PROJECT IDENTIFICATION FORM (PIF)

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[1]		
Country(ies):	Indonesia	GEF Project ID:[2]	5339
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4673
Other Executing Partner(s):	Ministry of Energy and Mineral Resources (MEMR)	Submission Date:	August 21, 2013
GEF Focal Area (s):	Climate Change	Project Duration (Months)	48
Name of parent program (if applicable): • For SFM/REDD+ ☐ • For SGP ☐	n/a	Agency Fee ($):	762,375

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK[3]:

Focal Area Objectives	Trust Fund	Indicative Grant Amount ($)	Indicative Co-financing ($)
CCM-2	GEFTF	2,182,500	13,455,000
CCM-3	GEFTF	5,092,500	31,395,000
CCM-6	GEFTF	750,000	3,500,000
Total Project Cost		8,025,000	48,350,000

B. INDICATIVE 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[4]	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount ($)	Indicative Co-financing ($)
1. Climate change mitigation options for the energy generation and energy end-use sectors.	TA	Prioritized appropriate mitigation actions in the energy generation and energy end-use sectors are designed	- Defined and established sectoral and sub-national reference baselines[5] for the energy generation and energy end-use sectors in representative provinces. - Developed and published detailed marginal GHG abatement cost curves for the appropriate mitigation options in energy generation and energy	GEFTF	775,000	3,700,000

[1] Energy sector refer to both the energy production (i.e., electricity and process heat production) and energy consuming sectors in Indonesia
[2] Project ID number will be assigned by GEFSEC.
[3] Refer to the reference attached on the Focal Area Results Framework when completing Table A.
[4] TA includes capacity building, and research and development.
[5] There are different parameters whose baselines can be set, e.g., emissions projections and energy performance benchmarks for the energy generation and energy end use sectors. The appropriate parameters including the energy end use sectors and provinces that will be covered by this proposed project will be determined and confirmed during the project preparation phase.

			end-use sectors. - Selected appropriate and prioritized mitigation options that are integrated into national and provincial development plan. - Two projects designed, each for the implementation of selected prioritized mitigation actions in the energy generation and energy end use sectors.			
2. Market transformation through implementation of appropriate mitigation actions in the energy generation and energy end-use sectors.	TA	Enhanced and sustainable market diffusion of renewable energy and energy efficiency technologies	- Established Integrated Market Service Center at provincial level in the selected provinces (indicatively in Aceh, West Sulawesi, West Nusa Tenggara and East Nusa Tenggara provinces) - Established technical support system to provide training for operation and maintenance of RE & EE technologies including MRV aspects of projects to local service companies and aspects such as linking energy access with rural livelihoods.	GEFTF	1,375,000	5,500,000
	Inv		- Implemented improved financing mechanisms for the appropriate mitigation action investment projects (RE and EE) including financing for small and medium enterprises that utilize the generated energy. - Implemented and operational pilot testing of two RE and two EE projects involving public-private partnership, tariff policy review for off-grid and mini-grid projects, emphasizing technology standards and streamlining investment permit system.	GEFTF	4,750,000	33,950,000
3. MRV system and national registry for mitigation actions in the energy generation and energy end-use sectors	TA	Accurate measurement and accounting of actual GHG emission reductions from mitigation actions in the energy generation and energy end-use sectors	- Improved and operational registry mechanism for mitigation actions in the energy generation and energy end-use sectors. - Developed MRV guidelines and standard methodologies for the energy generation and energy end use sectors. - Implemented MRV system for the selected appropriate mitigation actions.	GEFTF	750,000	3,500,000
		Subtotal			7,650,000	46,650,000
Project Management Cost (PMC)[6]				GEFTF	375,000	1,700,000

[6] This amount of US$ 375,000 includes Direct Project Services (services such as procurement, human resources management, organization of training activities, conferences, and workshops etc.) which UNDP provides at the request of government and itemizes

Total Project Cost			8,025,000	48,350,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, ($)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
National Government	Ministry of Energy and Mineral Resources (MEMR)	Cash	30,000,000
National Government	Ministry of Energy and Mineral Resources (MEMR)	Cash	7,500,000
National Government	Ministry of Disadvantaged Regions	In-kind	3,000,000
National Government	Ministry of Disadvantaged Regions	Cash	4,150,000
National Government	UKP4 (LECB project on MRV)	Grant	500,000
Private Sector	PT. Daun Biru (mini-hydro developer)	Cash	2,500,000
Private Sector	PT. Daun Biru (mini-hydro developer)	In-kind	500,000
GEF Agency	UNDP	Grant	200,000
Total Co-financing			48,350,000

D. INDICATIVE TRUST FUND RESOURCES ($) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY: NA

E. PROJECT PREPARATION GRANT (PPG)[7]

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

	Amount Requested ($)	Agency Fee for PPG ($)[8]
• No PPG required.		
• (up to) $50k for projects up to & including $1 million		
• (up to)$100k for projects up to & including $3 million		
• (up to)$150k for projects up to & including $6 million		
• (up to)$200k for projects up to & including $10 million	175,000	16,625
• (up to)$300k for projects above $10 million		

PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF PROJECT ONLY: NA

PART II: PROJECT JUSTIFICATION[9]

A. Project Overview

A.1. Project Description:

Global environmental problems, root causes and barriers that need to be addressed:

Despite having abundant renewable energy resources, Indonesia's energy supply mix is dominated by fossil fuels. Indonesia's primary energy is dominated by crude oil (38%), followed by biomass (20%), coal and natural gas (19%

against a schedule of costs set out in UNDP's Universal Price List (UPL) or local price list. An initial analysis indicates that these costs are around US$ 26,000 over the four years of project duration.

[7] On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

[8] PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

[9] Part II should not be longer than 5 pages.

each), hydropower (3%) and geothermal (1%)[10]. The energy sector in Indonesia emits 315 million tonnes CO_2 equivalent per year, second only to the forestry sector (1,232 million tonnes CO_2 equivalent) (SNC, 2012). The Government of Indonesia (GoI) has enacted a number of sustainable energy policies, including Presidential Regulation No.5/2006 on National Energy Policy, which sets a target by 2025 of a 17% contribution from renewable energy (RE) in the national primary energy mix and a 32% reduction in final energy intensity through various energy efficiency and energy conservation measures[11]. Other notable regulations are Presidential Decree No. 61/2011 establishing a National Action Plan to reduce greenhouse gas emissions (RAN-GRK), the Local Action Plan to reduce GHG emissions (RAD-GRK, 2012), and Presidential Regulation No.71/2011 on establishing a national GHG Inventory – all of which reflect the Government's voluntary commitment to reduce GHG emissions by 26% by 2020 through national efforts or by 41% with international assistance.

Both renewable energy (RE) and energy efficiency (EE) have been prioritized to achieve emission reduction targets. The energy and transportation sectors are targeted to reduce 38 million tonnes of CO_2 by 2020 (26% target emission reduction). In order to attract investments for RE and EE projects, Ministerial Regulation No. 04/2012 was issued to regulate a feed-in tariff for RE installations smaller than 10 MW and Presidential Instruction No. 13/2011 on water and energy saving was issued to achieve a 20% reduction of energy consumption in all Government institutions. The Indonesia National Council for Climate Change (DNPI) announced the Nusantara Carbon Scheme (NCS) in 2013, which opens up the possibility for a sectoral crediting mechanism through issuance of Nusantara Carbon Unit (NCUs).

While useful and ambitious, all of these policies have experienced considerable barriers in their implementation.

Barriers that the proposed project will address: The problems that need to be addressed through the proposed project are:

1. Lack of capacity in identification and prioritisation of appropriate and cost-effective mitigation actions at the national and sub-national levels in the energy generation and energy end-use sectors. The selection of mitigation actions is not undertaken in an integrated and systematic manner, resulting in a fragmented and uncoordinated approach that struggles to attract private-sector investment. Although the RAN-GRK lists national mitigation actions and establishes emission reduction targets, there are no accurate data on emission projections and mitigation potential per sector and there is no business-as-usual (BAU) baseline against which to measure the reductions achieved. These factors present a considerable challenge to translating RAN-GRK activities into Nationally Appropriate Mitigation Actions (NAMAs), even though the Government considers the NAMA approach to be crucial for the transparent and MRV'd implementation of the RAN-GRK and for assisting Indonesia to mobilise international climate finance and obtain UNFCCC recognition for its mitigation efforts.

- There is currently no standardised, official approach to establishing and updating reference baselines, identifying standard methodologies or assessing individual mitigation actions' contributions to the national targets, both in the energy generation and energy end-use sectors. Even the existing National and Local Action Plans in the energy sector (RAN-GRK and RAD-GRK) were not developed on the basis of accurate data for emission projections and mitigation potentials in different sub-sectors.
- There is no established sub-sectoral inventory framework of GHG emissions at provincial level for the energy generation and energy end-use sectors.
- There are no marginal GHG abatement cost curves for climate change mitigation technologies and measures for the energy generation and energy end-use sectors. In its Second National Communication (SNC) to the UNFCCC (submitted on 19 January 2012), Indonesia presented the potential climate change mitigation options for some of the energy-intensive sectors. However, such options were based only on very limited data and information, and were not based on specific GHG emission reference values (i.e. baselines).
- Lack of institutional arrangements for updating the GHG reference baseline and maintaining the database of potential mitigation actions.

[10] Handbook of Energy & Economic Statistics of Indonesia MEMR, 2011
[11] Data sourced from http://aperc.ieej.or.jp/publications/reports/outlook/5th/bau/Indonesia_BAU.xlsx

2. Limited market diffusion of renewable energy and energy efficiency technologies.

- Lack of a favourable market environment, inadequacy of technical manpower to conduct feasibility studies, poor operational and maintenance capacity, and a lack of involvement of – and benefits accruing to – local communities. These problems have resulted in limited investment in RE and EE. The RAN-GRK contains a detailed list of target RE investments: micro- and mini-hydro power (46.17 MW and 182 MW respectively), solar PV (102.1 MW), wind power (21.67 MW), and biomass-based power plants (0.4 MW). RAN-GRK is a working document with recommended CCM actions for the energy (power generation) sector. It is referred to as the compilation of Indonesia's potential NAMAs. Nonetheless, the suggested CCM actions in it are only indicative, without binding commitment and uncertain budget allocations for their implementation. Despite their inclusion in the RAN-GRK, there is no assurance that these CCM actions will be funded and implemented. For example, of the identified hydropower potential of 75 GW, only 9.13% of this has so far translated into installed capacity to date, while the figure for biomass energy is even lower at 3.3%.
- Various funding initiatives for RE and EE projects are under implementation by the Government, but very few support energy efficiency projects or energy service companies (ESCOs). Similarly, for renewable energy projects, the existing funding mechanisms mostly finance only proven and medium-to-large size RE technologies such as mini-hydro and biomass power plants using palm oil waste, ideally with installed capacities above 2 MW, investment costs above US$ 5 million and IRRs of at least 16%. Smaller and off-grid opportunities are largely overlooked.
- The number of internal bank assessors for RE and EE investments is very limited.
- The feed-in tariff for RE is still considered unattractive by investors while investment in EE can have long pay-back periods due to the Government's policy on energy subsidies. There is low interest in, and even lower participation in, carbon trading mechanisms.
- The permit system for energy generation investments is inefficient and costly; there is unclear regulation of, and role-sharing between, Government and private-sector actors in public-private partnership (PPP) mechanisms.

3. There is neither an operational national registry mechanism for mitigation actions nor MRV guidelines and standard methodologies for compliance assessment of programs and projects with the national emission reduction targets. The limited understanding of MRV systems and the capacity to implement them are a major barrier for effective implementation of the RAN-GRK and RAD-GRK.

Future energy policy-making and forward-looking development planning in the areas of energy and environment half a decade from now (2020) will not be effective, useful or meaningful if data/information from activities carried out under the RAN-GRK and RAD-GRK are not properly managed or MRV'd, and if the enabling environment for investment is not conducive. Not all of the necessary elements for a systematic mitigation approach are currently in place; in the absence of GEF support, the planning, funding and implementation of the various climate change mitigation initiatives (RE and EE) will be fragmented, unlikely to result in synergies and will have only limited impacts relating to Indonesia's energy-based emission reduction targets for 2020 and beyond. This is the expected baseline scenario in the absence of the proposed GEF project.

The relevant baseline projects and programs for this proposed project are those being implemented to support existing energy and climate change plans and policies. The MEMR is aiming to reach the RAN-GRK targets mainly through the following three baseline programs.

- Implementation of the RAN-GRK and RAD-GRK for the energy sector is the responsibility of the MEMR. The MEMR has listed mitigation activities to be implemented in all provinces in partnership with communities and the private sector. The list is part of the Annex of the Presidential Regulation 61/2011 on RAN-GRK[12]. The MEMR is aiming to reach the RAN-GRK targets mainly through the following three baseline programs.
    - DAK Energi Perdesaan or RE Rural Electrification Programme (Ministerial Regulation No. 02/2012) – This has allocated special funding in 2011 and 2012 to 101 districts with low electrification ratios to install micro

[12] Source: http://www.sekretariat-rangrk.org/ (Presidential Regulation 61/2011 on RAN-GRK).

hydro and solar home system/centralized PV. It aims to achieve 100% electrification in these districts by 2020. While this programme focuses on access to energy, the sustainability aspects such as operation and maintenance of energy infrastructure, linking energy access with productive applications, and development of MRV system have been overlooked.

- Desa Mandiri Energi (DME) or Energy Self-Sustained Village programme, which is being implemented since 2010. The programme targets implementation of renewable energy to supply at least 60% of the village energy needs using renewables. The implementation of the programme involves several line ministries and local governments under the Ministry of Social Welfare. To date, there are hundreds of DMEs all around Indonesia providing energy access to the communities as well as reducing GHG emissions. However, sustainability aspects as mentioned above for RE rural electrification (DAK Energi Perdesaan) programme and development of MRV system were not included.

- The third baseline programme aims at facilitating the achievement of energy efficiency improvement targets i.e. the Programme Kemitraan Audit Energy or Partnership Programme on Energy Audit is a free of charge energy audit programme refers to the previously issued four National Standards on energy conservation in building sector which include energy conservation for building cover (SNI 6389:2011), air circulation system (SNI 03-6390:2011), building lighting system (SNI 6197:2011) and the procedure for energy audit for building (SNI 6196:2011). While the Government of Indonesia has not yet established national green building certification system, Green Building Council Indonesia (GBCI), a private institution, has issued voluntary Greenship Certificate for new and existing buildings. Under the Partnership programme in 2011-2012, a total of 344 high energy-consuming buildings and industries have been audited and 28 energy managers have been certified. The audit resulted in recommendations for energy efficiency improvements. So far, the implementation of energy audit recommendations is poor. Based on the monitoring report of 200 buildings and industries that have been audited (i.e., about 59% of audited buildings and industrial establishments), around 57% implemented no-cost/low-cost recommendation (awareness action, internal management policy, monitoring), medium cost 39% and high cost 28%. Lack of financing, technology and human resource capacity were identified as main challenges for implementation of energy audit recommendations. The proposed GEF project will facilitate the design and implementation of the appropriate EE projects that will realize the identified energy conservation opportunities in the energy audit reports of the rest of the buildings and industrial establishments that were audited. In this case, the incremental activities that can be carried out would include those that will facilitate or enable the financing and implementation of the EE projects, or enhancements in the design of such projects.

- Indonesia Clean Energy Development (ICED) is a USAID project which is being implemented since 2011, promoting medium and large size biomass-based energy generation and energy efficiency interventions in Indonesia. This project targets Aceh, North Sumatera and Riau provinces, and has been providing project developers with technical assistance and access to financing. Since 2012, UNDP is involved in this project as one of the partners in assisting provincial governments in developing RAD-GRK for the energy sector. ICED project in principle agreed to support financial access for biomass power generation and energy efficiency initiatives that are facilitated by the proposed project as part of project interventions. The total funding available under ICED project is US$ 16 million (2011-2014) and the project aims to reduce 4 million tCO_2. Some of the activities in ICED are in line with the envisioned activities of the proposed GEF project, especially Component 2, and such activities, including their respective budgets (which will form part of the co-financing for this proposed project) will be determined and confirmed during the design and preparation stages (i.e., PPG phase) of the project.

- Millennium Challenge Corporation (MCC) has signed a Compact Agreement (US$ 600 million) with Government of Indonesia for five years and established the Millennium Challenge Account – Indonesia (MCA-I). MCC is aimed to increase household income in project areas through increased productivity, reduced energy costs, and improved provision of public sector growth-enhancing goods and services. US$ 320 million is committed for Green Prosperity Facility (GPF) in which, utilization of renewable energy and improved natural resources management is expected to increase household income of the communities. The GPF will focus in West Sulawesi and Jambi provinces. Discussions are underway at the moment in order to build synergies with the proposed project. One potential synergy is that MCC will acquire support from the proposed project in terms

of policy advocacy and capacity building while the proposed project may access the feasible renewable energy projects and grant for the communities particularly to support off-grid energy projects which can be part of component 2. The GPF is a suitable source of co-financing for the proposed project. The available co-financing under GPF (in the form of loan and grant for renewable energy projects) and the project activities that will be co-financed will be defined and clarified during the PPG phase of the proposed project.

- Following the issuance of Presidential Regulation No.71/2011 on National GHG Inventory, in July 2012, the MoE launched the guideline for National GHG Inventory for energy, industry, agriculture, and forestry and waste sectors. Both JICA and GIZ are providing support through bilateral cooperation. The proposed project can potentially build on the relevant activities that JICA and GIZ are supporting in this national GHG inventory program particularly on the development of guidance for sub-national level inventory and energy specific sub-sectoral assessments. National System for GHG Inventory (called SIGN) is currently developed by MoE. Such guidance must be used as reference by the respective line ministries and provincial governments in monitoring, and reporting their contribution to RAN-GRK and RAD-GRK. However, the adoption of the GHG inventory guideline by other government agencies is slow due to the lack of coordination, and required capacities to utilise the same.

Proposed alternative scenario with incremental cost reasoning:

The basis for the proposed project is Indonesia's voluntary emission reductions commitment to reduce GHG emissions in energy generation and energy end-use sectors as stated in the RAN-GRK and the associated RAD-GRK. In order to bring about the described alternative scenario proposed under the project, the project will address and remove barriers to the proper design, implementation and MRV of appropriate, feasible and cost-effective RE and EE interventions in the energy generation and energy end-use sectors in Indonesia. The proposed project will provide best practices as models for further implementation of mitigation actions under RAN-GRK and RAD-GRK. The proposed project will cover four provinces: (1) Nanggroe Aceh Darussalam; (2) West Nusa Tenggara; (3) East Nusa Tenggara; and, (4) West Sulawesi. The main reasons for the selection of these four provinces are: (a) preliminary studies indicate that potential renewable energy-based power generation options in those provinces include mini hydro, biomass, solar PV, wind power and landfill gas; (b) low electrification ratio; (c) indicative mitigation actions listed in the provincial RAD-GRK; and, (d) presence of private sector and related investments.

The proposed incremental activities such as, establishing and updating reference baselines, establishing a database of RE/EE application potentials at sub-national level, and the selection of locally appropriate and cost effective RE and EE technologies are expected to contribute to the development of NAMAs in the energy sector (power generation) and selected end-use sectors. The current capacity in the country on the identification, implementation, monitoring and evaluation of initiatives that employ RE/EE technologies lies mainly at the national level (government and private sector) including that on GHG inventories. Hence, bulk of the initiatives on the promotion of the application of RE/EE technologies in the country, as part of sustainable development or as a component of national efforts to achieve the country's committed GHG emission targets, are implemented by the relevant agencies at the national level. While these baseline initiatives in the country are essential for realizing GHG emission reductions, expanding the capacity to the sub-national/local government levels (including private sector entities in provinces) and introducing new features (e.g., NAMAs development and implementation) would enhance the magnitudes of global environmental benefits (i.e., GHG emission reductions) from these baseline efforts. Hence, incremental activities to facilitate the inclusion of these new features in the baseline CCM planning/programming, implementation, monitoring and evaluation processes at the national and local levels, and enable a much better control of the plan/program implementation, would be necessary. These will include the development of a MRV system and standard methodologies that will be used in assessing the individual CCM actions' contribution to the achievement of national targets. Without these incremental activities, the implementation of RE and EE programs in Indonesia will remain fragmented and ad hoc.

The proposed project is aimed to tackle the problems mentioned above, particularly through:

Component 1: Climate change mitigation options for the energy generation and energy end-use sectors

The expected outcome of this component is "prioritized appropriate mitigation actions in the energy generation and

energy end-use sectors are designed". This outcome will be achieved through the implementation of the following activities:

- Definition and establishment of sectoral and sub-national reference baselines for the energy generation and energy end use sectors in representative provinces.
- Development and publication of detailed marginal GHG abatement cost curves for the appropriate mitigation options in energy generation and energy end use sectors.
- Enhancement of the relevant national and provincial development plans to integrate selected appropriate climate change mitigation actions.
- Design of 2 NAMA projects each for prioritized CC mitigation actions in the energy sector (RE-based power generation) and energy end use sectors (EE).

The current GHG inventory guidelines issued by the MoE (under JICA and GIZ support to MoE) do not consider the GHG emission inventories at provincial level and sub-sectoral basis. Since there is no reliable baseline data available, the assessment of voluntary emission reduction targets therefore could not be verified at the moment. Activities under this component will assess the effectiveness of actions that will be funded and implemented, and the achievement of the set targets of the RAD-GRK Secretariat under the National Development Planning Agency (BAPPENAS) to specifically contribute in the development of nationally appropriate mitigation actions in the energy sector in these provinces. Policy/regulatory frameworks that will support the implementation and financing of prioritized NAMAs are expected to be enforced by the beginning of the 2nd year of project implementation.

The outputs of this component's activities will be useful inputs to the GHG inventory in the Indonesian energy (power generation) sector and energy end use sectors in country's Third National Communication (TNC) and Biennial Update Reports (BURs). Indonesia's TNC is expected to be submitted by 2016. In the meantime, some of the PPG activities on the sectoral and sub-sectoral reference GHG baseline data shall be readily available for the preparation of the country's 1st BUR. Close consultations with the TNC project team will be conducted to get the relevant information on the sectoral (based on NC sector categories) GHG emissions that will be used in scenario analyses (highlighting the forecast trends in emission levels) that can be used as guides in the implementation of MRV systems and standard methodologies for estimating potential GHG emission reductions from the developed climate change mitigation and NAMA projects.

Component 2: Market transformation through implementation of appropriate mitigation actions in the energy generation and energy end-use sectors

The expected outcome of this component is "Enhanced and sustainable market diffusion of renewable energy and energy efficiency technologies". This outcome will be achieved through the implementation of the following activities:

- Establishment and operationalization of Integrated Market Service Centers at provincial level in the selected provinces (indicatively in Aceh, West Sulawesi, West Nusa Tenggara and East Nusa Tenggara provinces).
- Establishment and implementation of technical support system to provide training for operation and maintenance of RE & EE technologies including MRV aspects of projects to local service companies and aspects such as linking energy access with rural livelihoods.
- Implementation of improved financing mechanisms for the appropriate mitigation action investment projects (RE and EE) including financing for small and medium enterprises that utilize the generated energy.
- Implementation and operationalization of two RE and two EE projects involving public-private partnership, tariff policy review for off-grid and mini-grid projects, emphasizing technology standards and streamlining investment permit system.

The Integrated Market Service Center in each of the selected provinces will be hosted by the local government. The center will provide information to project developers on technologies, feasible investments in RE and EE projects, introduce a one stop investment permit, Public-Private Partnership facilitation, and mediate conflicts. It is also expected to provide technical assistance services that include, among others, feasibility studies, guidance on MRV compliance and coordination with the national level agencies and national registry. The establishment and implementation of improved financing mechanisms will involve the evaluation of various options such as schemes

for the provision of loan guarantee or collateral to leverage higher bank loans, possibility for energy efficiency fund to demonstrate incentive mechanism for end-users of energy efficient appliances, and/or a rebate system for buyers of energy efficient appliances. Micro-financing is also an option that will be considered for facilitating usage of RE-based energy generation for supporting local productive economy. This is intended to ensure sustainability of the installed energy infrastructures particularly in rural communities and will be implemented in collaboration with local financial institutions, rural cooperatives, or NGOs, to enable effective involvement of communities. The feedback received from national banks indicates that such scheme can reduce the lender's risk. The selected financing mechanisms will be tested for the CCM/NAMA projects identified in Component 1. Under the Nusantara Carbon Scheme (NCS), there are two possible schemes: rate-based (indexed) crediting, and fixed sectoral emission limits. During the project preparation stage possible improvements to the NCS will be identified taking into account those that would most likely be preferred by the project stakeholders.

MEMR targets a total installed capacity of 88 MW of RE-based power generation units (as listed in RAN-GRK (2014-2020). Since these are just listed mitigation activities without adequate feasibility assessment and justification, their implementation is still uncertain. The proposed GEF project will assist the MEMR in realizing this target by establishing the necessary enabling conditions that would make possible the mobilization of the required investments, one of them is through the NAMA approach that this project will be promoting and facilitating. During the four years of project implementation, suitable enabling conditions will be created for the installation of RE-based power generation units with a collective installed capacity of 15 MW as part of two RE NAMA projects[13]. The remaining 73 MW capacity is expected to be implemented after the end of the 4-year implementation period of this GEF project. In the MEMR's long term plan the previously stated 88 MW capacity is part of the Ministry's target RE-based power generation installed capacity. It is expected that the enabling conditions (e.g., enforced support policy/regulatory frameworks, affordable financial support mechanisms, enhanced awareness about the benefits of RE) will facilitate or influence the mobilization of investments from the government and private sector to finance more RE-based power generation projects after the completion of the proposed 4-year GEF project. The baseline projects in Component 2 will be selected among the projects that have already received approved financial support under the MEMR's RE Rural Electrification Program; and Energy Self-Sustained Village Program, as well as other power generation projects of the national power utility - PLN, and of private independent power producers in the country. For the energy efficiency interventions[14], the proposed project aims at reducing the specific energy consumption of commercial buildings from 240 kWh/m^2/yr to 120 kWh/m^2/yr in two EE projects targeting a minimum of 50,000 m^2 of commercial building space. Commercial buildings are targeted in order to make use of results from the partnership Programme on Energy Audit conducted previously by the MEMR and to support implementation of Ministerial Regulation No.13/2012 on Electricity Conservation in buildings. The proposed four NAMA projects with prioritised investments will be selected based on local renewable resources, energy efficiency potential, abatement cost curves, and their potential for scaling-up based on the preliminary analysis, potential private sector investments, commitment of the local government as reflected in the provincial RAD-GRK and in consultation with partners. The projects will showcase NAMAs in energy generation and end-use sectors which can be replicated for other mitigation actions implementation as targeted in RAN-GRK and RAD-GRK in other provinces.

Proper measuring, reporting and verification of the results of the appropriate mitigation actions will be done with the use of the reference baselines, and the application of standard methodologies that will be identified under the proposed project. The relevant modifications to the current approaches to the development and monitoring of results and impacts of CCM projects are the essential incremental elements that the project will facilitate.

[13] The possible RE interventions are micro/mini-hydro, biomass, solar PV, wind power and municipal waste (landfill) gas power generation which will be identified during the PPG phase.

[14] The possibility of energy conservation and energy efficiency interventions in Small-Medium Enterprises (SMEs) in food and textile sub-sectors will be explored. If selected, the energy consumption benchmarking will be conducted since the baseline information is not yet available and the appropriate mitigation actions will be determined later.

Component 3: MRV system and national registry for mitigation actions in the energy generation and energy end-use sectors.

The expected outcome of this component is "accurate measurement and accounting of actual GHG emission reductions from mitigation actions in the energy generation and energy end use sectors". This outcome will be achieved through the implementation of the following activities:

- Improvement of existing national registry mechanism for mitigation actions in the energy generation and energy end-use sectors.
- Development of MRV guidelines and standard methodologies for the energy generation and energy end-use sectors.
- Implementation of a MRV system for the selected appropriate mitigation actions.

The key bottom-up data produced under the project from four provinces, on energy generation and end-use sectors, will feed into the National System for GHG Inventory under the MoE and also for the interventions proposed project. A number of support systems for effective MRV system will be established to monitor off-grid, mini grid and energy efficiency projects. These will include: (1) installation of on-site monitoring equipment that can continuously measure and record data; (2) cumulative measurements will be manually recorded on a log book; (3) decentralized energy consumption measurement and display board to monitor energy efficiency; (4) monitoring of electricity bills in collaboration with the electric power utility company; and, (5) in-house training for staff on monitoring methodology for pilot demonstrations. All the data will be archived electronically. The verification will be conducted by independent auditor under coordination with Nusantara Carbon Scheme for validating NCUs. The operational registry and MRV system is expected to clarify the contribution of each mitigation action to the 26% emission target (nationally funded/unilateral NAMAs), or 41% emission target (with international support/supported NAMAs) or even credited NAMAs.

Global environmental benefits analysis:

The planned pilot CCM projects that will be showcased as NAMA projects will be identified and selected from a number of ongoing and/or planned (and budgeted) baseline power generation projects supported under the MEMR programs, or by PLN and private IPPs. Such baseline projects may be subsumed into the GEF project as is (e.g., the MEMR funded RE-based power generation projects) or maybe modified to realize GEBs (e.g., IPP funded diesel power generation project converted to RE-based power generation). In either case, the GHG emission reductions will come from the incremental enhancements that will be applied to the baseline power generation or CCM projects. During the design/preparation phase of this proposed GEF project, the magnitudes of GHG emissions from the identified and selected baseline projects will be calculated based on the more detailed information that will be gathered, and the appropriate incremental enhancements that will be incorporated to these baseline projects. The CCM/NAMA projects in the energy end-use sectors that will be showcased in the proposed GEF project will be mostly on energy efficiency technology applications. Energy efficiency technology applications in commercial buildings will be among the direct project interventions intended for the energy end-use sectors.

For the purpose of estimating the potential GHG emission reductions that are attributable to this proposed project, it is assumed that: (a) a total of 15 MW of any or a combination of mini-hydro, solar PV, biomass gasification and wind power projects will be implemented as part of energy generation interventions during implementation of the project; and, (b) energy efficiency initiatives in commercial buildings that are implemented in compliance with the requirements of the existing National Standards on Energy Efficiency in Buildings. Regarding the latter, the EE initiatives will qualify for National Green Building Certification. The EE measures can range from the application of EE technologies (as retrofits) to replacement of inefficient appliances/equipment to reduce the building Specific Energy Consumption (SEC) from 240 kWh/m^2 to 120 kWh/m^2 per year.

During the 4 year project implementation, the project will facilitate or influence the installation of a total collective capacity of 15 MW RE-based power generation units. This will be the main tangible output of the project in regards the promotion and implementation of RE CCM/NAMA projects. The CO_2 emission reductions from these will be directly attributable to the project. The remainder 73 MW (out of the target 88 MW) are expected to be implemented after the 4-year GEF project. Since, these are more or less influenced or are assisted by the GEF project, the CO_2

emission reductions from them will be considered as direct-post project CO_2 emission reductions. For energy efficiency, the EE CCM/NAMA that will be facilitated by the project will be in commercial buildings, as applied to a minimum target of 50,000 m^2 of commercial building space. In the analysis of direct and direct post-project emission reductions, typical capacity factors of the proposed technologies are considered by taking into account an average grid emission factor across all the grids in Indonesia, which is 0.76 tCO_2/MWh. With regards to energy efficiency in commercial buildings, the current average SEC in existing commercial buildings of 240 kWh/m^2/yr is used as the baseline. The MEMR is targeting to achieve an average building sector SEC level of 120 kWh/m^2/yr. This will be done through the voluntary implementation of Green Building Codes.

Combined both direct and direct-post project emission reductions, (1) for RE interventions such as mini-hydro (50 MW, capacity factor of 50%), Wind power (10 MW, capacity factor 34%), biomass power (8 MW, capacity factor 80%), Solar PV (20 MW, capacity factor 22%), and (2) for EE interventions in buildings with a targeted building space of 50,000 m^2 where baseline SEC is 240 kWh/m^2 and targeted SEC is 120 kWh/m^2. The cumulative direct and direct post-project CO_2 emission reductions over 10 years for mini-hydro, wind power, biomass gasification, solar PV and energy efficiency in commercial buildings is 2,655,379 tCO_2. Considering the US$ 8,000,000 GEF grant for this project, the unit abatement cost is about US$ 3.01/tonne CO_2.

The above mentioned figures are rough estimates based on a conservative notion of the possible interventions that will be implemented under the proposed project. Since Indonesia's SNC does not provide any baselines and targets, the analysis presented here on global environmental benefits is calculated using a bottom-up approach considering foreseen installed capacity and possible EE potential in EE end use-sectors (direct influence of project).

Innovativeness, sustainability and potential for scaling up:

- *Innovativeness*: The proposed project facilitates the implementation of CCM actions through the NAMA approach. This will be the first time that this will be done in Indonesia. Most other internationally funded NAMA assistance is limited to build NAMA "readiness", might include the design of potential NAMAs but doesn't actually implement them. The current project is the first to do this in Indonesia.

- *Sustainability*: The proposed project aims to build capacity of the Government and private sector to develop and implement enabling technical knowledge, policy, institutional arrangement and financing mechanism to enable de-risking of sustainable investments in renewable energy and energy efficiency as well as to improve the electrification ratio through investment in RE. To ensure the effective application of the capacity provided the local governments in the provinces that will be involved in the project will commit to sustain the operation of the established Integrated Market Service Centers that will make use of most of the capacity development interventions in the performance of their mandates and tasks in the area of RE/EE technology applications in power generation and in the various energy-end use sectors. Moreover, the established technical support systems will be supported to continuously provide training for operation and maintenance of RE & EE technologies including MRV aspects of projects to local service companies and aspects such as linking energy access with rural livelihoods.

- *Potential for scaling up*: The project includes implementation of four projects, showcasing the NAMA approach in the energy generation and end-use sector in just four provinces. If successful, this experience can be used as a model for implementation of RAN-GRK and RAD GRK in all the other provinces of Indonesia, representing a tremendous potential for scaling-up.

A.2. Stakeholders: Roles in Project Preparation

Stakeholder	Role
Ministry of Energy and Mineral Resources (MEMR)	MEMR will be the executing partner of the proposed project since the Ministry has authority in energy sector. MEMR is responsible for the overall supervision and management of the project preparation activities. It will be involved in the project preparation as one of the stakeholders, provide required inputs to the project design, CEO endorsement request documentation and its review. For some of the activities, MEMR is responsible for overall coordination, supervision and

	management of the project preparation activities from the line ministries.
United Nations Development Programme (UNDP)	As GEF Implementing Agency, UNDP will assume the project assurance function through carrying out monitoring & evaluation of the project preparation activities, facilitating the budgetary provisions and support in implementing the project preparation activities. UNDP will lead the process of project preparation during the PPG phase by involving all the relevant stakeholders in the project design, preparation of required documentation for CEO endorsement and its review.
Ministry of Environment (MoE)	MoE is playing a pivotal role in the development of National MRV system for mitigation actions from all sectors in the RAN-GRK. MoE issued the GHG inventory guideline for energy sector and will start the process of developing national MRV system. It is essential to establish coordination between MEMR and MoE in development and implementation of MRV system for energy sector. MoE will be involved in the project preparation as one of the stakeholders, provide required inputs to the project design, and as active partner in the implementation of Component 1 and 3.
Ministry of Finance (MoF)	MoF will play role in issuance of fiscal policy, particularly for the climate change programme. MoF will be involved in the project preparation as one of the stakeholders, provide required inputs to the project design, and as active partner in the implementation of Component 2.
National Development Planning Agency (BAPPENAS)	BAPPENAS is responsible agency to develop RAN-GRK. BAPPENAS will be consulted on the design of the MRV-related activities of the project and to ensure synergy between RAN-GRK and RAD-GRK in energy generation and end-use sector. BAPPENAS will be one of the key stakeholders, involved in the project preparation, provide required inputs to the project design, and as active partner in the implementation of Component 3.
ICED Project	USAID's ICED project is promoting implementation of RE and EE projects in Indonesia. ICED-USAID will be a partner in leveraging public-private financing and provision of technical assistance, particularly for the small- to medium-scale renewable and clean energy projects. National project manager of ICED project will be involved in the project preparation as a stakeholder, provide required inputs to the project design, and as active partner in implementation of Component 2.
Millennium Challenge Corporation (MCC)/Millennium Challenge Account-Indonesia (MCA-I)	Under Green Prosperity Programme, MCA-I is promoting implementation of RE projects in Indonesia. Collaboration and synergy with MCA-I in the implementation of renewable energy related activities under GPF is intended to mobilize co-financing and higher project impact. Therefore, MCA-I will be involved in the project preparation as a stakeholder, provide required inputs to the project design, and as active partner in implementation of Component 2.
Financial institutions (including KfW)	There are about 6 commercial banks in Indonesia which are active in financing energy projects, including several renewable energy projects. All these institutions will be involved in the project preparation as stakeholders, provide required inputs to the project design, and as active partner in the implementation of Component 2.
Civil Society Organizations (e.g. ESCO Association, Institute for Essential Reform (IESR))	There are many CSOs in the country working with the issue of clean energy, green building and rural development. There is one Energy Service Company (ESCO) association and IESR, a national NGO, which are currently active and operational in the country. At the project preparation and implementation stage, these institutions will be involved as a stakeholders, provide required inputs to the project design and facilitating in the public consultation processes.
Academic Institutions (e.g. ITB, ITS, IPB)	There are three technical universities that are active when it comes to project focus i.e. Bandung Institute of Technology, Surabaya Institute of Technology and Bogor Agricultural Institute. These institutions will be involved in the project preparation as stakeholders, provide required inputs to the project design, and in the implementation particularly in acquiring technical skill to conduct feasibility study of RE/EE projects.
Green Building Council Indonesia (GBCI)	GBCI is developing and issuing certificate for green buildings in Indonesia. During project preparation stage, GBCI will be involved as a stakeholders, provide required inputs to the project design and as active partner in the implementation of Component 2, particularly for EE in commercial buildings.

A.3 Risk:

The following table summarizes the anticipated risks that might prevent the successful implementation of the project and achieving the project objectives, including the proposed mitigation measures:

Risks	Level of risk/ Risk Rating	Mitigation Measure
Lack of coordinating authority for implementation of mitigation actions in the government	Low	• MEMR is line ministry in charge for the emission reduction target in energy sector according to RAN-GRK. • Facilitation will be provided to the MEMR to lead the coordination for mitigation actions in energy sector with other related line ministries and sub-national levels government.
Lack of successful involvement of private sector, Public-Private Partnership local policy is not enacted	Low	• The policies and action plans of the energy generation sector has clearly indicated the promotion of renewable energy and energy efficiency. Institutional framework in place for the implementation of renewable energy and energy efficiency projects. • The MEMR and Ministry of Finance has planned to encourage the private sector through incentive scheme to promote renewable energy and energy efficiency applications. • Policy dialogue between government and private sector will be intensive. • Examples from other provinces/countries on successful PPP mechanism is disseminated and discussed with key stakeholders. • BAPPENAS will be involved in the PPP policy dialogues at provincial level.
Inability to maintain co – financing and the finances required for a sustained continuation of project outputs.	Low	• MEMR ensured their co-financing since the project outputs come directly under their development objectives. • Private sector will be involved in the implementation of mitigation activities. Indeed it is included as one of the criteria for the selection of prioritised investments. • Involvement of bilateral and multilateral institutions in the sustainable energy sector as a whole. For example, baseline project i.e. Indonesia Clean Energy Development (ICED) is USAID project.
Climate change impacts the sustainability of renewable energy projects implementation	Low	• Climate factors and climate scenario will be taken into account in the feasibility study and RE technology design. • Risk reduction strategy will be developed into a project design to manage climate-related risks.
Lack of manpower and institutional capacity at MEMR and local provincial government to support project implementation and programme continuity.	Medium	• The establishment of Integrated Market Service Center at provincial level in the selected provinces will address the institutional capacities at the local provincial government. • The project will adopt an integrated approach in the strengthening of institutional capacities of designated agencies for promotion of renewable energy and energy efficiency including the MEMR. And for this purpose, the commitment of the relevant personnel to allocate adequate time and efforts for such capacity building shall be ensured.
Lack of financial institutions sustained commitment for sustainable energy investments	Medium	• The capacities of financial institutions will be strengthened, including development of internal assessor within the institution to assess renewable energy and energy efficiency projects. • Several financial support mechanisms will be evaluated, such as loan guarantee/ collateral with the committed banks. For all intents and purposes, whatever schemes will be selected as appropriate these will be designed for optimum utilization of the funds.

A.4. Coordination:

The proposed will coordinate with the ongoing, proposed projects and programs that are closely linked with proposed GEF project.

a) BAPPENAS has been inviting development partners in Indonesia to support the RAD-GRK and its implementation. UNDP has assisted four provincial governments (Aceh, NTT, NTB and West Sulawesi) in the development of RAD-GRK in 2012 in collaboration with USAID's ICED project. BAPPENAS recognizes RAD-GRK as a living document that requires further improvement and assistance for its successful implementation, including the need for MRV system. The proposed project will support this initiative and further strengthen energy sector interventions in RAD-GRK for the targeted provinces to be able to attract investment to scale up its implementation with measurable emissions reduction to be reported as provincial contribution to the RAN-GRK. The proposed project will also closely coordinate with the existing NAMA commitments of Indonesia or even if these are credited NAMAs.
b) GIZ is implementing few projects that may be taken to the route of NAMAs at a later stage by the government. Projects such as "Policy Advice for Environment and Climate Change (PAKLIM)" focusing of energy efficiency in industrial sector, "Towards climate friendly transport technologies and measures (TRANSfer)" programme in transport sector, are aiming to include activities such as establishment of procedures for measuring, reporting and verification (MRV). Potential activities will be coordinated and available co-financing will be defined and clarified during the PPG phase.
c) Under MCC, the proposed project will coordinate with Green Prosperity Programme of the Millennium Challenge Corporation Indonesia (MCA-I) including potential assessment, improvement of spatial planning, grant for the community and project financing. Potential activities that need coordination and available co-financing will be further defined and clarified during the PPG phase.
d) KfW Entwicklungsbank is currently designing Global Climate Partnership Fund with the MoE for a structured financing up to US$ 20 million that will provide funds to renewable and energy efficiency projects as well as financing investment of ESCOs. The proposed project will open dialogue with KfW to seek possibility for RE & EE project financing. Potential activities that need coordination will be defined and clarified during the PPG phase and also available co-financing.
e) Under GEF-funded Wind Hybrid Power Generation Market Development Project (WHyPGen), UNDP is assisting government of Indonesia to develop FiT policy for wind power project and put in place technical capacity and financial mechanism for its implementation. The lessons learned in promoting investment in wind power generation sector through issuance of tariff policy and engaging project developers to the financing institution conducted under this project will be useful for the proposed project. Therefore, some of the activities will be coordinated, defined and clarified during the PPG phase.
f) Under GEF-funded BRESL project, MEMR is developing standards and labelling for CFL, electric fan, AC, refrigerator, electric motor, electronic ballast and rice cooker, including activities on public awareness, technical assistance to testing labs, accreditation programme and provision of testing equipment. The result of BRESL project on the energy performance standard for home appliances will be used in the proposed project for energy efficiency in the commercial building sector, particularly for replacing / retrofitting the inefficient appliances. Since these activities are being implemented by MEMR, some of the activities will be coordinated as required, defined and clarified during the PPG phase.

B. Description of the consistency of the project with:

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

The proposed project is in line with the Indonesian Presidential Regulation No.61/2011 on the National Action Plan to Reduce Greenhouse Gases Emission (RAN-GRK), which has set voluntary target for Indonesia of 26% GHG emission reduction by unilateral efforts and 41% emission reduction with international support in 2020 from its trajectory business as usual GHG emission scenario. The interventions proposed under RAN-GRK are potentially considered as NAMAs. RAN-GRK targets reduction of 22 million tonnes CO_2eq by 2020 which shall result from the implementation of energy efficiency actions and 4.53 million tonnes CO_2eq is from implementation

of various renewable energy technologies, such as micro and mini hydro, photovoltaic, wind power and biomass. Based on the experiences that will be gained from the implementation of the proposed project, potential NAMAs for RAN-GRK implementation will be reported in the 2nd BUR and TNC.

In the energy sector, the Indonesian Energy Law 30/2007 and Presidential Regulation 5/2006 on National Energy Policy renewable energy is targeted to contribute 17% of the primary energy mix in 2025 and energy efficiency in industries, buildings and households is expected to save 15.6% of the total primary energy needed in 2025. In addition, the Government of Indonesia is targeting 100% electrification by 2020, with special annual budget allocation for Rural Electrification Programme. In 2011, electrification ratio in Indonesia is reported 73%. By supporting implementation of on-grid and off-grid electricity generation in provinces with low electrification ratio, the proposed project is relevant with the aforementioned commitments of the national government.

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

The project objective is to support 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), 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) and CCM-6 (Outcome 6.2: Human and institutional capacity of recipient countries strengthened).

B.3 The GEF Agency's comparative advantage for implementing this project:

UNDP will provide US$ 200,000 as grant co-financing to support project activities that include personnel cost for project management, monitoring, evaluation, supervising and technical assistance. UNDP demonstrated a sound capacity to build institutional capacity in the country to the sustainable implementation of renewable energy and energy efficiency programs, including bringing stakeholders together for successful implementation. UNDP has extensive experience in renewable energy and energy efficiency projects aimed at technology identification, piloting decentralized generation and distribution, and designing revenue models, for example in the implementation of four GEF-funded projects during 2009-2013. Apart from this UNDP is assisting the government in developing Indonesia Climate Change Trust Fund, Mitigating Fiscal Framework and National Communications to the UNFCCC. The UNDP Country Office in Indonesia is sufficiently well resourced to provide the necessary oversight to support the Government of Indonesia in implementing this proposed project. UNDP's assistance in climate change falls under the responsibility of the Environment Unit (EU). A professional staff from the country office will be responsible for oversight, project assurance and will represent UNDP in the project board meetings. There is substantial in-house technical expertise within UNDP that can be deployed as required to support the Government. This is backed up also with the technical expertise of the Regional Technical Adviser available in the UNDP Asia-Pacific Regional Centre (APRC) based in Bangkok, Thailand. Also, UNDP's network of global Senior and Principal Technical Advisors provide additional technical oversight and leadership helping to ensure that programs on the ground achieve maximum policy impact.

Globally, the proposed project is strongly aligned with UNDP-GEF Energy, Infrastructure, Transport and Technology (EITT) team Signature Programme 3 (SP-3) i.e. "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 energy generation and end-use sectors, such as the project "Nationally Appropriate Mitigation Actions in the Energy Generation and End-Use Sectors in Peru", approved by GEF Council in 2012. Furthermore, UNDP in collaboration with European Union has been implementing Low Emission Capacity Building Programme (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 LECB is the

formulation of NAMA. 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 NAMA & MRV in energy generation and energy end use sectors.

UNDP Indonesia CO assisted the MoE in developing its Second National Communication (SNC) and currently designing its TNC, which include development of GHG inventory and mitigation options. UNDP Indonesia CO also assisted four provinces in the development of RAD-GRK and later assisted BAPPENAS in development of Monitoring, Evaluation and Reporting guideline for energy sector. This ongoing involvement and national experiences uphold UNDP in advantageous position, as a potential GEF agency in the development of NAMAs and partner with MEMR.

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
Mr. Dana A. Kartakusuma	GEF Operational Focal Point	Ministry of Environment	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 project identification and preparation.					
Agency Coordinator, Agency name	**Signature**	**DATE** *(MM/dd/yyyy)*	**Project Contact Person**	**Telephone**	**Email Address**
Adriana Dinu Officer-in-Charge and Deputy Executive Coordinator, UNDP/GEF		Aug 21, 2013	Butchaiah Gadde, Regional Technical Specialist EITT	+66 2304 9100 ext 5048	butchaiah.gadde @undp.org