to energy to support the national energy sovereignty agenda. The baseline situation showed 4% contribution of RE in the country's primary energy mix; 500 BOE/IDR billion primary energy intensity; and, 81% electrification ratio. Based on the RPJMN, by 2019 RE will account for 10% to 16% of the country's primary energy mix, and the installed RE-based power generation capacity would be about 7.5 GW. In terms of energy efficiency, the RPJMN targets a primary energy intensity of 472 BOE/IDR billion as manifested by a forecast energy saving of 12.7% compared to a business-as-usual (BAU) energy demand scenario in 2014. Moreover, the target electrification ratio by 2019 is 97%. The other notable regulations include: (a) Presidential Regulation No. 61/2011 establishing a National Action Plan to reduce greenhouse gas emissions (RAN-GRK); (b) Local Action Plan to reduce GHG emissions (RAD-GRK, 2012); and, (c) Presidential Regulation No.71/2011 on establishing a National GHG Inventory. All of these regulations support the GHGs emission reduction framework of Indonesia and reflect the Government's voluntary commitment to reduce GHG emissions by 26% by 2020 through national efforts or by 41% with international assistance. National and local actions both on renewable energy (RE) and energy efficiency (EE) have been prioritized to achieve the set GHG emission reduction targets. The energy and transportation sectors are targeted to reduce 38 million tons of CO₂ by 2020 (26% target emission reduction).

The RAN-GRK and RAD-GRK are working document with recommended climate change mitigation (CCM) actions covering the agriculture, forestry, industry, and transport and energy sectors of the country. Collectively, they are referred to as the compilation of Indonesia's potential NAMAs, in which some of the actions will be implemented as unilateral NAMAs (targeting 26% emission reduction from the business-as-usual GHG emission trajectory in 2020) and as supported NAMAs (targeting additional 15% emission reduction from BAU emission trajectory in 2020). Nonetheless, the suggested CCM actions in these plans are only indicative, without binding commitment and uncertain budget allocations for their implementation. Despite their inclusion in the RAN-GRK or RAD-GRK, there is no assurance that these CCM actions will be funded and implemented. Indonesia had referenced RAN-GRK as basis for development of Indonesia's Intended National Determined Contributions (INDC) that was submitted to the UNFCCC in September 2015. Based on the final draft (2015) of Indonesia's First Biennial Report (BUR) to the UNFCCC, the country's energy sector emits about 512 million tCO₂eq or 32.2% of Indonesia's total GHG emission. There is urgency in the energy sector to take action in reducing the level of GHG emissions by involving all the relevant stakeholders. This proposed project, therefore, will contribute to the formulation of the country's Third National Communication (3NC) to the UNFCCC, as well as the Biennial Update Reports (BURs) particularly for the sections about the energy sector. Furthermore, by supporting market transformation towards the application of renewable energy and energy efficiency technologies, the proposed project is relevant with the aforementioned commitments of the national government.

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.

The project objective is to support the design and implementation of appropriate climate change mitigation actions in the energy generation and energy end use sectors as part of the initiatives to achieve the voluntary GHG emission reduction targets of Indonesia. The expected outcomes from the various components of the project that will contribute to the realization of this objective are in line with the GEF-5 climate change mitigation focal area strategic objective CCM-2 (Outcome 2.2: Sustainable financing and delivery mechanisms established and operational), and, CCM-3 (Outcome 3.1: Favorable policy and regulatory environment created for renewable energy investments, Outcome 3.2. Investment in renewable energy technologies increased, and Outcome 3.3. GHG emissions avoided).

A.3, The GEF Agency's comparative advantage:

The UNDP is acknowledged to have a comparative advantage in implementing energy projects, particularly in providing integrated policy development, human resources development, institutional strengthening and non-governmental and community participation, which are key features of the barrier removal activities of this proposed project. *Ref: Comparative Advantages of GEF Agencies (GEF Council Paper C.31.5.rev.1)*

This project is supported by UNDP because it contributes to the achievement of Outcome: Enhanced capacity of Government of Indonesia (GoI) to manage natural resources and energy as stated in the UNDP-Indonesia Country Program Document 2011 – 2015. It also contributes to the achievement of the UNDP-Indonesia Country Programme Output: Developed policy framework to promote energy efficiency and renewable energy strengthened and renewable energy and energy efficiency roadmap. Globally, the proposed project is strongly aligned with the UNDP-GEF Energy, Infrastructure, Transport and Technology (EITT) Team's Signature Programme 3 (SP-3) on "Access to New Finance Mechanisms", which is aimed at promoting new approaches to leveraging finance for climate mitigation projects and programs, such as sectoral crediting, CDM PoAs and NAMAs. The proposed project is one of a series of similar initiatives UNDP is designing/implementing across the world focused on NAMAs in the energy generation and end-use sectors⁶. Furthermore, UNDP in collaboration with the European Union has been implementing the Low Emission Capacity Building (LECB) Programme in 25 participating countries including Indonesia. The LECB aims to strengthen technical and institutional capacities at the country level, whilst facilitating inclusion and coordination of the public and private sector in national initiatives addressing climate change. It does so by utilizing the global networks and substantial experience that UNDP has established through wide portfolio of projects and programmes across the globe. One of the programme areas of the LECB is the formulation of NAMAs. In Indonesia, LECB is focused on the development of NAMAs in the transport and industry sectors. The proposed project will utilize the expertise, tools and guidelines on NAMA and MRV from LECB in assisting the development of NAMAs & MRVs in the energy generation and energy end use sectors of the country.

The UNDP Indonesia Country Office (CO) assisted the Ministry of Environment and Forestry (MoEF) in developing Indonesia's Second National Communication (2NC) and currently in the formulation of the country 3NC. Both NC formulation projects involved the conduct of GHG inventories and development of climate change mitigation options. It also assisted 4 provinces in the development of their RAD-GRKs and later assisted BAPPENAS in the development of the Monitoring, Evaluation and Reporting guidelines for energy sector. This ongoing involvement in the country's climate change mitigation efforts, as well as the CO's track record of work in the country on the development and implementation of energy projects uphold UNDP's comparative advantage in the development of NAMAs and trusted partner of the MEMR in this field.

A.4. The baseline project and the problem that it seeks to address:

Currently all of the necessary elements for a systematic implementation of climate change mitigation actions under the RAN-GRK and the RAD-GRKs are not in place; the planning, funding and implementation of the various climate change mitigation initiatives (RE and EE) are not only fully defined but also fragmented, and the implementation of the plan actions rely heavily on public funds. At their present form, it is very unlikely that synergies between national and sub-national plans will be realized. In that case, there will only be very limited impacts on the realization of Indonesia's energy-

⁶ An example is the project "Nationally Appropriate Mitigation Actions in the Energy Generation and End-Use Sectors in Peru", approved by the GEF Council in 2012.

based GHG emission reduction targets for 2020 and beyond. In 2010, the Indonesia's National Council for Climate Change (DNPI) has published Indonesia's GHG Abatement Cost Curve for several sub-sectors including that for the power sector⁷. The report gives initial information on the marginal abatement cost (MAC) of various mitigation options in the Indonesian power sector based on prediction of current and future available technologies and project cost from several sample RE and EE projects. However, these initial estimations of climate change mitigation project cost and baseline situation did not take into account the influence of various essential factors such as those relating to geography, infrastructure condition and GHG emissions inventory of project locations. In that case, the developed MAC curves were barely used as reference by the national and local governments in the planning of climate change mitigation actions.

The climate change mitigation projects and programs of the national government, particularly the MEMR as responsible institution in reducing emission in the energy sector based on the RAN-GRK, are implemented through the following baseline programs: (1) Rural Energy Programme (2015-2019, annual budget allocation of about USD 50 million), which aims to increase the country's electrification ratio; and (2) *Program Kemitraan Audit Energi* or Partnership Programme on Energy Audit (2011-2019, average annual budget allocation of about USD 1 million), which facilitates energy efficiency improvements by providing free of charge energy audit services in the industry and building sectors, and for the certification of energy managers. The investment made by the government to promote RE and EE are still dependent on public budget and have not yet successfully leveraged private sector financing. Furthermore, to promote private investment, the country's new administration has emphasized the implementation of an "Integrated Single-Window Policy" and simplification of permitting procedures for mobilizing investments and to increase Indonesia's global competitiveness. The implementation of the system is both at national and sub-national levels, led by the national/sub-national Investment Agency. This is regarded as a good initiative. However, the coordination mechanism between the relevant agencies and effectiveness of its implementation are still weak particularly at the provincial and district levels.

Development partner agencies such as the GIZ, USAID and US-Millennium Challenge Account-Indonesia (MCA-I) have been conducting projects to promote implementation of RE in Indonesia. However, these projects are not always realized or if implemented, are not usually replicable. The non-replication is due to the high grant financing of these projects. The UNDP through the GEF-funded Wind Hybrid Power Generation Market Development Project (WHyPGen) has established cooperation with PT. Sarana Multi Infrastruktur (PT. SMI), a state-owned financing institution, to develop specific financing mechanism for wind power projects in Indonesia. PT. SMI managed USD 300,000 of the project fund as seed funding that was leveraged by PT. SMI in combination with other financing resources to serve as loan guarantee or to reduce interest or other financial requirements thereby reducing the financial risk of wind power project developer/investors. This financial de-risking instrument is still implemented by PT. SMI for wind power projects. The ongoing RE projects supported by other development partners as well as the financing scheme with PT. SMI are among the baseline activities that will be subsumed in the proposed project. Where applicable, these will be further enhanced to realize more positive global environmental benefits through the facilitation efforts that will be carried out under the MTRE3 project.

The registry system for climate change mitigation actions and the MRV agency are still under development by the MoEF. Transitional guidelines for Monitoring, Evaluation and Reporting (MER) for RAN-GRK and RAD-GRK have been developed by the RAN-GRK Secretariat with support from the GIZ and JICA. The MER approach is considered as initial step towards the standardized MRV system. Efforts to upgrade the MER to MRV system and to put in place institutional capacity for its implementation are still lacking.

⁷ http://www.mmechanisms.org/document/country/IDN/Indonesia_ghg_cost_curve_english.pdf

A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

Taking into account the barriers and the baseline situation in the country's energy generation and energy end use sectors, the proposed MTRE3 project will facilitate the realization of the voluntary emission reduction targets as stated in the RAN-GRK (national) and RAD-GRK (sub-national) for the energy generation and energy end use sectors. This will be achieved by establishing the necessary enabling conditions that would make possible the mobilization of the required investments in RE-based power generation and the application of feasible EE technologies in the energy end-use sub-sectors. The proposed project will bring about an alternative scenario wherein the realization of the RE and EE targets in the provinces (at least in the pilot provinces) will be more enhanced and contribute significantly to the achievement of the RAN-GRK and RAD GRK targets. By addressing the identified barriers through the implementation of appropriate incremental barrier removal activities, the expected enhanced mobilization of public and private investment for the implementation of RE and EE projects in the alternative scenario will be realized. The approach will be through NAMA implementation and MRV in 4 pilot provinces. Such approach, which is relatively new in Indonesia for realizing verifiable achievements of RAD-GRK and RAN-GRKs. In this case, the incremental activities would include those that will facilitate or enable the design, financing, and sustainable implementation of the RE and EE projects at pilot provincial level, and their MRV. The proposed project will also develop and update MAC curves to the provincial level by closely working with the country's GHG inventory mechanism and the RAN-GRK and RAD-GRK reporting procedures.

To bring about the alternative scenario, the project will address and remove barriers that are mentioned above particularly in RE-based power generation and energy efficiency technology applications in commercial buildings in Indonesia. The proposed project will make use, and promote best practices in the design and implementation of feasible and cost-effective RE and EE projects at the provincial level (i.e., provincial level NAMAs) and put in place enabling environment for transforming market towards RE and EE investments, which will simultaneously support implementation of mitigation actions covered in the RAN-GRK and RAD-GRK and in so doing adequately meet the country's voluntary climate change mitigation targets of either 26% (national efforts) or 41% (with external assistance) by 2020. Without these incremental activities, the implementation of RE and EE programs in Indonesia will remain fragmented, ad-hoc, highly dependent on limited public budget, and their impacts (in terms of GHG emission reductions) are unverifiable or at best just best estimates.

The summary of activities that will be implemented under MTRE3 project are as follows:

COMPONENT 1: CLIMATE CHANGE MITIGATION OPTIONS FOR THE RE-BASED ENERGY GENERATION AND ENERGY EFFICIENCY	
Outcome 1: Prioritized appropriate mitigation actions in the RE-based energy generation and energy efficiency.	
Output	Activities
1.1. Defined and established sectoral and sub-national reference baselines for the RE-based energy generation and energy efficiency in commercial building sectors in pilot provinces.	1.1.1. Development of data inventory for energy generation, its use, available renewable resource and GIS mapping of potential available resources of RE and its value chain at provincial level
	1.1.2. Development of reference baseline and GHG inventory of the energy sector in four pilot provinces (Jambi, West Sulawesi, East Nusa Tenggara, and Riau pilot provinces)
	1.1.3. Review and improvement of the Local Energy Planning Document (RUED) including RAD-GRK activities in 4 pilot Provinces

	1.1.4. Design and conduct of a capacity building to strengthen Energy Working Group on RAD GRK in 4 pilot Provinces
	1.1.5. Design and conduct of a benchmarking program for Specific Energy Consumption (SEC) or Energy Consumption Intensity (IKE) or Energy Performance Index (EPI) in the commercial buildings sector
1.2. Developed and published detailed marginal GHG abatement cost curves for renewable energy and energy efficiency options in the selected provinces.	1.2.1. Development of Marginal Abatement Cost Curves (MACCs) for applicable climate change mitigation options in 4 pilot provinces
	1.2.2. Conduct of a revamp program for the existing energy demand and consumption data system to support the development of GHG MACCs
	1.2.3. Design, conduct and evaluation of capacity building and awareness activities for the utilization of MACCs
1.3. Selected appropriate and prioritized mitigation options that are integrated into national and provincial development plan	1.3.1. Review of RAD-GRK activities using the MACC results and formulation of recommendations for enhancing the RAD-GRKs
	1.3.2. Mainstreaming RUED into the provincial development plan (RPJMD) of the 4 pilot provinces including updating of the RAD-GRKs and building synergy with RAN-GRK of MEMR
1.4. At least two projects designed, each for the implementation of selected prioritized mitigation actions in RE-based energy generation and energy efficiency in commercial building sectors.	1.4.1. Participatory selection and prioritization of climate change mitigation actions and identification of pilot sites
	1.4.2. Development of 2 NAMA proposals for the selected prioritized RE projects (resulted from Output1.3) as pilot/demonstration climate change mitigation projects.
	1.4.3. Development of 2 NAMA proposals for the selected prioritized EE projects (resulted from Output1.3) as pilot/demonstration climate change mitigation projects.

COMPONENT 2: MARKET TRANSFORMATION THROUGH IMPLEMENTATION OF APPROPRIATE MITIGATION ACTIONS IN THE RE-BASED ENERGY GENERATION AND ENERGY EFFICIENCY

Outcome 2: Enhanced and sustainable market diffusion of renewable energy and energy efficiency technologies

Output	Activities
2.1. Operational Integrated Market Service Center (IMSC) in the pilot provinces	2.1.1. Development of enhanced “Single-Window service” institutional guidelines for streamlining RE and EE investment permitting system at the provincial level.
	2.1.2. Operationalization of the IMSC to support sustainable investment in RE and EE.
	2.1.3. Development of an effective networking and knowledge sharing system with other provinces and with the national government to promote replication of successful pilot projects.
2.2. Established technical support system to provide training for operation and maintenance of RE & EE technologies including MRV aspects of projects to local service companies.	2.2.1. Design and conduct of a technical capacity building program for key stakeholders on RE/EE systems operation, maintenance, and monitoring.
	2.2.2 Development of standards, certification and accreditation of RE/EE technology and service providers.
2.3. Implemented financing mechanism, and supporting activities, to accelerate domestic financial sector investment in climate change mitigation activities	2.3.1. Design and conduct of a capacity building program for domestic financial institutions on risk and investment appraisal for RE/EE financing opportunities.
	2.3.2. Review and recommend broader fiscal and financial sector reforms to promote domestic investment in RE/EE activities.
	2.3.3. Establishment of the Sustainable Energy Fund for financing

	appropriate RE/EE projects.
2.4. Implemented and operational two RE and two EE demonstration NAMA projects (Output 1.3) through public-private partnership modality and supported by conducive environment for sustainable investment.	2.4.1. Evaluation and selection of investment proposals (inclusive of design) for the implementation of RE and EE pilot projects.
	2.4.2. Implementation and operationalization of two RE projects and two EE pilot projects in the 4 pilot provinces.

COMPONENT 3: MRV SYSTEM AND NATIONAL REGISTRY FOR MITIGATION ACTIONS IN RE-BASED ENERGY GENERATION AND ENERGY EFFICIENCY.

Outcome 3: Accurate measurement and accounting of GHG emission reductions from mitigation actions in the RE-based energy generation and energy efficiency applications.

Output	Activities
3.1. Improved and operational registry mechanism for mitigation actions in energy sector.	3.1.1. Development of a “sub-registry” of climate change mitigation actions for energy and energy end use sectors.
	3.1.2. Capacity building for the implementation, monitoring and evaluation of GHG registry mechanism in energy and energy end use sectors.
3.2. Developed Measurement, Reporting and Verification (MRV) guidelines and standard methodologies for RE-based energy generation and energy efficiency in commercial building sectors.	3.2.1: Development of project-level MRV methodology and guidelines for the selected RE/EE pilot projects.
	3.2.2: Development of procedures for GHG Audits that are conducted by third party entities.
3.3 Implemented MRV system for the selected appropriate mitigation actions in RE-based energy generation and energy efficiency in commercial building sectors.	3.3.1. Capacity building on the implementation of the MRV system and certification of GHG Auditors.
	3.3.2. Evaluation of MRV system for the selected RE and EE pilot projects.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

During the project implementation, there are some anticipated risks (e.g., internal or external factors beyond the direct control of the project management and implementation) that might prevent the project objectives from being achieved. These are listed in the table below. These are risks to be viewed in the context of Indonesia in both national and local levels of government. Most of these risks are mainly due to the various levels of understanding of, and attitude towards, the application of RE and EE technologies in the energy generation, and energy end-use sectors of the country.

Risk	Level of Risk	Risk Management
<ul style="list-style-type: none"> Shifting of government energy program priorities leads to reduced technical and budgetary support to ES&L program Poor coordination among line ministries and RE/EE 	Low	<ul style="list-style-type: none"> Government commitment to the project will be clearly established and confirmed through annual budget allocations. PD and PMO will ensure adequate liaison and discussion with MEMR regarding this. Government (national and local) commitment on EE and RE priorities are ensured through the RAN-GRK and RAD-GRKs. Facilitation will be provided to the MEMR to lead the

industry leads to slow policy execution and poor implementation of the program.		coordination of activities on climate change mitigation actions in the energy and energy end-use sectors with other relevant line ministries and sub-national level government agencies.
<ul style="list-style-type: none"> Local government and private sector not participating adequately in the project, due to lack of awareness, interest, disruption to operation and business priorities. Financing of investments for engaging in RE and EE business are not forthcoming or not available. 	High	<ul style="list-style-type: none"> Continuous updating (through the provision of expert advice) of the policies and action plans of the energy sector to ensure sustained promotion of RE and EE initiatives. Continuous review and adjustment of the institutional framework for the implementation of RE and EE projects. Regular capacity enhancement for local governments in the areas of low carbon development and energy-integrated development planning Private sector, professional organizations will be consulted and involved in the annual project work planning; for further enhancement of working relationships to ensure cooperation. Regular policy dialogue between governments (national/local) and private sector in regards RE & EE project development, financing and implementation through private-public partnerships (PPP). BAPPENAS will be involved in the PPP policy dialogues at provincial level. Regular dissemination of information on successful PPP initiatives and mechanisms on RE/EE project development, financing and implementation. Close collaboration with the GBI.
<ul style="list-style-type: none"> Failure of RE and EE products to perform as claimed by manufacturers resulting to customer dissatisfaction. Government is not able to implement and enforce testing procedures and standards on RE/EE equipment production and application 	Moderate	<ul style="list-style-type: none"> Thorough evaluation of the technical and economic performance of RE/EE technologies (and the associated hardware) that will be showcased under the project Strict implementation and enforcement of set performance standards in the country, as well as in the country of origin of the relevant equipment and instruments that will be used in the RE/EE technology application demos. The project includes interventions on strengthening the capacities of government agencies that are mandated to implement and enforce product testing and certification. Government to plan (and implement plan) on the provision, and training on the use, of testing equipment for specific RE/EE appliances/equipment.
<ul style="list-style-type: none"> Climate change hinders full performance of RE technologies due to disturbance to supply of renewable energy resources and impacts of climate events like flood/drought/landslide. Low level of social acceptance by local communities of renewable energy projects due to benefit-sharing issues. 	High	<ul style="list-style-type: none"> Climate factors and climate scenario will be taken into account in the feasibility studies that will be conducted in the potential RE/EE demonstration projects, as well as in the design and engineering of the selected RE/EE technology application demos. The design of the demonstration projects will be as such that climate-related (direct and indirect) risks, including insurance coverage. Free, Prior Informed Consent (FPIC) principle will be implemented for RE projects as part of social and environmental safeguard measure.
<ul style="list-style-type: none"> Unwillingness of private sector to participate in RE and EE investments due to lack of financial support and high initial investment cost 	High	<ul style="list-style-type: none"> The capacities of financial institutions will be strengthened, particularly in the assessment of renewable energy and energy efficiency project proposals. Close collaboration with the banking/financial sector in the design and development of appropriate financing schemes that

<p>leading to failure of the project to induce an increase in market driven RE and EE initiatives.</p> <ul style="list-style-type: none"> • The recent decision of the state-owned utility company (PLN) not to issue PPA for RE-based power generation projects will further increase the uncertainty among the private sector entities in investing in such projects. PLN requested the government to guarantee provision of state budget for the feed-in tariff payments if PLN it is mandated and required to purchase RE-based generated electricity from IPPs. 		<p>are mutually beneficial for the potential clients (e.g., RE/EE project developers/investors) and the bank/financial institution.</p> <ul style="list-style-type: none"> • Close monitoring and evaluation of the implementation of whatever suitable financing instruments that will be developed and promoted by the project. • Provision of up-to-date technology and market information on the economic and environmental aspects of RE/EE technologies. • Assist the government MEMR) in its continuing dialog with all pertinent parties (particularly PLN) in establishing the funding for the feed-in tariff payments, including how this will be made sustainable through the succeeding years.
<ul style="list-style-type: none"> • Capacity (human and institutional) at national and sub-national level is insufficient to make breakthrough for promoting investments in integrated RE/EE projects that need adequate stakeholder coordination. 	Moderate	<ul style="list-style-type: none"> • The establishment of Integrated Market Service Center at provincial level in the selected provinces will address the institutional capacities at the local provincial government. • Adoption of an integrated approach in the strengthening of institutional capacities of designated agencies for the promotion of RE and EE including MEMR personnel. For this purpose, the commitment of the relevant personnel to allocate adequate time and efforts for such capacity building shall be ensured.

A.7. Coordination with other relevant GEF financed initiatives

The MTRE3 project team will coordinate with the owners/developers of relevant GEF-financed RE/EE projects in the country, particularly in the sharing of information that will be used in specific project activities, e.g., formulation and development of NAMA project proposals. It should be noted that during MTRE project preparation stage (PPG exercise), the project development team (PDT) also coordinated with ongoing projects such as the UNDP-GEF Wind Hybrid Power Generation Market Development (WHyPGen) to consider the potential wind power projects (and their respective owner/developer) that were identified by the project, for use in the development of RE NAMA proposals. During the implementation of the MTRE3 project, coordination work will be planned and implemented with the implementers of relevant RE/EE projects in the country for purposes of data/information sharing and exploring synergies in activities implementation. Liaison with the implementers of RE-based power generation and EE technology application projects will be set-up for this purpose, particularly for the development of NAMA proposals. In developing energy efficiency NAMAs, the MTRE3 project team will coordinate with the UNIDO-GEF project on energy efficiency in small-medium industries on the scale up interventions for the identification of potential NAMAs projects in pilot provinces.

Coordination with the project team working on the development of the national MRV system, as well as those working on the preparation of the BURs and 3NC, particularly for the energy and energy end use sectors of the country will be done. Lastly, the MEMR is also implementing a number of related activities such as those on RE/EE Accelerated Roadmap. Inasmuch as the MEMR is the UNDP's implementing partner for the MTRE3 Project, the project team will definitely coordinated with MEMR not only in the

annual planning and implementation of the project activities but also assist in the implementation of the Roadmap.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

During the conduct of the PPG activities, a number of government institutions, financing agencies, energy experts and private sector energy development companies were consulted about the MTRE3 approach and the possible institutional arrangements. The following lists down the stakeholders of the MTRE3 Project and their respective roles:

Role of MTRE3 Stakeholders

Stakeholder	Role
Ministry of Energy and Mineral Resources (MEMR) Directorate General for New and Renewable Energy and Energy Conservation (DG-NREEC) Education and Training Center for Renewable Energy & Energy Conservation (Pusdiklat EBTKE)	As implementing Partner of MTRE3 project in close coordination with the Ministry of Environment and Forestry (MoEF), Ministry of National Development Planning, Ministry of Finance and Ministry of Public Works. MEMR is responsible in enactment of renewable energy and energy efficiency policy and regulation for providing technical assistance in relation to improving energy efficiency and renewable energy measures of energy investment. The training center is a structure within MEMR that is responsible to conduct energy-related education and trainings for government officials in Indonesia.
Ministry of Environment and Forestry (MoEF) Deputy Minister's Office for Climate Change Mitigation and Environmental Damage Control SIGN (<i>Sistem Inventarisasi GRK Nasional</i> / National GHG Inventory System) Center	Lead agency in implementation of MRV scheme for RAN-GRK and will be the focal point for coordinating MRV scheme for energy sector in provinces and HPMP beneficiaries with MTRE3 activities. Lead agency in implementation of National GHG Inventory and will be the focal point for coordinating GHG Inventory for energy sector in provinces.
National Planning Agency (BAPPENAS) Directorate for Environment	Focal point for coordinating NAMAs (Nationally Appropriate Mitigation Actions) framework in Indonesia. MTRE3 project will work closely with BAPPENAS in the implementation of proposed project interventions.
Ministry of Public Works (MPW) Directorate General of Cipta Karya, Directorate of Environment and Building Management	Leading agency for regulation on building code – supporting energy efficiency program for commercial buildings in the proposed project.
Ministry of Finance (MoF) Centre for Policy on Climate Change and Multilateral Financing, Fiscal Policy Office (FPO/BKF)	Leading agency for provision of policies and regulations for financial packages and incentives in supporting RE investment and EE for commercial buildings. MTRE3 project will work closely with MoF in the implementation of Sustainable Energy Fund.
Agency for the Assessment and Application of Technology (BPPT) <ul style="list-style-type: none"> Center for Energy Conversion and Conservation Technology (PTKKE) 	<ul style="list-style-type: none"> Focal point for technical support and recommendation of RE and EE technology for MTRE3 project.

<ul style="list-style-type: none"> Center for Energy Technology Laboratory (B2TE) 	<ul style="list-style-type: none"> Focal point for Laboratory and Test of RE and EE and Energy Auditing for MTRE3 project.
Financial Service Authority (OJK)	Focal points for enabling financial packages in banking sectors and incentives in supporting RE and EE for commercial buildings investments in the proposed project.
Ministry of State-owned Enterprise (BUMN)	Focal points for enabling State-owned Enterprise (BUMN) in banking sectors in supporting RE investment and EE for commercial buildings. MTRE3 project will closely consult with BUMN while mobilizing finance for proposed project interventions.
Local Government	Local government will be partner of MTRE3 in implementing renewable energy and energy efficiency related regulations for energy investment, implementation of energy appropriate mitigation actions and establishment of Integrated Market Service Center.
PT Sarana Multi Infrastructure (PT SMI)	Focal partner for Sustainable Energy Fund supporting RE and EE investments. MTRE3 project will work closely with PT SMI in the implementation of proposed project interventions.
BKPM – Indonesia Investment Coordinating Board	Focal point for investment permit in RE and EE. MTRE3 project will work closely with BKPM to mobilize investments for the proposed project interventions.
RE Project Developers in RE/EE: <ul style="list-style-type: none"> PT. Pasadena Engineering Indonesia PT. Multi Fabrindo Gemilang PT. Daun Biru Engineering 	Association or corporation focusing on RE investment, focal point for project development, engineering, procurement and construction service providers and co-financing partners. MTRE3 project work them closely in the design of project interventions and implementation of demonstration projects. These companies have conducted pre-feasibility study for several potential RE-power projects, which implementation can be supported by results from MTRE activities (i.e. access to financing, streamlined permit, improved feasibility, etc.). The companies are currently sourcing their project financing. The investment for their subsumed project is considered as co-financing to the MTRE3 project.
Building Managers	Individuals or service companies that guide investment decisions on EE and in few cases, focal point for energy efficiency technology implementation in commercial buildings. MTRE3 project work them closely in improving the services they provide.
Green Building Council Indonesia (GBCI)	Association that provides technical assistance, assessment, EE related information, EE standard for commercial buildings. The association will be involved in market development activities under MTRE3 and certification.
Civil Society Organizations (CSOs), Indigenous communities and women groups	CSOs, Indigenous communities and women groups at project locations will be engaged during feasibility assessment and prioritization of RE/EE projects in provinces as part of FPIC process. They will be targeted participants in technical training on RE/EE operation and maintenance. It is expected that employment and local entrepreneurs as service providers can be enhanced from CSOs and local communities.
Development Partners	Development partners are potential to co-finance feasibility study, RE construction/EE instalment and to participate in Sustainable Energy Fund. MTRE3 project work them closely in maximizing the global environmental benefits through accessing additional co-finance.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

The proposed project is expected to bring about the following socio-economic benefits to Indonesia at the national and local levels.

- Clear policy, regulation and institutional framework promoting decentralized, market-based RE and EE in public-private partnership manner, leading to increased number of properly vetted and approved RE/EE projects implemented by the private sector or community-based RE-based power projects through private-public partnerships.
- Increased technical capacity of national and local government officials in planning and prioritization of cost-effective and appropriate RE and EE projects supported by reliable data, leading to more effective planning, budgeting and implementation of public RE/EE projects.
- Increased support for RE and EE project financing that can encourage national project developers/investors to participate in RE/EE investments. More RE/EE project investments and RE/EE projects implemented.
- Increased job opportunities from the implementation of various RE/EE projects.
- Reduced burden of public funding due to more private sector investments in RE/EE projects.
- Easier national government reporting of the verifiable achievement of mitigation commitment to international for a, with the operationalization of registry and MRV system linking sub-national and national level.
- Sustainable rural energy from renewable resources that can stimulate rural socio-economic development.
- Rural households gain access to electricity from RE-based energy systems.
- Enhanced growth of local economy and increase employment from operation and maintenance services business as well as other productive economy benefitted from access to electricity.
- Women gains access to technical knowledge of RE/EE and about operation/maintenance of RE systems. Reduced gender inequality and enhance women's empowerment in rural socio-economic development activities.

B.3.Explain how cost-effectiveness is reflected in the project design:

46.The project is designed to support both national development objectives and contributing to the achievement of global environmental benefits. In the baseline scenario, the level of awareness of decision-makers about the economic and social benefits for promoting RE & EE is not sufficient to lead to substantial RE/EE investments in the country. The MTRE3 project consists of incremental activities that are mainly for removing barriers and creating enabling environments for transforming market toward RE/EE investments, and realize more global benefits from GHG emissions reduction that can be derived from the displacement of fossil fuels for power generation in rural Indonesia, and the widespread utilization of RE and implementation of EE. At the same time the project assists Indonesia in meeting its voluntary emission reduction commitment by 2020.

47.The design of the incremental activities took into account all the relevant baseline activities that are currently being done and those that will be carried out in the country even without the GEF assistance. It also took into consideration the national priorities particularly the increased contribution of RE in the primary energy mix, increase the electrification ratio in rural Indonesia and reducing energy consumption in the country's urban areas. The project involves innovative approaches to de-risking public-private investments such as improved prioritization approach for cost-effective mitigation actions, creation of integrated market service center, streamlining permit system, establishment and operationalization of financing mechanism, and supporting activities, to accelerate domestic financial sector investment in climate change mitigation activities,; and the deployment of a registry and MRV mechanism to better track and confirm the achievement of GHG emission reduction targets.

C. DESCRIBE THE BUDGETED M & E PLAN:

<i>Type of M&E activity</i>	<i>Responsible Parties</i>	<i>Budget (US\$) excluding project staff time; all figures are indicative</i>	<i>Time frame</i>
Inception Workshop (IW) & associated arrangements	<ul style="list-style-type: none"> Project Manager (PM) UNDP CO 	8,000	Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> Project Team UNDP CO 		Immediately following IW
Measurement of Means of Verification of project results (baseline and end-of-project impact study)	<ul style="list-style-type: none"> Project Manager /Executing Agency Project team members 	Included in Project Management	Start, mid and end of project (during evaluation cycle) and annually when required
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> Oversight by UNDP-GEF BRH Technical Advisor and PM Measurements by regional field officers and local IAs 	Included in Project Management	Annually prior to APR/PIR and to the definition of annual work plans
APR/PIR	<ul style="list-style-type: none"> PMU - PM M&E team UNDP CO UNDP-GEF BRH 	0 (included in routine project staff activity)	Annually
Meetings of Steering Committee and relevant meeting proceedings (minutes)	<ul style="list-style-type: none"> PM UNDP CO Regional advisory boards National implementing agency 	5,000	PSC at least once a year, ideally immediately following Regional Advisory Board meetings
Quarterly Operational status reports	<ul style="list-style-type: none"> M&E team 	0 (included in routine project staff activity)	To be determined by Project team and UNDP CO
Technical monitoring, evaluation, and reporting within project components.	<ul style="list-style-type: none"> Project team National and international consultants as needed 	0 (included in routine project staff and counterpart activity)	Continuous, starting from project inception
Midterm Evaluation (external)	<ul style="list-style-type: none"> Project team UNDP CO UNDP/GEF BRH External Consultants (i.e. evaluation team) 	35,000	At the midpoint of project implementation.
Final Evaluation (external)	<ul style="list-style-type: none"> External Consultants (i.e. evaluation team) Project team 	35,000	At the end of project implementation

<i>Type of M&E activity</i>	<i>Responsible Parties</i>	<i>Budget (US\$) excluding project staff time; all figures are indicative</i>	<i>Time frame</i>
	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP/GEF BRH 		
Final Report	<ul style="list-style-type: none"> ▪ External Consultant ▪ Project team ▪ UNDP CO 	(costs included in Terminal Evaluation, above)	At least one month before the end of the project
Compilation of lessons learned	<ul style="list-style-type: none"> ▪ M&E team ▪ Project team ▪ UNDP CO ▪ UNDP/GEF BRH 	16,000	Annually
Financial audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ Project team ▪ External auditors 	Indicative cost per year: 3,000	Yearly @5 years
Achievements and project performance monitoring to field sites	<ul style="list-style-type: none"> ▪ Project Team ▪ GoI ▪ Media ▪ Donors ▪ UNDP CO* ▪ UNDP/GEF BRH* <p><i>* covered by IA fees</i></p>	44,000	Annually or more frequently
TOTAL INDICATIVE COST	(Excluding project team staff time and UNDP staff and travel expenses)	158,000	


PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S) :):

NAME	POSITION	MINISTRY	DATE
Dana A. Kartakusuma	GEF Operational Focal Point and Senior Advisor to the Minister of Environment	Ministry of Environment, Government of Indonesia	02/28/2013

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Adriana Dinu, Executive Coordinator, UNDP-GEF		June 28, 2016	Manuel Soriano, STA- EITT	+66 2304 9100 ext 5048	butchaiah.gadde @undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK

Project Title	Market Transformation through Design and Implementation of Appropriate Mitigation Actions in the Energy Sector (MTRE3)
Project Objective:	To support the design and implementation of appropriate climate change mitigation actions in the energy generation and energy end use sectors
UNDP Integrated Results and Resources Framework 2014-2017 Outputs:	Output 1.5. Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy).
Expected CPAP 2010-2015 Outputs	2.2.1. National energy policies and guideline developed and integrated into sub-national development plan. 2.2.2. Sub-national authorities and key partners are able to implement programmes, mobilize resources and develop public-private partnership for RE/EE, which will contribute to the reduction of national greenhouse gases emission.
Applicable GEF-5 Strategic Objectives:	Climate Change Mitigation Objective-2: Promote Market Transformation for Energy Efficiency in Industry and the Building Sector. Climate Change Mitigation Objective-3: Promote Investment in Renewable Energy Technologies
Applicable GEF-5 Outcomes:	Outcome 2.2: Sustainable financing and delivery mechanisms established and operational. Outcome 3.1: Favourable policy and regulatory environment created for renewable energy investments. Outcome 3.2. Investment in renewable energy technologies increased Outcome 3.3. GHG emissions avoided.

Project Outcomes	Indicators	Baseline	Targets (End of the Project)	Source of Verifications	Critical Assumptions
Objective: To support the design and implementation of appropriate climate change mitigation actions in the energy generation and energy end use sectors	<ul style="list-style-type: none"> • Cumulative CO₂ emissions reduction, tons CO₂ eq • Cumulative energy produced from RE systems facilitated by the project, MWh • Cumulative energy saved from EE in commercial buildings facilitated by the project, MWh • Cumulative volume of public and private investment mobilized for SEF, US\$ million • Cumulative number of additional households (from baseline) having access to electricity in pilot provinces 	<ul style="list-style-type: none"> • 0 • 0 • 0 • 0 • 0 • 0⁸ 	<ul style="list-style-type: none"> • 27,019 • 79,190 • 8,550 • 25 • 80,000 	<ul style="list-style-type: none"> • Report of RAN/ RAD-GRK; Report of Registry and MRV Agency • Annual government expenditure report. • PLN Annual Report, MEMR & ESCOs report. • Project monitoring report, MRV report. 	GOI's commitment to climate change mitigation remains unchanged.

⁸ The baseline value is 2,066,689 households (HHs). This comprise: 511,233 HHs (@ 61% ratio electrification) in Jambi Province; 900,679 HHs (@ 60.8%) in Riau; 132,556 HHs (@ 47%) in West Sulawesi; and, 522,221 HHs (@ 48%) in NTT. Source: PLN Annual Report 2013.

Project Outcomes	Indicators	Baseline	Targets (End of the Project)	Source of Verifications	Critical Assumptions
Component 1: Climate Change Mitigation Options for the RE-based Energy Generation and Energy Efficiency.					
Outcome 1: Prioritized appropriate mitigation actions in the RE-based energy generation and energy efficiency.	Number of provinces with updated sub-national GHG Inventory and GHG Marginal Abatement Cost Curve (MACC) for energy sector	0 ⁹	4	GHG Inventory Report Publication of provincial MACC.	
Component 2: Market Transformation through Implementation of Appropriate Mitigation Actions in the RE-based Energy Generation and Energy Efficiency.					
Outcome 2: Enhanced and sustainable market diffusion of renewable energy and energy efficiency technologies.	Total number of provinces with operational “Integrated Market Service Center” (IMSC) to support sustainable RE & EE investments.	0	4	Annual report of Provincial Investment Agency. Reports from the IMSCs on RE/EE projects that were assisted in development and implementation	Continued commitment of local government officials in supporting IMSCs in their regions (Presidential Regulation No.27/2009).
	No. of small-to-medium scale RE/EE projects that were financially supported by the Sustainable Energy Fund Cumulative amount of funds from the SEF used in financially supporting small-to-medium scale RE/EE projects , US\$ million	0 ¹⁰ 0	10 ¹¹ 25 ¹²	Reports on SEF-financed RE/EE projects Financing agreements for SEF-financed RE/EE projects	
	Cumulative number of NAMAs proposals developed for RE and EE projects in pilot provinces, based on the identified and prioritized RE/EE projects.	1 ¹³	4 (2 RE and 2 EE)	Registry system database/Secretariat of RAN-GRK for submission of NAMAs	Continues support of GOI agencies and partner financing institutions to SEF

⁹ Data in Provincial GHG inventory 2012 are available with MoEF for all 34 provinces in Indonesia; but no sub-national MACC available.

¹⁰ A Letter of Agreement between UNDP/WHyPGen and PT.SMI on financing support for wind power projects was signed in 2013.

¹¹ The average size of the identified demo RE projects for demonstration is below 2 MW.

¹² The SEF is expected to mobilize investments of US\$ 25 million, targeting the MTRE3 demonstration of 15 MW RE-based power generation and energy efficiency improvement projects in commercial buildings with floor area of 50,000m².

¹³ This is a financed-ready NAMA on energy efficiency in buildings developed for the Jakarta City Hall.

Project Outcomes	Indicators	Baseline	Targets (End of the Project)	Source of Verifications	Critical Assumptions
				proposals.	
	Cumulative capacity of RE investment projects implemented, MW	0	15	Reports on approved, financed and implemented RE projects.	Local government continue to consider climate change mitigation as part of local development agenda.
	Cumulative floor area of buildings that were made energy efficient, m ² .	0	50,000	Reports on approved, financed and implemented EE projects.	
Component 3: MRV System and National Registry for Mitigation Actions in the RE-based Energy Generation and Energy Efficiency.					
Outcome 3: Accurate measurement and accounting of actual GHG emission reductions from mitigation actions in the RE-based energy generation and energy efficiency.	No. of registered mitigation actions in energy sector that are endorsed by the MEMR and MoEF.	0	14 ¹⁴	Documents of registered projects Website of Registry system of MoEF.	Continuous cooperation and coordination between provincial and national government agencies.
	Total number of MRV reports submitted to MoEF following nationally agreed standard method and guideline.	0	4 ¹⁵	Submitted MRV reports.	Data availability at local level to support MRV process.

¹⁴ At least 10 small-medium size RE/EE demonstration projects, 2 RE and 2 EE NAMAs

¹⁵ MRV reports for implemented RE and EE NAMAs projects.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

GEFSec Comments (20 June 2016)

Comments & Responses				Reference																						
7. Are the components, outcomes and outputs in the project framework (Table B) clear, sound and appropriately detailed?																										
<p>Comment:</p> <p>a) Please address the disparity between the claimed allocation against CCM-2 in Table A, which covers almost 50% of the resources, and the very low level of emissions benefits estimated to come from energy efficiency. Although co-financing for renewable energy is much higher, the amount of investment in efficiency is still significant. In a revised version, bring Table A, Table B, project activities, and emissions benefits into alignment.</p> <p>Response:</p> <p>Corrections have been made on the total budgets for EE and RE activities in Part I, Sec. A based on the detailed budget of the project activities. The correct CCM-2 budget is US\$ 802,500 or 10% of total GEF funding for the project.</p>				CER Doc: Part I; Sec A.																						
<table><tr><th>Focal Area Objectives</th><th>Trust Fund</th><th>Grant Amount (US\$)</th><th>Co-financing (US\$)</th></tr><tr><td>CCM-2: Promote market transformation for EE in industry and building sector</td><td>GEFTF</td><td>802,500</td><td>5,300,000</td></tr><tr><td>CCM-3: Promote investment in renewable energy (RE) technologies</td><td>GEFTF</td><td>7,222,500</td><td>54,800,000</td></tr><tr><td colspan="2">TOTAL</td><td>8,025,000</td><td>60,100,100</td></tr></table>					Focal Area Objectives	Trust Fund	Grant Amount (US\$)	Co-financing (US\$)	CCM-2: Promote market transformation for EE in industry and building sector	GEFTF	802,500	5,300,000	CCM-3: Promote investment in renewable energy (RE) technologies	GEFTF	7,222,500	54,800,000	TOTAL		8,025,000	60,100,100						
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TOTAL		8,025,000	60,100,100																							
The alignment of the GEF cost figures in tables in Part I; Secs. A and B is as follows:																										
<table><tr><th rowspan="2">Project Component</th><th rowspan="2">Expected Outputs</th><th colspan="2">GEF Funding (US\$)</th></tr><tr><th>CCM-2</th><th>CCM-3</th></tr><tr><td rowspan="4">Component 1: Climate Change Mitigation Options for the RE-based Energy Generation and Energy Efficiency.</td><td>Output 1.1 Defined and established sectoral and sub-national reference baselines</td><td>50,000</td><td>450,000</td></tr><tr><td>Output 1.2 Developed and published detailed marginal GHGs abatement cost curves</td><td>50,000</td><td>450,000</td></tr><tr><td>Output 1.3 Selected appropriate and prioritized mitigation options that are integrated into national and provincial development plan</td><td>31,630</td><td>284,666</td></tr><tr><td>1.4. At least two projects designed, each for the implementation of selected prioritized mitigation actions in RE-based energy generation and energy efficiency in commercial building sectors.</td><td>50,000</td><td>450,000</td></tr><tr><td></td><td>Total Outcome 1</td><td>181,630</td><td>1,634,666</td></tr></table>				Project Component	Expected Outputs	GEF Funding (US\$)		CCM-2	CCM-3	Component 1: Climate Change Mitigation Options for the RE-based Energy Generation and Energy Efficiency.	Output 1.1 Defined and established sectoral and sub-national reference baselines	50,000	450,000	Output 1.2 Developed and published detailed marginal GHGs abatement cost curves	50,000	450,000	Output 1.3 Selected appropriate and prioritized mitigation options that are integrated into national and provincial development plan	31,630	284,666	1.4. At least two projects designed, each for the implementation of selected prioritized mitigation actions in RE-based energy generation and energy efficiency in commercial building sectors.	50,000	450,000		Total Outcome 1	181,630	1,634,666
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	Total Outcome 1	181,630	1,634,666																							

Comments & Responses				Reference
2. Market Transformation through Implementation of Appropriate Mitigation Actions in the RE-based Energy Generation and Energy Efficiency.	Output 2.1 Established Integrated Market Service Center in the pilot provinces	100,000	900,000	
	Output 2.2 Established technical support system to provide training for operation and maintenance of RE & EE technologies including MRV	85,290	767,610	
	Output 2.3 Implemented improved financing mechanisms for investments in the climate change mitigation projects	270,000	2,430,000	
	Output 2.4 Implemented and operational pilot testing of two RE and two EE investments	40,000	360,000	
	Total Outcome 2	495,290	4,457,610	
3. MRV System and National Registry for Mitigation Actions in the RE-based Energy Generation and Energy Efficiency.	Output 3.1 Improved and operational registry mechanism for mitigation actions in energy sector.	25,000	225,000	
	Output 3.2 Developed Measurement, Reporting and Verification (MRV) guidelines and standard	25,000	225,000	
	Output 3.3 Implemented MRV system for the selected appropriate mitigation actions	37,370	336,330	
	Total Outcome 3	87,370	786,330	
Project Management Cost		38,210	343,894	
TOTAL		802,500	7,222,500	
Direct Emission Reduction (tCO2 eq)		45,600	5,108,832	
Unit Abatement Cost		17.60	1.41	
Comment: b) Please confirm if this project is registered as a NAMA activity with the UNFCCC and properly shows the full GEF investment amount.				
Response: The work on getting this proposed GEF project registered as a NAMA activity with the UNFCCC is ongoing. Currently, the endorsement from the Indonesia UNFCCC Focal Point is being sought. The recent abolishment of the National Council for Climate Change as per the Presidential Regulation 16/2015 has caused the delay in getting the UNFCCC Focal Point endorsement. This development also led to the transfer of the authority as focal point for UNFCCC negotiations to the Ministry of Environment and Forestry (MoEF). The new UNFCCC Focal Point based in the MoEF, is still figuring out how to endorse UNDP as a NAMA project developer and how to endorse the registration of this project as a NAMA activity. Discussions regarding these issues within the MoEF are scheduled to take place in July/August 2016. Nevertheless, the UNDP and the project implementing partner will closely coordinate with the MoEF on this, and will ensure that the full GEF investment amount will be reflected in the registration application.				
8. (a) Are global environmental/ adaptation benefits identified?				
Comment: a) Emissions reductions of 5 million tCO2e are expected from direct and post project direct				

Comments & Responses	Reference																
<p>investments; and additional 1-15 million tCO₂e indirect emissions benefits are estimated, for a total estimate, using conservation assumptions, of 6 million tCO₂e. However, the emissions benefits for efficiency are out of proportion to the investment amount. Please clarify this disparity. Consider applying the GEF/STAP energy efficiency methodology to confirm the emissions estimate (available at https://www.thegef.org/gef/pubs/STAP/Methodologyfor-Calculating-GHG-Benefits-of-GEF-EnergyEfficiency-Projects-v.1)</p> <p>Response: The estimation of the GHG emission reductions from the energy efficiency interventions followed the GEF/STAP methodology. Out of 5 million tCO₂ expected direct and direct post project CO₂ emission reductions, only 45,600 tCO₂ are from energy efficiency initiatives that will be directly supported by the GEF project as demos, and from energy efficiency projects whose design will be assisted by the project but will be implemented by their developers/owners after the completion of the GEF assistance. The rest of the expected GHG emission reductions will come from renewable energy investments that will be directly supported by the GEF project as demos, as well as those that will be provided technical assistance during their design/planning stages and will be implemented after the completion of the GEF project.</p> <p>Thank you for pointing out the inconsistency between the CO₂ emission reductions from the EE interventions and the incorrect amount of GEF budget for the CCM-2 in Part I; Sec. A. This has now been corrected, and the resulting conservative estimate of the unit abatement cost (UAC) is about 17.6 GEF US\$/ton CO₂. Considering the anticipated consequential CO₂ emission reductions, the UAC can range between 3.3 to 5.9 GEF US\$/ton CO₂.</p> <p>One would note that bulk of the investments are on renewable energy interventions. This is mainly due to alignment with the Indonesian government's conservative target for energy efficiency in the buildings sector - 20% reduction in the sectoral specific energy consumption (SEC) reduction from the baseline in 10 years.</p> <p style="text-align: center;">EXPECTED CO₂ EMISSION REDUCTIONS ATTRIBUTED TO THE MTRE3 PROJECT</p> <table border="1" data-bbox="191 1236 1243 1541"> <thead> <tr> <th data-bbox="191 1236 1065 1268">Summary Project Contribution to GHG Emission Reduction (tCO₂ eq)</th><th data-bbox="1065 1236 1243 1268"></th></tr> </thead> <tbody> <tr> <td data-bbox="191 1268 1065 1310">Direct Project Emissions Reduction, tCO₂</td><td data-bbox="1065 1268 1243 1310">1,289,846</td></tr> <tr> <td data-bbox="191 1310 1065 1352">Direct Post Project Emissions Reduction, tCO₂</td><td data-bbox="1065 1310 1243 1352">3,864,586</td></tr> <tr> <td data-bbox="191 1352 1065 1394">Total Direct Project and Post Project (over their useful lifetime), tCO₂</td><td data-bbox="1065 1352 1243 1394">5,154,432</td></tr> <tr> <td data-bbox="191 1394 1065 1436">Consequential Emission Reductions (BU Approach), tCO₂</td><td data-bbox="1065 1394 1243 1436">15,417,696</td></tr> <tr> <td data-bbox="191 1436 1065 1478">Consequential Emission Reduction (TD Approach), tCO₂</td><td data-bbox="1065 1436 1243 1478">1,440,000</td></tr> <tr> <td data-bbox="191 1478 1065 1520">Overall GEF Finance</td><td data-bbox="1065 1478 1243 1520">8,025,000</td></tr> <tr> <td data-bbox="191 1520 1065 1541">Overall Unit Abatement Cost Reduction, GEF US\$/tCO₂</td><td data-bbox="1065 1520 1243 1541">1.56</td></tr> </tbody> </table>	Summary Project Contribution to GHG Emission Reduction (tCO ₂ eq)		Direct Project Emissions Reduction, tCO ₂	1,289,846	Direct Post Project Emissions Reduction, tCO ₂	3,864,586	Total Direct Project and Post Project (over their useful lifetime), tCO₂	5,154,432	Consequential Emission Reductions (BU Approach), tCO ₂	15,417,696	Consequential Emission Reduction (TD Approach), tCO ₂	1,440,000	Overall GEF Finance	8,025,000	Overall Unit Abatement Cost Reduction, GEF US\$/tCO₂	1.56	<p>ProDoc: Annex B</p>
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<p>11. Does the project take into account potential major risks, including the consequences of climate change, and describes sufficient risk mitigation measures? (e.g., measures to enhance climate resilience)</p> <p>Comment: There are many activities ongoing in Indonesia. Please address the risk that after significant delay, the project components are overtaken by events and will no longer be productive.</p> <p>Response: After significant delay in the development of the proposed GEF project, the risk ratings of two previously identified medium level risks have to be adjusted. These are:</p> <ul style="list-style-type: none"> • Risk of shifting of government energy program priorities – The risk level has changed to Low. 	<p>CER Doc. Part II, Sec. A.6</p> <p>ProDoc: Para</p>																

Comments & Responses	Reference
<p>The MEMR received approval from the House of Representative during the state budget revision period for 2016 to allocate about U\$ 61 million for Energy Resilience Fund, which would boost the implementation of its renewable energy program.</p> <ul style="list-style-type: none"> • Risk of unwillingness of private sector to participate in RE investments – The risk level has been changed to High. The recent decision of the state-owned utility company (PLN) not to issue Power Purchase Agreement (PPA) for renewable-based power generation projects will further increase the uncertainty among the private sector entities in investing in RE-based power generation projects. PLN requested the government to guarantee provision of state budget for the feed-in tariff payments if PLN it is mandated and required to purchase RE-based generated electricity from IPPs. <p>The MTR3E project will assist the government MEMR) in its continuing dialog with all pertinent parties (particularly PLN) in establishing the funding for the feed-in tariff payments, including how this will be made sustainable through the succeeding years. This risk management measure has been incorporated into the project risk log.</p>	45; Items 1 & 5.
15. Has the cost-effectiveness of the project been sufficiently demonstrated, including the cost-effectiveness of the project design as compared to alternative approaches to achieve similar benefits?	
<p>Comment: Please address the point in questions 7 and 8.</p> <p>Response: Please refer to the above responses to Questions 7 & 8.</p>	
26. Is CEO endorsement/approval being recommended?	
<p>Comment: Not at this time. Please address comments in boxes 7, 8, and 11.</p> <p>Response: The project proponents have adequately responded to the comments under Questions 7, 8 and 11, and are now looking forward to the favorable endorsement of the project by the GEF CEO.</p>	

Comment and Response	Reference
STAP Comments, October 07,2013	
<p>Comment:</p> <p>1. <i>The scope is too broad for a large country such as Indonesia. It would have been better if the focus was on one of the major sectors to enable market development with adequate resources.</i></p> <p>Response:</p> <p>The main idea behind the project is to enable the design and implementation of appropriate climate change mitigation actions particularly application of renewable energy (RE) and energy efficiency (EE) technologies, for fossil fuel consumption displacement/or reduction, and ultimately GHG emission reduction. While RET applications can be done in various energy end use sectors, these interventions produce more significant impacts (in terms of fossil fuel consumption reduction, and GHG emission reduction) in the energy sector (particularly power generation). Hence, the decision to consider the energy sector. Energy efficiency technology applications can also be carried out in the energy generation sector (particularly in energy guzzling fossil fuel-fired power generation facilities). However, considering the fact that this particular</p>	ProDoc: Part II, Section 5, Footnote 8.

<p>segment of the energy generation sector is not an area supported by GEF, the decision of the project proponents was to work on the energy end-use sector that would appreciate better the application and benefits of EE technologies, particularly for EE promotion and advocacy purposes. Hence, the focus on commercial buildings for showcasing the design, planning, engineering, installation and operation of systems that improve the energy utilization of commercial building facilities/services.</p> <p>While the coverage may appear to be wide (energy and energy end-use sectors), in reality, the project focuses only in 2 major segments of this combined sector, electric power generation and commercial buildings. The general idea is to demonstrate the sustainable and cost-effective application of RE and EE technologies in these 2 sub-sectors for purposes of replication in other provinces in Indonesia. The approaches, strategies, and methodologies that were applied in the RE-based power generation demos that will be implemented may also be adopted in other energy generation projects (e.g., steam generation). The energy efficiency improvement projects can also be replicated, or the approaches/methodologies can also be adopted in other EE projects in the other end-use sectors. Lastly, the enabling conditions that will be facilitated by the project to support RE and EE project implementation are actually not only meant for the energy generation sub-sector and for commercial buildings, but are intended to be applied (perhaps with some modifications) in other energy end-use sectors in the country.</p>	
<p><u>Comment:</u></p> <p>2. <i>Market transformation through implementation of mitigation actions in the energy sector is too ambitious. It is better to focus on a few selected sectors and attempt market development.</i></p> <p><u>Response:</u></p> <p>The level of ambition for market transformation that is to be achieved by the project is based on earlier studies done in Indonesia by the MEMR, the national utility PLN, IPPs, and from previous donor-supported studies in the electricity sector of the country. Considering the Medium-term National Development Plan (RPJMN) 2015-2019, the Action Plans to reduce GHG emissions RAN-GRK (national) and RAD-GRK (local); and the development plan of PLN (RUPTL), the project proponents determined what the country's electricity sector is currently doing and planning to do, in addressing the need to reduce GHG emissions from power generation. Whatever must be done, and can realistically be done in the energy sector to transform it to a sector that has significantly lower carbon footprint, but cannot be done without assistance (in this case from the GEF) are the ones that the project proponents ambition to at least facilitate through the MTRE3 Project. Yes, transforming the energy sector through implementation of climate change mitigation actions is ambitious. But this transformation can be facilitated and that is what the MTRE3 project seeks to achieve, with a view that with the conducive enabling environment that will be created, eventually the aspired market transformation is achieved. Please refer also to the response to Comment 1.</p>	
<p><u>Comment:</u></p> <p>3. <i>The project also aims at designing two projects for implementation for each of the prioritized mitigation actions. It's not clear whether both renewable energy an energy efficiency projects will be selected for each of the mitigation actions? How many mitigation actions would be selected? Even two projects for each major mitigation action could be too large for a single project to achieve and too small for a large country such as Indonesia.</i></p>	

<p><u>Response:</u></p> <p>The climate change mitigation actions that will be selected and considered for development and implementation are among the potential RE and EE projects that were identified in previous projects of the MEMR and to some extent by the provincial governments. At least 10 small-to-medium scale RE/EE projects is expected to be supported by the established SEF. In addition, there will be two RE and two EE projects that will be selected and will be further developed as NAMA projects (provincial or national level NAMAs projects) that are ready for financing. The selection of the projects will be based on a set selection criteria that will include, among others, the replicability potential of the projects in other provinces. It must be reiterated that the demonstration or showcasing of these projects (conceptualization, design, planning, engineering, financing, installation, commercial operation, and maintenance) is meant to encourage the scale-up and/or replication of these demos, and the adoption of the approaches/strategies that were applied in the entire process of RE/EE project evolution, to other stakeholders (e.g., local governments, energy project developers/investors, financial institutions, engineering firms, etc.) in other provinces of Indonesia. This way, although the project interventions can be considered relatively small, the target impact/influenced sectors cover a wide swath of energy producers and energy end users of the country.</p> <p>See also response to Comment 2.</p>	<p>ProDoc: Part II, Section 6; Activity 1.4.1 & Footnote 11</p>
<p><u>Comment:</u></p> <p>4. <i>Many of the interventions proposed may be duplicating other programs that are being implemented in Indonesia, particularly for Component 1. It is necessary to develop synergies with a large number of ongoing projects in Indonesia. The lack of a baseline for Component 1 is a concern.</i></p> <p><u>Response:</u></p> <p>Based on assessment in each pilot provinces and lessons from similar RE/EE projects that have been implemented or currently being implemented by other development partners such as GIZ, USAID, and MCA-I, as well as the RE and EE CDM projects, there are several things that have to be done in the energy and energy end-use sectors to come up with a more cohesive and integrated program for mitigating climate change. The proposed project builds on, and incorporate relevant enhancements to these baseline projects. These could be: (1) aspects that are not, or will not be covered by the baseline projects; (2) additional features and interventions that can be done to baseline projects; and, (3) follow-up interventions to enhance the realization of EE & RE targets through joint or collaborative implementations. The MTRE3 Project does not aim to duplicate the baseline projects but to enhance and complement/supplement them. Several analyses of these baseline projects provided information regarding their results, achievements, and shortcomings, as well as lessons learned from them. Examples of lessons learned that have been considered in the design of the MTRE3 project include; (a) enhancing the capacity of local government personnel in the planning and development of climate change mitigation to attract private sector investment; (b) improvement of data availability and reliability about the potential RE & EE projects; (c) streamlining of the current RE project investment permitting system; and, (d) more flexible financing mechanisms is required particularly to reduce initial cost for small-medium size of RE & EE investments.</p> <p>Component 1 activities are based on several baseline activities that serve as bases for the design of the activities under that component. The approach described in the</p>	<p>ProDoc: Part I, Sec.3, Para</p>

<p>previous paragraph was applied in coming up with the Component 1 activities. In addition, the current work on the MoEF's National GHG Inventory System (SIGN); and the ongoing activities that make use of the Monitoring, Evaluation and Reporting (MER) system for the RAN/RAD-GRK, are the baseline for the project's activities on strengthening data system and technical capacity of provincial government personnel in conducting Provincial GHG Inventories; and in the development of the MRV system for RE-based power generation and energy efficiency projects that will be linked with national registry and MRV system.</p>	<p>20</p>
<p><u>Comment:</u></p> <p>5. <i>Many years ago a large GEF project, for Indonesia, called ALGAS had similar objectives overlapping Component 1. It's necessary to consider the lessons learned from such initiatives, and explicitly note how this initiative is building on this past work.</i></p> <p><u>Response:</u></p> <p>The regional ALGAS project (Indonesia is one of the countries involved) produced what could be considered as the Initial National Communications (INC) to the UNFCCC of Indonesia. The climate change mitigation actions that were identified in the INC have since been superseded by those stated in the country's 2NC, and the recently submitted Intended National Determined Contributions (INDC) report to the UNFCCC (Sep. 2015). Nonetheless, lessons learned from these previous similar initiatives are always taken into account and where feasible applied in the design of new projects like the MTRE3 Project. For example: The way the least cost abatement strategies were arrived at considering the minimal GHG emission data available in the early 2000s can be applied in this new project particularly in situations where provincial energy and GHG emission data are lacking. With the 2NC report, the 1st BUR, and the INDC, there are relatively more national energy and GHG emission data to work with compared in the late 1990s and early 2000s. However, it is most likely that at the provincial level, the data/information situation would most likely be the same as in the ALGAS days. In such situation, the project team can make use of the approach that was used in the ALGAS project in coming up with the provincial CCM action plan.</p>	<p>ProDoc: Part II, Sec. 5; Footnote 10</p>
<p><u>Comment:</u></p> <p>6. <i>Similarly MRV guidelines and methodologies already available from other projects can be easily adapted to Indonesia.</i></p> <p><u>Response:</u></p> <p>Agree. This will be done, and where applicable guidelines and methodologies are available, these will be used or modified to make them tailor-made for the intended beneficiaries.</p>	<p>ProDoc: Part II; Sec. 5; Para 27</p>
<p><u>Comment:</u></p> <p>7. <i>Lessons from implementing energy efficiency and RE projects under CDM and several multilateral and bilateral agencies should be considered to avoid duplication.</i></p> <p><u>Response:</u></p> <p>Agree. Lessons learned from the implemented EE and RE projects in Indonesia by development agencies, as well those under the CDM are definitely considered in the project design to avoid repeat of shortcomings, adoption of best practices, and enhancement of outcomes. During project implementation, the project team will still keep track of ongoing EE/RE projects to also benefit not only from their results but also</p>	<p>ProDoc: Part II; Sec. 5; Para 27</p>

<p>from lessons learned and best practices from them and where feasible, apply them (if necessary) in any adjustments that maybe made in the scheduling, or implementation strategy of the project activities.</p>	
<p><u>Comment:</u></p> <p>8. <i>National Communications project for Indonesians and the biennial update report (BUR, also funded by GEF), are likely to have several similar interventions and activities: preparation of GHG inventory, development of mitigation options, NAMAs, MRV guidelines, etc. Thus there is a need to ensure synergy between the two GEF projects in Indonesia.</i></p> <p><u>Response:</u></p> <p>The GEF-funded Third National Communication (3NC) project is focusing on GHG Inventory in waste and land-based sectors and supporting development of MRV and registry system at national level under MoEF. The project will use the 3NC project activities as baseline and contribute in strengthening GHG Inventory at provincial level for the energy sub-sector, build provincial government technical capacity for its implementation and ensuring linkage between provincial and national systems.</p>	<p>ProDoc: Part I, Sec. 3, Para 21</p>
<p><u>Comment:</u></p> <p>9. <i>There are a number of reports and studies from World Bank, Asian Development Bank, JICA, etc. which highlight the mitigation options and potential in the Indonesian energy sector. It is necessary to avoid duplication of the studies, unless significant new information is available to make a new assessment of the mitigation potential.</i></p> <p><u>Response:</u></p> <p>The project has identified potential RE & EE projects as climate change mitigation actions in 4 pilot provinces as well as in other provinces as target for replication after the MTRE3 project completion, from various studies including those from the MEMR, World Bank, ADB and the state-owned utility company. Please refer also to response to Comment 4 above.</p>	<p>ProDoc: Part II, Sec. 6, Activities 1.4.2 & 1.4.3</p>
<p><u>Comment:</u></p> <p>10. <i>The project should build on present policy initiatives to support renewable energy and reduce GHG emissions by energy efficiency, inter alia. It will assist with developing the NAMAs for Indonesia, although it may be too late for that objective in some respects by the time the individual projects are built and operational. It seems that having targets in place is good but how to deliver on these is not clear, and this project could help provide some clarity if good methodology is used that can be replicated. The current government subsidy for fossil fuels will need to be addressed before good replication is achievable.</i></p> <p><u>Response:</u></p> <p>Agree. Per the baseline analyses that were done during the project preparation stage (PPG exercise), the relevant projects/programs in the country on energy, and climate change mitigation were identified. These include those on all aspects of energy planning, energy development (e.g., RE-based energy generation), energy utilization (e.g., EE technology applications), energy policy, energy data/information management, as well as those on GHG emission inventories, UNFCCC-related projects, etc.</p> <p>Forecasts of energy demand under a business-as-usual scenario were made, as well as under an alternative scenario that the project is expected to facilitate to achieve. The</p>	<p>ProDoc: Part II, Sec. 5 Para 26</p> <p>Footnote 9</p>

<p>target settings that were made were based on the MEMR and PLN, and supplemented by information derived from the various relevant study reports produced by other energy projects. Actions that have been identified by the MEMR, PLN and/or the baseline studies to achieve the set targets were further analyzed by the project development team (PDT) to identify: (a) aspects that are not fully addressed by the proposed actions; (b) additional interventions, or enhancements to the proposed actions, that can be done; and, (c) follow-up interventions to enhance the realization of the set targets. From the analyses of the proposed climate change mitigation actions that were done, the potential RE & EE projects (as climate change mitigation actions) were identified. Based on a set of criteria that was developed by the PDT, the 2 greenfield RE NAMA and 2 EE NAMA projects, were identified.</p> <p>Inasmuch as the issue of subsidized fossil fuels is an important factor that will impact on the widespread application of RE and EE technology projects in Indonesia, this will not be tackled head on by the project, but indirectly through the policy barrier removal activities that will be carried out under the project. This will also be indirectly addressed in the planned Sustainable Energy Fund that will assist RE/EE project developers in enhancing the financial viability of their projects that maybe impacted by the subsidized cost of fossil fuels.</p>	<p>Annex D</p>
<p>GEF COUNCIL Comments, November 2013 Work Programme</p>	
<p><u>Comment by Germany:</u> <i>The private sector contribution in the form of co-finance is from hydro-power developers provoking the question on the level of agreement for this contribution and the conditionality on implementing appropriate mitigation actions in the hydropower sector.</i></p> <p><u>Response:</u> IPPs working on several prospective mini-hydropower projects in the pilot provinces have carried out pre-feasibility studies on these and the resulting analyses show that these are technically and economically feasible. The project proponent see the advantage in collaborating with MTRE3 project, as they will get benefits from the project activities, such as access to Sustainable Energy Fund facility to support detailed engineering design, streamlined permit system and facility from the IMSC in the province. The private sector entities that have committed co-financing for MTRE3 (PT. Pasadena Engineering, PT. Daun Biru and PT. Multi Fabrindo Gemilang) are currently sourcing for funds for the financing of their respective RE-based power generation projects. They have agreed to subsume their projects into the MTRE Project, making these as part and parcel of this UNDP-GEF project. The financing for their projects are considered part of the co-financing to the MTRE3 project.</p>	<p>ProDoc: Part I, Sec. 4, Para 24 (Role of MTRE3 Stakeholders)</p>
<p><u>Comment by Germany:</u> <i>The PIF states that Marginal Abatement Cost-curves for the energy sector in Indonesia are not available. The curves are available at http://photos.mongabay.com/10/indonesia_ghg_cost_curve_english_sm.pdf</i></p> <p><u>Response:</u> The suggested marginal abatement cost curve is from Indonesia's National Council for Climate Change (DNPI). In 2010, the DNPI published Indonesia's GHG Abatement Cost Curve for several sub-sectors including the power sector. The report gives initial information on the marginal abatement cost of various mitigation options in the</p>	<p>ProDoc: Part I, Sec. 3, Para 16</p>

<p>Indonesian power sector based on predictions of current and future available technologies and project cost from several sample RE/EE projects. Estimation on the project cost and baseline situation has not yet taken into account the influence of geographical or location factor, infrastructure condition and local GHG inventory in those locations. Hence, the 2010 marginal abatement cost curve was barely used as reference by the government in planning the country's climate change mitigation actions, which are supposed to be reflected in the RAN-GRK and the RAD-GRKs. The 2010 MACCs have not been used to drive the issuance of necessary policies or regulations to stimulate investments on climate change mitigation actions. Furthermore, lack of location context in the analysis of the MACCs makes it difficult for provincial government to use it as reference for provincial NAMA project development. The MTRE3 Project will of course still refer to the 2010 MACCs with a view of strengthening these by developing a methodology for introducing local context in MACC development.</p>	
<p><u>Comment by Germany:</u> <i>The PIF states that MRV guidelines and standard methodologies are not available. However, Indonesia (supported by JICA and GIZ) has developed “Guidelines for Monitoring, Evaluation and Reporting of RAN/RAD-GRK measures”. Following these guidelines Indonesian provinces are already preparing the first Monitoring and Evaluation Reports (MERs). The reports are expected to be ready by end of 2013.</i></p> <p><u>Response:</u> BAPPENAS has been implementing Monitoring, Evaluation and Reporting (MER) for RAN-GRK and RAD-GRK. The RAN-GRK Secretariat with support from GIZ and JICA produced and issued the <i>Guideline for Monitoring, Evaluation and Reporting RAN-GRK and RAD-GRK (MER)</i> for use by provincial governments. So far the Provincial MERs for 2013 and 2014 from key line ministries and provinces are with the RAN-GRK Secretariat. Up to now, the MER system is just the initial step towards the development and implementation of a standardized MRV system, since the “Verification” part is currently missing. Furthermore, the National Registry system is yet to be established by the MoEF. Hence, the reporting procedure for climate change mitigation actions is actually not yet really in place. The MTRE3 Project will upgrade the MER into a MRV system particularly for RE-based power generation and energy efficiency projects and to put in place institutional capacity for its implementation at the provincial level.</p>	<p>ProDoc: Part I, Sec. 3, Para 20</p>
<p><u>Comment by Germany:</u> <i>Germany suggests to coordinate with project financed by Germany and implemented by the Energy Centre of the Netherlands (ECN) entitles “Mitigation Momentum” as this is active in one of the pilot regions (West Nustengara).</i></p> <p><u>Response:</u> The MEMR as project proponent and implementing partner of the MTRE3 project has changed the pilot province from West Nusa Tenggara to Jambi considering more potential private investments in mini-hydro and biomass-based power generation after the assessment that was carried out during the project preparation stage (PPG exercise). However, results and lessons learned from the “Mitigation Momentum” have been taken into account in the design of the project activities. The project team (under the MEMR) will also coordinate with the “Mitigation Momentum” project team for exchange/sharing of data/information that can be useful during project implementation.</p>	<p>ProDoc: Part II, Sec. 6, Footnote 13</p>
<p><u>Comment by Germany:</u></p>	

<p><i>Component 1 of the proposed activity suggests the design of two NAMA projects. Clarification is sought on the expected scale of these NAMAs (national or provincial level) which also relates to the question of the potential for scaling up.</i></p> <p><u>Response:</u></p> <p>The MTRE3 project will facilitate RAN-GRK achievement through the implementation of RE-based power generation projects with collective capacity of 15 MW as provincial NAMA projects (consist of 7 MW mini-hydro, 6 MW biomass and 2 MW solar PV projects). For energy efficiency NAMA projects, EE technology application projects in commercial buildings (with a collective total floor area of 50,000 m²) will be carried out, with the aim of reducing the current average commercial building specific energy consumption (SEC) of 285 kWh/m²-yr by 20%, or down to 228 kWh/m²-yr.</p> <p>The project activities are designed in a way that encourages scale up and replication of the demonstrations in the 4 pilot provinces to other cities/towns in these provinces and also in other provinces in Indonesia. The set of criteria for the selection of the demo RE and EE projects, as well as those that will be supported by the SEF include, among others the potential of the project to be scaled-up and/or replicated. Replication is expected because the implementation of climate change mitigation actions is now a major part of the Local Energy Planning (RUED) of provinces, and with that, climate change mitigation actions (e.g., RE/EE projects) will be planned and budgeted. Scaling-up and replication of the demo projects are expected in view of the enabling environment that the MTRE3 Project will establish for RE/EE investments, such as streamlined permitting system, operation of IMSCs in provinces to provide information and assistance in developing feasible RE/EE projects, and the operationalization of the SEF that will provide attractive project financing services for eligible RE/EE projects.</p>	<p>ProDoc: Part II, Sec. 5, Para 29.</p> <p>ProDoc: Part II, Sec. 9, Para 52</p>
<p><u>Comment by Germany:</u></p> <p><i>Regarding the outcomes of the project Germany would like to highlight the need to clearly separate between baseline activities and achievements by the project especially in view of Indonesia's declaration to mitigate emissions by 26% on a voluntary basis without international support and by 41% with international support.</i></p> <p><u>Response:</u></p> <p>The clear delineation of the baseline efforts of the GOI to realize its GHG emission reduction target on its own, and in collaboration with the domestic private sector entities, and those initiatives that are supported by both the GOI and other foreign-based entities and international development partners can be seen once the national registry system for climate change mitigation actions is established and operational under the MoEF. For the MTRE Project, as per the requirement in GEF-funded projects, the project activities are a combination of baseline and incremental activities. In the description of the outputs in each component of the project, the description of what activities will the GEF be funding is presented, and these are the incremental activities that either enhance (modify, augment or supplement) the baseline activities or are entirely incremental since these are not currently being done in the country. Most of the incremental activities are those that remove the identified barriers to the widespread application of RE and EE technologies and in filling gaps in the country's efforts to monitor, document/report, verify and confirm the results and impacts of the climate change mitigation initiatives that are carried out, specifically in the energy and energy end-use sectors.</p>	<p>ProDoc: Part I, Sec. 5, Activity 1.4.2</p> <p>Part II, Sec. 8; Paras 47 & 48</p>
<p><u>Comment by Japan:</u></p>	

<p><i>In Indonesia, Japan has been implementing “Support to Indonesia’s Energy Efficiency Testing and Certification Facilities and Expertise”, a capacity building project for government officials and private sectors, in order to facilitate the achievement of the objectives of Indonesian national energy policy, through Japan-UNDP Partnership Fund since 2011 (approx. \$490,000). Japan recommends that the World Bank and the UNDP share the information of the projects mentioned above with UNDP Indonesia.</i></p> <p><u>Response:</u> The results from abovementioned project have been shared with the PDT, and have been taken into account in the design of the proposed capacity development activities of the MTRE3 project. The project team will also coordinate with the project implementers during the MTRE3 project implementation on enhancing the capacity of provincial government personnel in developing and evaluating EE projects.</p>	<p>ProDoc: Part II, Sec. 6, Para 34</p>
<p>Comments by GEF Secretariat</p>	
<p><u>Comment [6]:</u> Is (are) the baseline project(s), including problem(s) that the baseline project(s) seek/s to address, sufficiently described and based on sound data and assumptions? <i>Please note that more detailed illustration of identified funding mechanism is expected during CEO endorsement stage.</i></p> <p><u>Response:</u> Please refer to Annex D of the MTRE3 Project Document for the detailed description of the proposed Sustainable Energy Fund.</p>	<p>ProDoc: Annex D</p>
<p><u>Comment [8]:</u> Are global environmental benefits adequately identified, and the applied methodology and assumptions for the description of the incremental/additional reasoning sound and appropriate? <i>The projects will be identified, with more detailed illustration on emission reductions and scale of work, and submitted at the PPG stage. Please apply appropriate GEF/STAP methodologies for emissions estimates, including use of the GEF/STAP energy efficiency methodology for energy efficiency components.</i></p> <p><u>Response:</u> The estimation of the GHG emission reductions from Direct, Direct Post Project, and Consequential (Bottom-Up and Top-Down) follows the GEF/STAP methodology.</p>	<p>ProDoc: Annex 2</p>

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS¹⁶

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: \$ 175,000			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent to date</i>	<i>Amount Committed</i>
Updating and analysis of background context including baseline investments and GHG emission profile	65,000	65,000	0
Conduct of the Project Logical Framework Analysis	50,000	43,213	6,787
Scoping and assessment of potential city wide NAMA concepts	10,000	7,746	2,254
Review and assessment of financing mechanism to support the sustainable scaling up of low carbon cities	10,000	10,000	0
Detailed design of project activities with participation of relevant stakeholders	15000	6,547	8,453
Discussions and agreement on the project management and implementation arrangements	5,000	5,000	0
Negotiation and confirmation of co-financing	10,000	10,000	0
Preparation of Project document, CEO Endorsement Request and tracking tool	10,000	10,000	0
Total	175,000	157,506	17,494

Overall, the implementation of planned activities for the design, development and preparation of the MTRE3 project achieved the PPG exercise objective. The project development team (PDT) carried out the PPG Exercise based on the agreed project initiation plan. Data and information that the team was able to gather and organize were used in the design of the various project activities. Information about the ongoing and planned programs of the national government and local governments on the application of EE and RE technologies were gathered, processed and analyzed to obtain a clear understanding of the current situation regarding the issues and concerns about the application of such technologies. The logical framework analysis (LFA) that was carried out by the team together with the stakeholders was mainly to verify and confirm the project results framework that was developed and presented during the PIF stage of the project development. Practically, the LFA confirmed the previously defined project goal and objective, and expected outcomes. The discussions with the stakeholders and project partners also resulted in getting commitments for the co-financing of the baseline activities that were subsumed into the project; the government's contribution to the funding of some of the incremental activities, as well as in the agreed project coordination mechanisms and the project implementation arrangements. The outputs of the PPG exercise were used in the detailed design of the MTRE3 project components and activities.

¹⁶If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

No reflows of funds are foreseen under this Project.