



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:	Improvement of Industrial Energy Efficiency in Myanmar		
Country(ies):	Myanmar	GEF Project ID: ¹	5321
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	130042
Other Executing Partner(s):	Ministry of Industry, Ministry of Environment Conservation and Forestry, Ministry of Energy etc.	Submission Date:	2/26/2013
		Resubmission Date:	4/10/2013
GEF Focal Area (s):	Climate Change	Project Duration (Months)	60
Name of parent program (if applicable):		Agency Fee (\$):	259,350
• For SFM/REDD+ <input type="checkbox"/>			
• For SGP <input type="checkbox"/>			

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK²:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCM-2 Promote Market Transformation for Energy Efficiency in Industry and the Building Sector	GEFTF	2,730,000	13,800,000
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
Total Project Cost		2,730,000	13,800,000

B. INDICATIVE PROJECT FRAMEWORK:

Project Objective: To promote sustained GHG emissions reduction in the Myanmar industry by improving policy and regulatory frameworks and institutional capacity building for industrial EE and the implementation of energy management system, based on ISO 50001, EnMS and optimization of energy systems in industry.						
Project Component	Grant Type ³	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Improvement of policy and regulatory frameworks, incentive schemes, support programmes	TA	Improved policy and regulatory frameworks, incentive schemes, support programmes, energy data and awareness will facilitate sustainable energy efficiency improvement in industry	1.1. EE strategy developed based on experience and lessons learned from other countries; 1.2. Incentive schemes, e.g. tax breaks or exemptions, grant and non-grant instruments, etc. and support programmes, e.g. consultancy services,	GEFTF	400,000	1,000,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the reference attached on the [Focal Area Results Framework](#) when completing Table A.

³ TA includes capacity building, and research and development.

			training, etc. developed; 1.3. Energy consumption data by large and medium sized industry establishments collected and managed; and 1.4. Awareness raising activities on NAMA and EE conducted.			
2. Capacity building	TA	Strengthened or built capacity of institutions, industries, consultants and equipment suppliers on energy management system, energy system optimization, and EE project financing will assist industries in the implementation of EE improvements	2.1. Introductory, user and expert training on energy management systems based on ISO 50001, EnMS conducted; 2.2. User and expert training on energy system optimizations conducted; and 2.3. Training on EE project financing provided to industry and financial institutions.	GEFTF	700,000	2,400,000
3. Demonstrations and Upscaling	Inv	Demonstrated projects on energy management system, and energy system optimization in selected plants and sub-sectors and widely used case studies will result in direct GHG emissions reductions and leverage the interest and belief in investment in IEE projects	3.1. Energy management system based on ISO 50001, EnMS implemented in 50 industrial establishments, case studies prepared; and 3.2. At least 20 optimization projects implemented energy systems: pump, compressed air, fan, and steam, case studies prepared.	GEFTF	1,370,000	9,600,000
4. Monitoring and Evaluation	TA	Adequate monitoring and evaluation facilitating smooth and successful project implementation	4.1. Regular monitoring exercises conducted, PIRs prepared; Tracking tools prepared according to GEF requirements; and 4.2. Mid-term and final project evaluation conducted.	GEFTF	125,000	300,000
Subtotal					2,595,000	13,300,000
Project Management Cost (PMC) ⁴				GEFTF	135,000	500,000
Total Project Cost					2,730,000	13,800,000

⁴ To be calculated as percent of subtotal.

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

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
GEF Agency	UNIDO	Grant	70,000
GEF Agency	UNIDO	In-kind	150,000
National Government	Ministry of Industry	In-kind	800,000
National Government	Other Ministries and Institutions, TBI	In-kind	1,980,000
Private Sector	Industries and external development partners, TBI during PPG phase	Grant	2,000,000
Private Sector	Industries	In-kind	8,800,000
Total Cofinancing			13,800,000

D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹:

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) ²	Total (\$) c=a+b
UNIDO	GEFTF	Climate Change	Myanmar	2,730,000	259,350	2,989,350
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				2,730,000	259,350	2,989,350

¹ In 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. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

E. PROJECT PREPARATION GRANT (PPG)⁵:

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

	<u>Amount Requested (\$)</u>	<u>Agency Fee for PPG (\$) ⁶</u>
• No PPG required.	<u> -- 0-- </u>	<u> --0-- </u>
• (upto) \$50k for projects up to & including \$1 million	<u> </u>	<u> </u>
• (upto)\$100k for projects up to & including \$3 million	<u> 100,000 </u>	<u> 9,500 </u>
• (upto)\$150k for projects up to & including \$6 million	<u> </u>	<u> </u>
• (upto)\$200k for projects up to & including \$10 million	<u> </u>	<u> </u>
• (upto)\$300k for projects above \$10 million	<u> </u>	<u> </u>

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

Trust Fund	GEF Agency	Focal Area	Country Name/Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total PPG Amount						

MFA: Multi-focal area projects; MTF: Multi-Trust Fund projects.

⁵ On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

PART II: PROJECT JUSTIFICATION⁷

A. Project Overview:

A.1. Project Description: Briefly describe the project, including; 1) the global environmental problems, root causes and barriers that need to be addressed; 2) the baseline scenario and any associated baseline projects; 3) the proposed alternative scenario, with a brief description of expected outcomes and components of the project; 4) incremental cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing; 5) global environmental benefits (GEFTF, NPIF) and adaptation benefits (LDCF/SCCF); 6) innovativeness, sustainability and potential for scaling up.

1. Global Environment Problems, Root Causes and Barriers that need to be addressed:

Industrialization has always been a high priority of the country development agenda of Myanmar. In 2010, the country had about 790 state-owned industrial establishments and 101,000 private establishments, concentrated mainly in Mandalay Division, Yangon, Bago, Ayeyarwady, and Sagaing; around 4.8 million people are employed in industry. The share of industry in GDP has increased from 10.5% in 1990/91 to 20.5% in 2010/11. With the expected foreign investment influx in the coming years, the industrial sector will certainly grow much faster.

Share in GDP (%)

	1990/91	2002/03	2007/08	2008/09	2010/11
Industry	10.5	12.75	19.9	21.7	20.5
Agriculture	57.3	52.89	43.3	41.2	43
Services	32.2	35.3	36.7	37.1	36.5

The country has been facing acute energy and power shortages. Therefore, drastic measures have to be taken to improve this situation; worldwide experience shows that EE is one of the most cost effective measures to increase the availability of electricity and energy. According to the United Nations Development Programme (UNDP), approximately 1,000 kilograms of oil equivalent of energy are needed per capita per year to ensure an acceptable standard of living. However, UNESCAP has estimated the per capita energy consumption in Myanmar to be only about 430 kilograms of oil equivalent. In Yangon and Mandalay, the country's two largest cities, electricity has been distributed under a rationing system for the past eight years, i.e., for six hours a day to households and 12 hours per day to the industrial zones. This creates immense difficulties for industrial operations, in particular for those sub-sectors which require continuous power supply. According to the development index of Myanmar that was compiled by the World Bank in 2010, the average Myanmar uses only about 94 kWh of electricity per year which places Myanmar at the ninth rank among the Southeast Asian countries.

According to statistics from the Ministry of Electric Power (Division 2), as of January 2010, Myanmar needed 1,555 MW of electricity, while the existing power plants produced only 556 MW.

In addition to the need to improve EE to increase energy availability for the growing population and expanding industry, there is also very high potential for EE in the industrial sector due to the following reasons:

- Energy usage in the entire economy is very inefficient, due to energy price subsidization;
- Energy efficiency in industry is very low because of obsolete technologies and equipment, and outdated practices being used;
- The industrial sector consumes large amounts of energy as Myanmar has relatively higher industry production

⁷ Part II should not be longer than 5 pages.

outputs than other least developed countries.

There is very high potential for utilization of solar thermal energy in the industry of Myanmar. The country has very high annual average solar radiation, about 5KWh/m²/day, equivalent to about 51,973 TWh/year, but almost no use so far in the industrial sector. The majority of the country's industry, such as textile, rubber, pharmaceutical, food and beverage, leather processing, and biochemical, etc. need a process heating temperature below 250°C, which can be provided by solar thermal technologies. Currently, the primary energy consumption is based mainly on oil and natural gas.

In order to successfully implement EE improvements and allocation of solar thermal energy in industry, there remain many barriers, however, that need to be addressed in order to create a sustainable EE market in the country:

- Lack of experience and information in promoting IEE;
- Lack of enabling policy and regulatory frameworks, incentive schemes, support programmes, awareness, knowledge and methodologies;
- Lack of adequate institutional capacity and human resources in industry;
- Lack of information and data on energy consumption and benchmarking;
- Lack of adequate financing resources and capacity to develop investment projects;
- Government subsidies for energy use in the industrial sector.

2. Baseline scenario and associated baseline projects:

As mentioned above, EE and energy conservation have been the priorities of the new Government which was formulated only after the election at the end of 2011. The highest institution dealing with energy at the national level, the National Energy Management Committee with the Vice-president acting as Head of the Committee, was only established in January 2013. The Committee's duties and functions are inter-alia, to formulate National Energy Policy, and necessary laws, rules and regulations to implement the National Energy Policy with a focus on ensuring sustainable development, environmental conservation and cutting energy waste.

There have only been a few small programmes implemented, mainly on awareness raising, such as promoting the utilization of energy efficient appliances and energy saving technologies and the reduction of energy consumption in the transport sector. The Ministry of Energy and Ministry of Industry have also participated in seminars and workshops at the regional level, such as the ASEAN Energy Award Program, but little EE capacity building has taken place within Myanmar. External support on this field has also been limited in number and small in scope. The New Energy and Industrial Technology Development Organization (NEDO) of Japan has been recognized as the most notable external partner in the EE field. NEDO has planned to organize energy conservation seminars, and carry out feasibility studies for energy conservation projects under the framework of a cooperation programme signed with the Foreign Economic Relation Department, FERD, of the Ministry of National Planning. In recent years, Myanmar has sent about 20 plant engineers and officials to Japan to receive training on EE, and with the support of the ASEAN Energy Centre, some energy audits have been carried out. Since 2011, the Myanmar Engineers Society, MES has organized few training courses on energy managers based on the materials and methodologies developed by the AEMAS project, ASEAN Energy Management Scheme, of the ASEAN Centre for Energy. Since 1997, about 8 regional industrial training centers have been established with support from the governments of Germany, ROK, Japan, China, India, etc. They have provided limited training courses for industrial technical personnel.

While there are limited projects focusing specifically on industrial energy efficiency issues in Myanmar, there has been recognition of the need for improvements in the provision of electricity in Myanmar. The government of Norway, through the Asian Development Bank (ADB), has recently announced its intention to provide a technical assistance grant to Myanmar to help improve the 1984 Electricity Law in line with current international standards. Similarly, the IFC has also discussed their intent to invest in the improvement of the Myanmar electricity grid. The proposed project's focus on EE standards and ISO 50001 within industry would complement this work, adding the missing industrial increment to these already existing projects.

There have been almost no policies or regulations specifically relating to EE and energy conservation. The most

notable policy document was the Energy Master Plan prepared in 1998 with support from Japan. Recently, the Government has cited its intention to improve the energy pricing system and as part of the Sustainable Industrial Development led by the Myanmar Industrial Development Committee, MIDC, large industries have been encouraged to obtain ISO 140001, Environmental Management Standards, compliance certifications. ISO 140001 is considered the “predecessor” of ISO 50001 on the Energy Management Standard (EnMS).

3. GEF project alternative scenario:

As discussed, barriers still remain to be addressed in order to ensure sustained EE improvements in Myanmar. With the financial support from the GEF, UNIDO will mobilize additional resources and external and local expertise to assist the country in removing these barriers. Since early 2010, UNIDO has consulted with concerned ministries, institutions and industries of the country to develop the IEE project proposal, similar to other UNIDO IEE projects being implemented in more than 15 other countries around the world, focusing on two new approaches: (i) implementation of a energy management system at the factory level based on the new ISO 50001, Energy Management Standards, and (ii) optimization of energy systems, such as pump, compressed air, steam, motors, etc. In ASEAN, similar projects are being implemented in Malaysia, Thailand, Indonesia, the Philippines and Vietnam.

The proposed project will have 3 substantive components:

The proposed UNIDO/GEF project will constitute a significant additional driver for investment in energy efficiency practice and equipment by industry in Myanmar. Energy management is a cost-effective means of incentivizing energy efficiency. The introduction of an energy management standard, in response to customer demand, and delivery of rigorous training on energy management, and energy systems optimization, will broaden support for current energy efficiency programs and provide a foundation for industry’s accelerated uptake of energy efficiency technology and practice. The project will deliver the incremental technical and policy inputs needed to facilitate the preparation of proposals acceptable to banks that are committed to financing energy efficiency. The project will not only result in energy savings and a reduction in GHG emissions, but also in an increase in competitiveness and global market access of industrial products from the country.

Component 1: Improvement of policy and regulatory frameworks, incentive schemes, support programmes.

- *Output 1.1: EE strategy developed based on experience and lessons from other countries*

International and local experts will assist the concerned authorities, and in consultations with all stakeholders, develop the national EE strategy. Attention will be made to carefully review the existing energy price subsidy structures of the country, their short-term and long-term impacts and to come up with appropriate recommendations for the Government to consider reducing this subsidy. Lessons and experiences from other countries in the development and implementation of the strategy will be shared. Capacity building will take place in on-the-job training.
- *Output 1.2: Incentive schemes and support programmes developed*

Experience and lessons from other countries will be shared and suitable incentive schemes: grant and non-grant instruments suitable to the country conditions will be developed. Support programmes, including programmes to promote the implementation of ISO 50001, or EE action plans, as a follow-up of the project, will also be designed to ensure sustainability.
- *Output 1.3: Energy consumption data by large and medium industry establishments collected and managed*

Reliable energy data is crucial for the effective implementation of policies, regulations and incentive schemes. The project will assist the design and implementation of an energy data reporting system, and the management of the database. It can also help to establish benchmarking for selected sub-sectors in the industry. During the project, only energy data from the large and medium industrial establishments will be collected; later on it will be expanded to other sectors and small establishments. An institution will be selected to be responsible for collecting and managing the energy data. Regulations will be developed to govern the use of the collected data.
- *Output 1.4: Awareness raising activities on NAMA and EE conducted*

Effective and suitable awareness raising programmes will be designed and implemented. Results from the

project will be used, for example, in the case studies from component 3 to develop incentive schemes and support programmes, etc. Awareness raising activities can also be integrated into other project activities, and targeted to specific audiences and subjects, for example, the half-day awareness workshop on energy management system.

Myanmar is in the process of formulating its NAMA, and the project will provide relevant information to the process and also participate in the TNA exercise to ensure that the project activities are in line with the mitigation action plan and technology needs. Specific reference to NAMA and TNA will be included in the relevant awareness raising documents and events of the project.

Component 2: Capacity building

- Output 2.1: Training on energy management systems conducted

The UNIDO training packages on EnMS will be adjusted and translated into Burmese, if necessary. Training will be carried out at three levels: (i) half-day awareness training targeted at organization managers, plant owners, concerned government officials, etc., (ii) 2-day user training targeted at plant engineers, energy managers and consultants, etc., and (iii) expert level training targeted at energy management experts and ISO 50001 auditors; at least 40 experts will be trained in EnMS. Capacity building for institutions responsible for the implementation of ISO 50001, such as the Standards Institute of the MOST, will also be strengthened. Training courses will be organized in regions with a high industrial concentration, i.e. Mandalay Division, Yangon, Bago, Ayeyarwady, and Sagaing and a practical guide for the implementation of EnMS will be developed. Training and demonstration projects on EnMS will focus on energy intensive sub-sectors with the highest energy saving potential, such as: petro-chemical, ceramic, automotive, pharmaceutical, food processing, paper & pulp, etc. The selection will be further considered during the PPG phase.

- Output 2.2: Training on energy system optimization conducted

The UNIDO training packages on energy system optimization (ESO) will be adjusted and translated into Burmese, if necessary. Systems can include pump, compressed air, steam, fan, motor, and process heating and the final selection will be conducted during the PPG phase. Training will be carried out at three levels: (i) 2-day end user training targeted at plant engineers, energy managers and consultants, and concerned government officials, etc.; (ii) expert level training targeted at respective specialists, energy managers of large industrial establishments, and free-lance consultants, who could later on provide services to the SMEs; and (iii) half-day vendor training. At least 10 to 15 experts and 30 to 50 end-users in each of the energy systems will be trained. Capacity building for an institution responsible for the follow-up on the training after project completion will also be strengthened. The selection of the institutions will be carried out during the PPG phase; MES is one of the relevant candidates.

Training and demonstration projects on ESO will be focused on sub-sectors that use significant amounts of energy for their energy systems, such as: steam system in the petro-chemical, paper & pulp, textile, and food processing sub-sectors; fans in the cement, and ceramic sub-sectors; pumps in the food processing, and paper & pulp sectors; and compressed air in the automotive sub-sectors. The selection will be further considered during the PPG phase and carefully implemented during project implementation.

- Output 2.3: Training on EE project financing conducted.

Interested industry personnel will receive training on preparing bankable EE project proposals, and banks and financial institutions personnel will receive training to enhance their understanding of IEE projects to facilitate their work in providing funds for EE project investment.

Component 3: Demonstration and upscaling

- Output 3.1: Energy management system implemented and case studies prepared.

Around 50 companies or plants will receive support to implement EnMS using the capacity built and incentive schemes developed. It is expected that some 20 plants will plan to obtain ISO 50001 compliance certificates. Case studies will be prepared for awareness raising.

- *Output 3.2: Energy system optimization implemented and case studies prepared.*

From the companies implementing EnMS, energy systems will be selected and assessed. It is expected that about 20 ESO projects will be implemented using the capacity built and incentive schemes developed. Case studies will be prepared for awareness raising.

4. Incremental cost reasoning and co-financing:

Myanmar has been in relative isolation for many years. Therefore, this type of support from the GEF and UNIDO is critical to complement the effort of the country on its way to developing a sustainable industrial sector.

In the absence of the proposed UNIDO-GEF project, the uptake of energy management based on ISO 50001 and energy system optimization would be very slow. The GEF project will provide assistance in the promulgation of energy policy and regulations, and building capacity of enterprises and institutions. Furthermore, it will share international experiences from other countries where energy management standards have successfully been implemented as well as from other ASEAN countries, which are implementing similar IEE projects. The GEF project will play a catalytic role in transforming the market for industrial energy efficiency goods and services through the activities on standards and capacity building.

Co-financing:

The tentative total co-financing of the project is equivalent to US\$13.8 million as explained in Part I. More consultations will be carried out during the PPG phase and co-financing letters will be obtained; in particular, efforts will be made to raise co-financing in cash by the Government, such as the Ministry of Industry, the Ministry of Energy, etc. in addition to their in-kind contributions.

5. Estimation of Global Environmental Benefits:

The project will result in the achievement of energy consumption savings in industry in Myanmar in comparison to the BaU scenario, hence reducing the country's GHG emissions.

In a brief assessment of the limited available energy data in Myanmar and in comparison with similar projects implemented in ASEAN countries, it is expected to have about 2 to 4 million tons of CO₂ equivalent direct, and about 5 to 10 million tons of CO₂ equivalent indirect, reduced over a 15-year period, including the 5-year project implementation period. The expected abatement cost with the GEF grant would be to the tune of \$1.35- 0.68 ton CO₂ direct, and \$0.54-0.27/ton CO₂ indirect.

A more detailed assessment of energy savings will be conducted during the PPG phase following the GEF GHG calculation manual.

6. Innovativeness, sustainability and potential for scaling up:

Implementation of EnMS and ESO are very new approaches for developing countries and the project's strong private sector participation in the Project Steering Committee (PSC) will ensure the formation of a valuable public-private partnership. The project will also benefit significantly from the experience gained by other similar projects in five other ASEAN countries.

To ensure sustainability and scaling up, the project will focus on creating a vibrant and sustained local market for EE services and goods by offering integrated technical assistance packages: (i) enabling policy and regulatory framework with incentives and support programmes, (ii) intensive capacity building, (iii) demonstration and awareness raising, and (iv) improved financing for EE. In particular, the project will deliver high quality trainings on EnMS and ESO with significant on-site practices under extensive coaching by experienced international and local trainers, final exams with certificates for expert level trainees, and selected institutions to be strengthened to continue the training after project completion.

It is expected that a much higher number of industries will implement EnMS and ESO after project completion, as a result of improved awareness and policy and incentives to promote EnMS implementation. They can easily get support from well trained experts, and the number of experts will be increased thanks to the continued training to be provided by the strengthened institutions.

A.2. Stakeholders: Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and others as relevant) and describe how they will be engaged in project preparation:

Stakeholder	Roles in the project
Ministry of Industry, MOI	MOI is the national executing agency, and the Chair of the Project Steering Committee (PSC).
Ministry of Environment Conservation and Forestry, MOECF	As the GEF Focal Point in Myanmar, MOECF shall be a member of the PSC.
Ministry of Energy, MOE	To be responsible for and participate in the policy and regulatory frameworks component, a member of the PSC.
Ministry of Science and Technology/Standards Institute	To be responsible for policy and implementation relating to ISO 50001, EnMS.
Union of Myanmar Federation of Chambers of Commerce and Industries, UMFCCI	To reach out to the business sector; A member of the PSC.
Myanmar Industries Association, MIA	To reach out to the industries; A member of the PSC.
Myanmar Engineering Society, MES	To provide technical expertise; A member of the PSC.
Banks and other financial sources	The bank officials will receive training from the project and will provide loans for the demonstration projects, when applicable, participating in the application of non-grant instruments.
Gender Groups	Relevant women associations will be invited to participate in the PPG phase to provide inputs and comments to the CEO ER; for example, whether the CEO ER will have adequately addressed gender issues and gender mainstreaming.
Civil Society Organizations, CSOs	Relevant CSOs will be invited to participate in the PPG phase or consulted about their roles during project implementation.
Indigenous Groups	Efforts will be made to involve the indigenous peoples of Myanmar in the PPG phase and later on during the implementation of the project; for example, they will participate in awareness raising activities. They will also benefit from the increased energy availability resulting from the project.

A.3. Risk: Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable):

The foreseen risks are summarized in the below table. There are no specific climate change risks relating to the implementation of this project, other than the general impacts that climate change can have on the entire country and the entire industrial sector of Myanmar.

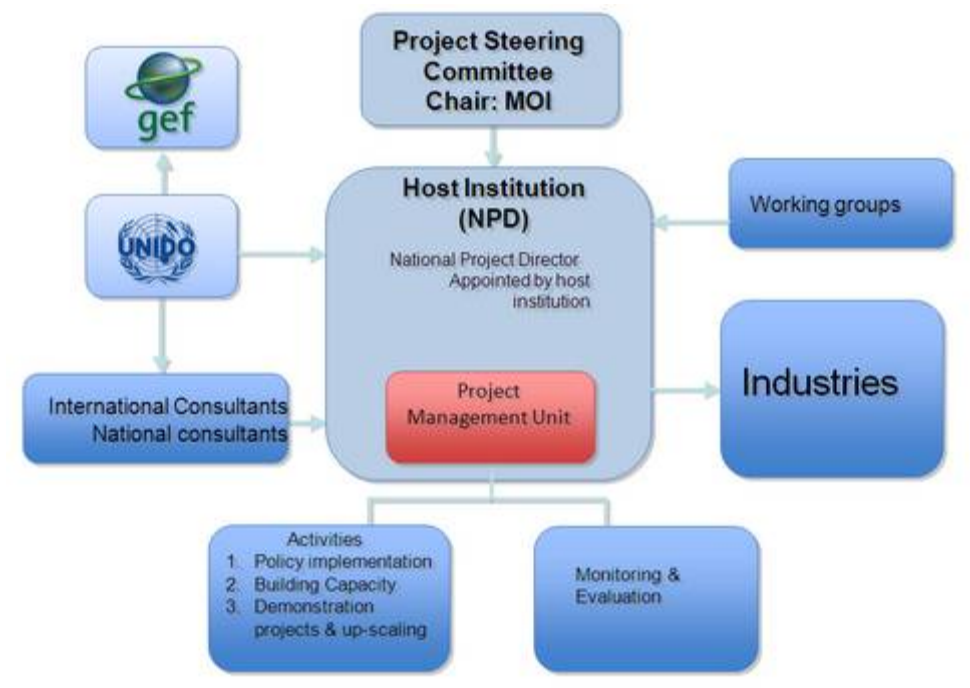
Risk	Rating	Mitigation
Management priorities in the participating public sector and private sector organizations change over time before and during project implementation.	Low	Key stakeholders are member of the PSC, and Co-financing letters will be obtained during the PPG phase to ensure the commitments.
Lack of effective coordination between various project partners.	Low	A proper coordination will be sought through the PSC and ad-hoc working groups per subsector or theme that can be set up as needed, bringing in other partners and beneficiaries.
Companies have doubts on techno-economic viability. Thus, demonstration projects are delayed, limiting the opportunity to disseminate success stories and develop case studies.	Medium	Technologies are applied in developed and developing countries. To overcome this risk, the factories selected as demonstration sites will be carefully evaluated. This will include the management support, financial strength, and technical backup and replication abilities. The demonstration project proponents are anticipated to provide initial case studies results and thus serve as examples for other factories to replicate.
Limited number of participants interested in training and no immediate demand of services for trained experts as the growth of the market for solar thermal technology is slower than expected.	Low	The integrated approach by the project is expected to mitigate this risk by not promoting only the technology by creating new market and demand of application in heat processes in the industrial and commercial sector; the project proponents and industrial collaborators will play a proactive promotion and campaign to create interest.
Incentive and financial support system are insufficient.	Medium	The capacity of financial and governmental institutions will be strengthened on energy saving opportunities. Grant and non-grant instruments will be developed and applied to ensure availability of financing resources. Experiences from other countries will be shared, and results from the demonstration will be widely presented.

A.4. Coordination: Outline the coordination with other relevant GEF financed and other initiatives:

The country is now in the process of beginning to develop other GEF projects and other countries, such as Japan, the Republic of Korea, China, Germany, etc. and inter-governmental organizations and institutions, such as the UNDP, WB, ADB, etc. are starting to develop projects relating to climate change. For example, the World Bank has recent announced a zero-interest loan package to expand access to electricity and other potential projects. During the PPG phase, more consultations will be carried out with these institutions, in particular with the WB, ADB and UNDP, to discuss coordination and cooperation modalities and mechanisms. The national Project Steering Committee, consisting of many members of the National Energy Management Committee, will significantly facilitate this coordination.

The UNIDO Regional Office in Bangkok, also covering Myanmar and other countries in the region as described in B.3 hereunder, will facilitate the coordination with relevant projects supported by other development partners through the RO's participation in various coordination mechanisms at the country level, for example the UN Country team. The RO will also facilitate the coordination and cooperation between this project and other UNIDO projects in Myanmar and other IEE projects in the region, as briefly described in B3.

The project will be hosted by the Ministry of Industry (Heavy Industrial Planning Department) and managed daily by a Project Management Unit. A PSC will be established to provide strategic guidance, and coordination between various ministries. The Ministry of Industry will chair the PSC and a National Project Director will be appointed by the Ministry of Industry to act as the daily focal point for the PMU on behalf of the Government to ensure the counterparts' ownership of the project.



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 project is consistent with the national policies, plans, programmes, and assessments relating to the UNFCCC. For example, Myanmar's Initial National Communication (INC) submitted to the UNFCCC on 26 December 2012 prioritizes energy conservation and efficiency as one of the country's three focuses to reduce CO2 emissions in the

energy and industrial processes and product use sectors. The INC has also pointed out that a reduction of energy consumption in industry will increase the energy availability to the economy, thus improving energy access for the population. The Technology Needs Assessment carried out under the ICN project has observed that large segments of the industrial community in Myanmar are not aware of industry related environmental problems, and many factories are still using old machineries and obsolete technologies. However, there is a large amount of interest for environmentally sound technologies. The country is currently in the process of developing the NAMA.

In order to meet the challenges of rapid energy demand growth, Myanmar has laid and pursued the following principles for the energy sector, as stipulated in the Energy Policy and Strategy prepared by the Ministry of Energy:

- To maintain the status of energy independence;
- To promote wider use of new and renewable sources of energy;
- To promote energy efficiency and conservation; and
- To promote use of alternative fuels in household.

From these 4 principles, the last three will result in a reduction of country CO₂ emissions.

On 9 January 2013, the president of Myanmar established the National Energy Management Committee with the Vice-president as the Head of the Committee. The Committee's duties and functions are inter-alia, to formulate National Energy Policy, and necessary laws, rules and regulations to implement the National Energy Policy with focus on ensuring sustainable development, environmental conservation and cutting energy wastes.

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

The proposed project aims to support the reduction of fossil CO₂ emissions in Myanmar's industry by improving energy efficiency. The project is therefore fully consistent with Objective 2 of the GEF Climate Change Focal Area Strategy, namely "Promote market transformation for energy efficiency in industry and the building sector." As a result of the proposed project intervention, Myanmar will have improved regulations, financial incentive mechanisms: grant and non-grant instruments and strengthened technical and institutional capabilities for the development, financing and implementation of energy efficiency improvements.

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

UNIDO's mandate is to assist developing countries and transition economies in developing their industries, and presently focuses on Green Industry. UNIDO has been formally recognized by the GEF as having comparative advantage in IEE and RE, and currently manages the implementation of similar IEE projects in more than 15 countries around the world, five of which are in ASEAN. UNIDO has developed complete packages of training documents for EnMS and energy system optimizations (pumping, steam, compressed air, fan, and motor) and has extensive experience in managing ISO 50001 IEE projects. This experience will allow the creation of synergies and linkages between the proposed project and existing ones in the South-East Asian region. UNIDO has its Regional Office in Bangkok, which covers Myanmar in addition to Thailand, Malaysia, Laos and Cambodia.

It is expected that UNIDO will contribute US\$70,000 in cash and US\$150,000 in-kind to the main phase of the project, and US\$50,000 to the pre-PIF and PPG phases. Equivalent to US\$15,000 has already been provided for the pre-PIF phase and US\$35,000 is to be provided for the PPG phase. In-kind contribution will be the provision of technical expertise by UNIDO staff, as well as training materials, tools and software already developed by UNIDO.

Within UNIDO, potential synergies with relevant departments, such as the Business, Investment and Technology Service Branch, Trade Capacity-Building Branch, Agri-Business Development Branch, Industrial Policy and Private Sector Development Branch, Montreal Protocol Branch and Environment Management Branch will be established. For example, the Montreal Protocol Branch currently has a project on refrigeration and ODS in Myanmar that offers many complementary aspects and could easily incorporate energy efficiency, allowing for project coordination in the field.

The project objectives are in line with one of the three thematic areas UNIDO, namely “energy and environment” where UNIDO helps its clients to solve two fundamental problems: de-linking intensity of energy and material use from economic growth, and reducing the environmental damage that occurs with energy and material use. The project will also link to two global initiatives managed and launched by UNIDO SE4ALL, and Green Industry Platform.

UNIDO's Energy Strategy aims at helping developing countries and countries in transition to achieve the following objectives:


- Increase the competitiveness of their industries by reducing the dependence on fossil fuels;
- Reduce their impact on climate change by decreasing the carbon emissions of their industries and by promoting renewable energy technologies;
- Increase the viability of their enterprises, particularly in rural areas, by augmenting the use of locally available renewable energy sources.

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):
 (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Hla Muang Thein	DDG, Environmental Conservation Department	MINISTRY OF ENVIRONMENTAL CONSERVATION AND FORESTRY	11/12/2012

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
Mr. Philippe Scholtès, Officer in Charge, Programme Development and Technical Cooperation Division (PTC) UNIDO GEF Focal Point		4/10/2013	Khac-Tiep NGUYEN, Industrial Development Officer, Energy and Climate Change Branch, UNIDO	43-1-26026-3086	k.nguyen@unido.org