



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:	Green Technology Application for the Development of Low Carbon Cities (GTALCC)		
Country(ies):	Malaysia	GEF Project ID: ¹	5329
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4283
Other Executing Partner(s):	Ministry of Energy, Green Technology & Water Iskandar Malaysia and cities of Putrajaya, Cyberjaya, Miri, Port Dickson	Submission Date:	09 April 2013
GEF Focal Area (s):	Climate Change	Project Duration (Months)	48
Name of parent program (if applicable): <ul style="list-style-type: none"> • For SFM/REDD+ <input type="checkbox"/> • For SGP <input type="checkbox"/> 	N/A	Agency Fee (\$):	413,705

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK²:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCM-4	GEFTF	4,354,794	34,386,878
Total Project Cost		4,354,794	34,386,878

B. INDICATIVE PROJECT FRAMEWORK

Project Objective: To facilitate the implementation of low carbon initiatives in at least five Malaysian cities and showcase a clear and integrated approach of successful low carbon urban development.						
Project Component	Grant Type ³	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Policy support for the promotion of integrated low carbon urban development	TA	1. Major cities implemented and adopted integrated low carbon urban development plans and /or programs	1.1.1. Approved and enforced policies, legislations and regulations on integrated low carbon urban development. 1.1.2. Completed design and planning of integrated urban systems (such as those related to sustainable urban transport, energy supply, waste management, spatial planning). 1.1.3 Completed sectoral priority assessment for cities; approved action plan comprising comprehensive low carbon climate resilient options as well as financing and implementation plan. 1.1.4. Established GHG inventory framework and baseline GHG	GEFTF	672,000	3,574,200

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.

			<p>emissions for project cities; completed monitoring, verifying and reporting (MRV) system for carbon emissions.</p> <p>1.1.5. Operational one-stop center in the Ministry of Energy, Green Technology and Water (MEGTW) that facilitates the development and implementation of low carbon sustainable cities and create synergies with similar initiatives to promote coherent actions.</p>			
2. Awareness and institutional capacity development	TA	<p>2.1. Expedient appraisal, approval and implementation of strategic urban development plans/program and projects.</p> <p>2.2. Major cities are aware of, and are planning and implementing low carbon technology applications for integrated urban development.</p>	<p>2.1.1. Established and operational institutional framework for the effective implementation of low carbon cities policies including defined roles, responsibilities and reporting structures of related agencies.</p> <p>2.2.1. Completed training programs for policy decision makers, local governments, green practitioners and financing institutions on strategic urban planning processes for low carbon and climate resilient development, decision making and financing opportunities.</p> <p>2.2.2. Disseminated knowledge products for specific target groups in designing, implementing, financing low carbon technology applications.</p> <p>2.2.3. Established National Low Carbon Cities Network with linkage to a global network for experience sharing.</p>	GEFTF	676,000	1,073,333
3. Low carbon technology investments in cities	TA	3.1 Increased investment in low carbon technology applications in cities	<p>3.1.1. Approved Electric Vehicle (EV) Master plan; and feasibility study and business plan for EV charging stations.</p> <p>3.1.2 Completed feasibility study on the expansion of new corridors of the Bus Rapid Transit (BRT) line in Iskandar Development Region.</p> <p>3.1.3 Developed a regular monitoring system for customer feedback for BRT system to increase ridership.</p> <p>3.1.4 Operational mobility management system for the Iskandar Regional Development Authority.</p> <p>3.1.5 Formulated city-level Nationally Appropriate Mitigation Actions (NAMA) proposals.</p> <p>3.1.6 Established and operational</p>	GEFTF	1,200,000	1,765,000

			financing mechanism to support the sustainable scaling up of low carbon urban development. 3.1.7 Developed and operationalized framework for integrating climate resilient strategies and climate proofing into urban transport planning.			
	Inv	3.2 More low carbon urban infrastructure projects implemented in Malaysian cities	3.2.1. Operationalized EVs and installed charging stations, for e.g. in at least five cities. 3.2.2. Leveraged investments in low carbon urban systems (e.g. community solar PV power generation system, municipal waste incineration and power generation project, etc.) based on the outcome and output of 1.1.2. 3.2.. Commissioned a BRT system in Iskandar Development Region (no GEF support requested)	GEFTF	1,599,423	27,021,580
				Sub total	4,147,423	33,434,113
Project Management Cost (PMC) ⁴				GEFTF	207,371	952,765
Total Project Cost					4,354,794	34,386,878

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

Sources of Co-financing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
National Government	Ministry of Energy Green Technology and Water	In-kind	1,153,740
National Government	Government of Malaysia	Grant	24,235,913
Local Government	Municipalities of Putrajaya, Cyberjaya, Miri, Port Dickson, Iskandar Malaysia (IM) including University Malaya (UM) and University Technology of Malaysia (UTM).*	In-kind	494,460
Local Government	Municipalities of Putrajaya, Cyberjaya, Miri, Port Dickson, IM including UM and UTM.*	Grant	3,150,000
Private Sector	Developers, financing institutions, technology suppliers**	In-kind and cash	5,000,000
GEF Agency	UNDP Country Office (TRAC/CS fund, part of Project Management cost)	In-kind and grant	352,765
Total Co-financing			34,386,878

*Interested cities and municipalities will be selected/finalized during the project development/preparation period (PPG Phase). Co-financing letters will be secured. Putrajaya and Cyberjaya has a present population size of about 100,000; Iskandar Development Region comprises of five different local authorities with population size estimated to be more than 1 million; and Miri and Port Dickson have around 300,000.

**Interested and potential private sector partners will be selected during the project development/preparation period (PPG Phase). Co-financing letters will be secured.

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

N/A

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.

⁴ To be calculated as percent of subtotal.

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.	_____	_____
• (Up to) \$50k for projects up to & including \$1 million	_____	_____
• (upto)\$100k for projects up to & including \$3 million	_____	_____
• (Up to)\$150k for projects up to & including \$6 million	100,000	9,500
• (upto)\$200k for projects up to & including \$10 million	_____	_____
• (upto)\$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: N/A

PART II: PROJECT JUSTIFICATION⁷

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.

Cities are a key contributor of GHG emissions with an estimated 70% of the world’s energy related emissions. In Malaysia, more than half of total emissions are related to urban spaces—specifically, electricity (up to 26% of the emissions), transportation (16%) and solid waste (12%). Recognizing that cities are natural partners to chart a low carbon growth path the Government of Malaysia has recently launched the Low Carbon Cities Framework and Assessment (LCCF). The objective is to achieve sustainable development, reduce carbon emissions of the cities and contribute towards the national commitment of reducing up to 40% of GHGs in terms of emission intensity by GDP by the year 2020 compared to 2005 levels.

Currently, several low carbon city initiatives which explicitly target low carbon development are at various stages of development at the national and subnational levels. However, the initiatives are developing in a rather fragmented manner without a common shared vision, integrated approach to low carbon development, agreed definitions or well accepted methodologies and standards. The following table summarizes the various initiatives that constitute the baseline activities for this proposed project. The five baseline projects have been selected together by the MEGTW and participating cities based on fact that these projects explicitly target low carbon development in Malaysian cities. They are linked at the policy level and align closely to the priority set by the 10th Five Year Plan (including its supportive policies - National Climate Change Policy and National Green Technology Policy), and the Second National Communication on promoting green, low carbon

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.

⁷ Part II should not be longer than 5 pages.

townships. The transport sector is one of the major GHG emitting sources. Hence, sustainable urban transport including EVs and BRT are the key thrust under the Malaysian Government's policies on climate change, green technology, the Second National Communication and National Land Public Transport Framework. GEF funding will be catalytic in integrating these individual projects under a comprehensive framework to promote the low carbon city agenda. GEF support will assist cities in designing, implementing and demonstrating an approach to urban development planning that will establish crucial linkages among sectors such as energy, transport, waste and urban spatial planning. Towards this end, the baseline projects will be enhanced through GEF funding to maximize global environment benefits. Such improvements are the incremental activities of the proposed project.

Project Name	Description	Implementation Period	Available or Approved Budget, US\$
Green Township Malaysia and Low Carbon Cities Framework (LCCF)	The Green Township Malaysia (GTM) is a national initiative to promote green townships in Malaysia where Putrajaya and Cyberjaya have been considered as demonstration model. In an attempt to scale up the initiative, the government has recently launched the LCCF. The LCCF is envisioned and applicable to cities of any sizes, townships and neighborhoods to measure the impact of their development decision in terms of carbon emissions and abatement. It provides an assessment system and guides cities to support holistic sustainable development. Activities under the LCCF comprise of (a) technical assistance to partners on defining scope and boundaries, identifying mitigation strategies, collecting baseline data and implementing pilot projects; (b) capacity development on the use and application of the LCCF; (c) feasibility assessment on the one stop development center. These LCCF activities form part of the proposed GEF project's interventions to deliver the specific outputs that will contribute to the realization of Outcomes 1.0, 2.1 and 2.2.	2010 - ongoing	3,833,300
Development of EV Infrastructure	The EV infrastructure programme focuses on policies, assessments, implementation and reporting on the use of EVs in Malaysia. A scale up of the existing EV pilot phase has been planned to 200 EV units with 175 charging stations. The government is providing financial assistance for mass production and overall development of EVs. The EV Master Plan development is also underway. The government has initiated consultations with EV manufacturers on potential roll outs and charger manufactures on site identification for stations. These EV development program activities are part and parcel of the proposed GEF project and will deliver the necessary outputs that will contribute to the realization of Outcome 3.	Up to December 2014	2,127,580
Low Carbon Societies	This research initiative is focused on facilitating the transition of Iskandar Regional Development Authority (IRDA) to a low carbon society and formulating policy roadmaps. Some of the on-going and planned activities are the (a) development of a methodology to create low	2008-2020	150,000

	carbon scenarios; (b) formulation of low carbon society action plans; (c) awareness enhancement and training activities for city authorities, policy makers, private sector, academic institutions and other stakeholders. These baseline activities will be enhanced to deliver outputs that will contribute to the realization of Outcomes 1, 2.2 and 3.1.		
Low Emission Capacity Building Programme (LECB) for Malaysia	The LECB project will assist Malaysia in its efforts to enhance the national capacity on GHG inventory systems, prepare for designing MRV framework and promote the uptake of NAMA that ultimately serves national priorities for Low Emissions Development Strategies. The project will cover GHG emissions sources in the waste, cement, paper and pulp, oil & gas, petrochemical sectors. Under the proposed project these baseline activities will be augmented to deliver the outputs that will contribute to the realization of Outcomes 1, 2.2 and 3.2.	2013-December 2015	202,765
Bus Rapid Transit (BRT) in Iskandar	A BRT system with a total length of 320 kilometers has been planned to cover the five flagship zones of Iskandar Malaysia, with the pilot project to cover approx. 43 kilometers. The system is targeted to increase peak hour public transport modal share to 50% by 2030. The proposed model for this pilot project shall involve development and construction of infrastructure and supporting public transport facilities such as bus lanes, integrated transport terminals, stations and interchange, integrated ticketing and cashless transaction system and passenger information system. These pilot projects will serve as baseline demonstrations for the commercial operation of integrated urban mass transport system that will contribute to the low carbon development of Malaysian cities, and contribute to the realization of outcome 3.	2016- 2019	26,275,000

The enhancements that will be done under this proposed project to the abovementioned baseline projects are mainly aimed at the removal of certain critical barriers that have restricted the progress in the widespread promotion and application of low carbon development concepts in urban areas in Malaysia. The main barriers are the following:

There is an absence of appropriate policy, legal/regulatory frameworks that effectively support the adoption and application of, as well as public and private sector investments in, low carbon and energy efficient initiatives in urban development activities. While the government has recently launched the LCCF, legal and regulatory frameworks are unavailable which prevents the adoption among cities and for private sector investment. Policy complementarities across urban sectors are missing and there is a lack of cooperation across sectors and jurisdictional boundaries while providing urban services. Moreover, uncoordinated and fragmented efforts from various actors persist while implementing low carbon projects. There is no clear system to monitor, gather, analyse and disseminate information on developments and progress. This hampers not only awareness in general but also development of effective policies and targets. This also makes it impossible to assess the existing initiatives and whether or not to continue funding; strengthen it or redirect the resources to other, more effective measures. If this barrier persists in the long term, cities will continue to face development problems that are directly linked to environmental degradation and increased GHG emissions.

Lack of financing support from city governments and from commercial financing institutions, persists, for the

implementation of low carbon urban development initiatives. Often financial institutions consider low carbon investments as high risk and reluctant to provide loans and financing instruments unless they are backed by strong collateral or fully guaranteed by the government. Financing institutions have limited options to mobilize finance for low carbon investments which are generally capital intensive. Besides, inadequate scaled up and demonstration projects hinder investor's confidence. This is further exacerbated by inadequate financial incentives such as grants, tax incentives and concessional finance. Although a crucial area, Malaysia's experience with financing tools and incentives focused on supporting integrated urban development is limited and significant work is required to develop new approaches. Furthermore, while municipalities have a significant responsibility for local economic development and providing urban public services, they have limited access to finance. Mismatch exists between sources of available finance to cities and demands for services and infrastructure. Reliance of municipalities on land sales as their revenue base may create incentives for unsustainable land use practices inconsistent with low carbon spatial forms. Although there is currently increased level of interest in cities on low carbon development, if this barrier is not adequately addressed, this will lead to diminished confidence and appeal among the developers and investors.

Low level of knowledge and technical and institutional capacities of city governments on, the development, application and implementation of low carbon development measures and energy efficient urban system projects. The long term effect of this barrier to the cities in Malaysia is getting 'locked in' the higher GHG emission development pathway as investment quickly becomes long term sunk costs.

Low level of interest, understanding and awareness of city governments and urban citizens about integrated urban development. The persistence of this barrier in the long term will lead to the current non-sustainable and non-environment friendly development activities in cities, which perpetuates the current status of cities being the largest contributor of GHG emissions in Malaysia.

The proposed project will therefore support the Government of Malaysia to leverage additional sources of finance to spur the transformation of Malaysian cities to low carbon cities, and in so doing contribute to the achievement of the national GHG emission reduction targets.

Alternative Scenario and Incremental Reasoning

The overall project objective is to facilitate the implementation of low carbon initiatives in at least five Malaysian cities (Iskandar Malaysia, Cyberjaya, Putrajaya, Port Dickson and Miri) and showcase a clear and integrated approach of successful low carbon urban development. The proposed project will assist the national government through the MEGTW in the formulation of overarching policy direction for low carbon development and create enabling environment to leverage low carbon investments in cities. The project will work with the municipal governments through Ministry of Housing and Local Governance (MHLG, as key stakeholder) and MEGTW to strengthen the capacity of the city authorities in planning, developing and implementing integrated urban development interventions.

The proposed project is structured in three components, which are necessary to address the abovementioned barriers and facilitate the successful implementation of the baseline efforts to achieve low carbon climate resilient urban development. Component 1 of the proposed project will involve activities that will assist cities to identify, plan and design integrated low carbon urban systems (e.g. low carbon transport systems such as EVs and BRT, energy supply, land-use, and waste management) including city level action plans to establish such systems. The actual implementation of the action plans along with the supportive investment in the urban systems will be leveraged and brought to fruition through the activities in Component 3. Furthermore, activities in Component 1 - that involve the creation of enabling policy support and establishing city level baseline information and MRV systems - will simultaneously ensure 'readiness' of the cities to access and utilize innovative financing mechanisms and leverage investments in low carbon interventions (as showcased in Component 3). The linkage between these project components is in fact two-way, whereby, the successful demonstration of urban projects in Component 3 will bolster the confidence of policy decision makers and inform effective policy making in Component 1.

Component 1: Policy support for the promotion of integrated low carbon urban development

This project component is expected to address the policy and institutional barriers. Achievement of low-carbon city objectives will depend critically on national policies and regulatory frameworks. Overarching policy directions and guidance are needed from the national government to successfully implement low carbon development strategies. Therefore, indicative GEF supported activities under this component will include - undertaking policy studies and assessments to facilitate the preparation of policies, regulations and implementing guidelines supportive of low carbon urban development including provisions for private sector engagement.

One critical element towards informed policy making on low carbon cities is the knowledge of the city's carbon footprint. With the limited resources under the Green Township Malaysia (GTM) and Low Carbon Cities Framework (LCCF), cities face constraints to prepare scientifically sound and robust data collection, management systems and GHG inventories. Under this project component, the current activities under these two baseline projects will be supplemented by interventions such as the formulation of GHG accounting framework, estimation of baseline GHG emissions and establishment of a mechanism to monitor, verify and report GHG emissions. Related activities under the LECB project will also be augmented under this project component to incorporate city wide approaches. GEF support will assist participating cities to establish a vision and set low carbon targets.

Supplementary activities will also be carried out to promote and expand the work that is being done by the Iskandar Regional Development Authority (IRDA) in the development of Low Carbon Societies. For this, GEF support will be required for the implementation and replication of sectoral assessments and identify priority sectors with maximum GHG reduction potential in other Malaysian cities, in addition to that in the Iskandar region. Measurable indicators will be set and action plan formulated with targeted financing plan. Low carbon development as an urban planning intervention has the potential to simultaneously promote climate change mitigation and resilience. The action plan, therefore, will encourage strategic options leading to low emissions and climate resilient development trajectory.

Moreover, the proposed project promotes to institutionalize integrated urban development planning fully recognizing the direct link between energy use and sustainable urban development.⁸ In conventional urban planning processes, the energy end-use sectors that are the sources of GHG emissions (e.g., transport, solid waste management, etc.), are not planned and managed in a holistic manner. Failing to integrate the development planning in each urban sector, important opportunities for optimizing energy utilization and maximizing emission reductions are being missed. By promoting, showcasing and assisting cities to carry out an integrated approach to urban development planning, the effective promotion and advocacy of energy and resource cost efficiency as well as energy and resource utilization efficiency can be realized, ultimately leading to emissions reductions. GEF support will assist the pilot cities in the design and planning of low carbon urban systems (such as EV infrastructure, BRT and projects related to the energy, land use and municipal waste sectors) to showcase effective multi-sectoral linkages. Initially, the integrated low carbon urban development approach will be piloted in one sector and based on the outcome the model will be adopted to additional sectors. So, as a starting point and in line with the national priority⁹, the government and project proponents have identified the sustainable transport sector (such as the EV and BRT) as a means to demonstrate how integrated urban development can be planned and implemented. Broadly speaking, integration can be achieved at two levels (a) horizontal integration, i.e., among various urban sectors and/or (b) vertical integration among the various levels of government, municipalities and entities involved in urban governance (local, regional, national, private sector, civil society, etc.). This way, cities can pursue their low

⁸ There is a clear connection between energy demand and the way the development and arrangement of cities are planned. Bulk of the carbon emissions from cities comes from the utilization of energy to support the day-to-day activities in cities, as well as in the operation of urban systems (e.g., transport, communications, water supply, etc.). In that regard, providing due consideration to the potential impacts on energy use and the city's natural environment of the various city programs/projects that will be implemented, will definitely facilitate lesser pollution, lesser wastes, and lesser emissions from cities. The integration of energy considerations in the urban development planning process along with the energy efficient and climate resilient design, operation and maintenance of urban systems is a step towards ensuring low carbon urban development.

⁹ Sustainable transportation is a key thrust under the national policy (including in National Policy on Green Technology, Second National Communication to the UNFCCC, and Low Carbon Cities Framework) as one of the significant contributor of the GHG emissions in Malaysia.

carbon efforts in a more standardized and holistic manner so that low carbon development planning and implementation is more systematic, accountable and the progress can be measured, reported and verifiable. Detailed approach and opportunities for integration will be fleshed out during the project preparation stage.

A one stop center¹⁰ will be established in the MEGTW to serve as a focal point for project developers and investors to facilitate the preparation of low urban development projects, expedite approval processes as well as provide advisory and quality information during project design and implementation. It will be used to promote and simultaneously assist in the application process of the financing mechanism that will be established as output 3.1.6 and also assist in creating synergies among similar ongoing initiatives. For that, GEF assistance is required for the conduct of a feasibility study to identify a competent entity to carry out the mandate and develop its capacity to expedite project appraisal and approval. The successful implementation of the activities are anticipated to eventually lead to clear direction and mandatory guidelines to city authorities, policy makers, project developers and others.

Component 2: Awareness and institutional capacity development

This component addresses barriers pertaining to the lack of information, awareness and institutional constraints to plan, implement and monitor integrated low carbon urban policies and projects in cities. Capacity needs assessment and capacity building trainings will be organized on low carbon, sustainable urban development planning, decision making, operations, management and financing opportunities. The target beneficiaries of the trainings are policy makers, government agencies, city authorities. This will enhance their capacity to effectively articulate the concept of low carbon cities and drive urban planning as a tool to achieve resilience, low carbon development and sustainability in a comprehensive manner.

The tentative activities that will be carried out in Component 2 includes: (a) establishment of a supportive institutional framework which has an overarching function of governing all structures, policies that contributes to overall low carbon outcome. It ensures that all key sectoral agencies/departments under city management (including energy, transport, spatial development and waste management) have important roles and responsibilities to engage in a comprehensive set of actions, continuously identifying and implementing cross cutting low carbon policy themes and interventions. It will stimulate integrated actions across key urban systems by encouraging cooperation among different agencies and across municipal governments; (b) design and conduct of capacity development activities to encourage partnership with the private sector including financing institutions; and, (c) conduct of a stocktaking analysis of integrated urban development initiatives and regulations to consolidate international best practices.

These indicative activities, together with the subsumed baseline activities under the GTM, LCCF and LCS as outlined in section B.1 are expected to at least reduce, if not eliminate the pertinent information barriers, as well as the technical capacity hindrances in the planning, implementing and monitoring integrated urban development policies and projects. Consequently, the successful implementation of the activities that will comprise this project component will lead to the widespread understanding of the concept of integrated urban development planning.

Component 3: Low carbon technology investments in cities

This project component is expected to comprise activities that will address barriers pertinent to finance and technology. The indicative activities that will contribute towards realizing the outputs (as mentioned in Part 1 Section B) are discussed below.

The level of capital required to finance citywide low carbon transition is substantial and public expenditure alone will not be sufficient to adequately fund the required investments. Local authorities are uniquely positioned to drive and influence local economic development but due to financial constraints they are reluctant in committing budget on low carbon agenda. Therefore, innovative solutions are imperative, particularly where the public-private partnership plays a critical role to enable investments at scale. Under this

¹⁰It is one of the structures within the institutional framework (output 2.1.1) that facilitates the low carbon outcome.

component, indicative activities include assessment and identification of innovative financing strategies complimented with capacity building, institutional arrangements on the established financing scheme and setting up of an operational entity. Market based mechanisms and economic incentive schemes may provide sustainable approaches to alternative financing paradigms that focus explicitly in facilitating low-carbon cities solutions. Internationally, some specific models, albeit in an embryonic market place, are being developed. For instance, targeted concessional finance by the government or public sector led model where local authorities collaborate with the private sector. Malaysia's experience in financing energy projects¹¹ and carbon finance may provide a basis to design and operate future approaches to finance urban development projects. A detailed investigation will be conducted during the project preparation stage to identify and design the most feasible financing mechanism that is tailored to the local context. Carbon finance mechanisms and NAMAs will also be explored as potential financing instruments. It is viewed that NAMAs can prove to be an effective vehicle for countries to access global funds, governed under the UNFCCC or other potential sources of bilateral or multilateral funding. The project will include capacity building on NAMA identification and formulation as well as lead to the evolution of an initial idea to a comprehensive NAMA concept.¹²

Demonstration of application of low carbon technologies is important to provide real case studies to decision makers and boost private sector confidence. Indicative activities will include (a) the implementation of the EV Master Plan and preparation of feasibility study. GEF support will augment this through the development of a business model for the charging stations and installation of charging stations in at least five participating cities. The government is promoting the adoption of EVs and its supportive infrastructure as a part of the sustainable urban transport policy. So far, the diffusion of EVs has been plagued by barriers such as high cost, short driving ranges, inadequate incentives, lack of public appetite, infrastructure, etc. The government is taking a lead role in the regulatory refinement geared towards stimulating the growth of an otherwise nascent EV market in the country and has decided to seek GEF's assistance to reinforce and replicate the baseline activities.

(b) The implementation of the BRT system in the Iskandar Development Region (which is the main demonstration piece of the proposed GEF project) will be enhanced through GEF support by commissioning a feasibility study on the expansion of the BRT system; as well as the establishment of a regular monitoring system to gather customer feedback. As part of the expansion plan (which will also involve the feasibility assessment of similar BRT systems in other urban centres in Malaysia), an assessment of the performance of the demonstration will be done. This will include identification of operations performance, determination of issues with the customers, their satisfaction levels, etc., which will be useful in promoting ridership and diverting personal auto trips. Further, mobility management system will be developed for managing and delivering coordinated transportation services to customers and achieving efficiency of transport services delivery system.

As the Government of Malaysia is planning to introduce EV bus fleet as a part of its sustainable transportation solution, the feasibility of integrating EV buses in the BRT system will be investigated during the project preparation stage. If viable, this will showcase a progressive example of harnessing local benefits and GHG reductions as a part of a comprehensive intervention. Additional low carbon urban interventions that will be planned and designed (in output 1.1.2) will ultimately be brought to fruition and investment leveraged in output 3.2.2. Example of such investments includes sustainable transport systems (such as the BRT) that will be designed taking into account the low carbon development objectives; features and concerns of other urban systems (e.g. spatial planning and design considerations such as land use mix, built-up to open space ratios, etc.) to ensure effective design and location of BRT stations as well as passenger access. Further examples include projects related to the energy supply (e.g., community solar PV power generation system; energy efficient electricity distribution systems); sustainable urban transport (e.g., rapid mass transport systems; energy efficient transport infrastructures such as smart traffic control systems); comprehensive waste

¹¹ e.g., through the National Green Technology Financing Scheme

¹² This may include, but not limited to, the identification of potential NAMA options, prioritization, stakeholder engagement, assessment of required support, financing options, feasibility evaluation for NAMA designs, etc. Once the concept is fully established the government is anticipated to take a decision on whether or not to make a formal submission to the UNFCCC.

management (e.g. waste to energy projects, such as municipal waste incineration cum power generation system; biogas-based power generation from anaerobic sewage treatment system) and land use planning (e.g., Green Infrastructures - a network of decentralized storm water management practice that can capture rainwater, thus reducing storm water runoff and improving the quality of city waterways). The interventions will be identified by the participating municipalities and linked at the policy level, both nationally and locally. The demonstration projects will showcase how effective multi-sectoral inter-linkages can be successfully established and implemented.

Global Environmental Benefits

With the GEF support, the potential global environmental benefit in terms of CO₂ emissions reduction from the application of low carbon technologies and practices in the Malaysian cities will multiply. The incremental GEF contributions will lead to the installation of EV charging stations and enhancement of the BRT project, thereby, promoting increased ridership and reduced personal auto trips as well as improved fuel efficiency. GEF financing will render the baseline projects more successful and enhance the magnitude of GHG emissions reduction more than that would otherwise be in the baseline scenario. Cumulative direct emissions avoided from the overall GEF project is approx. 1,081,990 tCO₂ over the project lifetime. Of this amount around 20% (i.e. 216,398 tCO₂) can be conservatively attributed to the GEF incremental activities. This translates to unit abatement cost of \$4.0/ton of CO₂. Detailed emission reduction estimates will be carried out during project preparation, and presented during the CEO endorsement.

By assisting cities towards low carbon future, the project will deliver socio-economic benefits to the country. Low carbon choices not only mitigate climate change but they also make cities more sustainable, efficient, accessible, competitive and livable. Through strategic urban planning process the project will promote climate resilience as a tool for sustainable development. The project will also help generated health and environment benefits due to reduced air pollution. Furthermore, the project aspires to promote the integration of gender responsive approach in the design and implementation from the very outset. By taking into account different gender roles, needs and preferences, the project will further harness the capacities of communities, particularly women, on low carbon development policies and activities.

If the significant barriers (as discussed in section B1) still persist local governments, developers and the private sector will be discouraged from investing in low carbon investments in cities. This could subsequently lead to cities getting locked into a high carbon development path. Therefore, the GEF financial support for the incremental activities of this project is imperative to create the much needed policy, regulatory and investment environment for the development of low carbon cities.

Innovativeness and Replicability

A first of its kind in the country, the project promotes an integrated and holistic approach to urban development planning. Through this innovative approach it aspires to capture and capitalize the natural links between different urban sectors. For instance, by integrating energy considerations into the planning of transport, municipal services and smart urban form the project will not only maximize the GHG emissions reductions but also contribute to reduced environment degradation, increased efficiency, improved quality of urban life and sustainability. Likewise, the project aims to address low carbon and climate resilience simultaneously in achieving sustainable urban development.

Supportive and credible policy regime, as an outcome of the project, will provide clear guidance and direction to city authorities and generate private sector interest. This coupled with establishment of the financing mechanism is anticipated to spur investments. Sustainability of the financing mechanism will be ensured by designing it in a way where limited public funds will be channeled through local financial institutions to maximize leverage of additional private financing. Through aggressive communication and outreach activities, experiences and the lessons learned will be disseminated both inside and outside of Malaysia. The project offers demonstrable example of how integrated urban development planning can be implemented and provides a tangible opportunity to quantify environment and climate change benefits of such investments. The

articulation of benefits will be of value to policy makers as they can craft additional tools and measures to promote low carbon urban development. This, in turn, will pave the way for scaling up investments and further replicate the project results across more cities in the region. It is anticipated that the project will stimulate the growth of EVs by double of that in the baseline scenario. This is expected to result in an increase of at least 400 EVs and 400 charging stations. The BRT model is anticipated to be replicated by at least two cities if the proposed GEF project successfully demonstrates the design, planning and operationalization of the system.

This way the project aims to trigger transformational change at the city/municipal level of urban systems reducing their overall carbon footprint and increasing their climate resilience through integrated and smart solutions.

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	Role
Economic Planning Unit, Prime Minister's Department	Overall policy direction to achieve the low carbon city agenda.
Ministry of Energy, Green Technology and Water (MEGTW)	Lead Partner and guardian of the LCCF and responsible in promoting it to the cities and local authorities. MEGTW will take the primarily responsibility for development and detailed design of the project.
Ministry of Housing and Local Government (MHLG)	The MHLG is the executive authority responsible for local governance, spatial planning, housing and municipal services. Facilitate the coordination between MEGTW and local governments, policy advice and planning on land use, local governance, and other municipal services per their mandate.
Ministry of International Trade and Industry	Advise and formulate policies related to the import and use of electric and hybrid vehicles.
Ministry of Transport	Policy development and planning for national transportation policies
Department of Town and Country Planning	Advise planning matters related to the use and development of land
Malaysian Green Technology Corporation	Coordination support, capacity development training and policy studies
Private Sector Entities	Provide commitment for financing and detailed design of investment projects
Malaysian Institute Planners	Provides necessary advice and general guidelines related to city planning and policy research
Academic institutions	Policy research and studies to strengthen baseline data , impact analysis, etc.
Local Government, city council and municipalities	Local government, cities and municipalities will be partner of GTALCC for effective project design and preparation. Preparation to host low carbon investments.
National Hydraulic Research Institute of Malaysia/ Ministry of Natural Resources and Environment	Provide advice on policies and programmes related to climate resilient development.

MEGTW as the leading executing agency for this project will ensure that government agencies and other stakeholders, as listed in the table above, are duly consulted and extensively engaged as per their mandate. During the project design, participatory multi-stakeholder consultations will be conducted to ensure stakeholders' needs and concerns are duly addressed and incorporated. This will simultaneously enhance the stakeholders' ownership of the project. There is already an established mechanism through which MEGTW engages with the local governments for the LCCF programme. The proposed project will build on the existing coordination mechanism whereby the MEGTW will collaborate with the MHLG to provide targeted assistance and guide the local governments to plan, develop and adopt integrate low carbon urban development approach in their local planning processes. Local authorities will be thoroughly engaged in the identification, development, implementation and monitoring of the site specific urban mitigation actions in collaboration with the private sector, civil society and relevant national authority. Periodic meetings will be held among the MEGTW, local governments and related partners to plan activities, monitor and report progress.

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 following table summarizes the potential risks that might prevent the project objective from being achieved, the level of risk and the proposed mitigating actions for each risk.

Risk	Mitigation Measure	Risk Rating
Risk due to climate change impacts on urban systems	Climate Change is predicted to have adverse impacts on cities. In Malaysia, the climate risks are linked to the high concentration of population, resources and infrastructure in the urban areas. The risk will be mitigated by coordinating with the adaptation teams under the Ministry of Natural Resources and Environment to assist policy makers and city authorities address climate change risks through comprehensive urban planning process that will consider climate resilient strategies.	Moderate
Lack of interest from the private sector on low carbon investments in cities	The project will support a model in which the government provides an enabling environment to spur private investment and the private sector provides innovative approaches to catalyze capital for low carbon investments. The project will help prepare high quality assessments, feasibility studies, investment appraisals and business plans to facilitate decision making by financial institutions. Facilitate public private dialogue and engage the private sector early on to solicit their perspectives and needs for low carbon development.	Low
Low level of commitment of city authorities, to implement the required regulatory changes	UNDP has a track record of successfully engaging with the local authorities on climate change projects. Hence the risk can be effectively mitigated by continuing to provide the on-going assistance, technical backstopping and communication to encourage commitments from municipality staff.	Low
Non implementation of new technologies due to high costs.	Assist in selecting the most appropriate technologies taking into consideration the socio-economic profiles and local market conditions.	Moderate
Overall Risk Rating	Low	

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

The project development team will consult the implementers of relevant ongoing projects and programs in MEGTW and MHLG. This will ensure complementarity and build on best practices and lessons learned. During the PPG stage numerous stakeholders' consultation activities including the log frame analysis will be organized to discuss the issues and concerns related to low carbon cities' development and prepare detailed project implementation and management arrangements.

During the implementation stage, the coordination mechanism will be further established to ensure proper coordination and involvement of the baseline project proponents. It is recommended that the project be implemented by the LCC Secretariat which will be located at Malaysia Green Technology Corporation, under the support of the executing agency, MEGTW. A project steering committee will be formed and chaired by MEGTW to serve as a strategic focal point and lead the project. UNDP will continue to provide assurance and support services as per GEF's guidelines. The MEGTW will ensure that all government agencies as highlighted in section B.5 (for instance the MHLG which is involved in the policy design and implementation

of low carbon cities initiatives) are duly consulted and involved as per their mandate. The committee will also include representatives of the city authorities from the pilot municipalities, regional development authorities, etc. The committee will meet biannually or often if required. Host cities will report progress of implementation during the meeting including updates on green technology adoption and baseline activities. Direct reporting of the project outcomes will be made to the LCC committee established under the Climate Change and Green Technology Committee chaired by the Prime Minister. Local governments will be the main beneficiaries and co-partners in the project working in close coordination with the project developers of the baseline project activities. They will be actively engaged in institutionalizing integrated urban development planning and hosting the integrated urban projects.

The project will also complement the ongoing activities under the EU UNDP Low Emissions Capacity Building (LECB) programme. It will draw on the results of the LECB programme which will provide hands on experience with GHG inventory framework and NAMA related activities including associated MRV framework. Furthermore, focused discussions will be initiated to ensure close coordination with other institutions that are currently planning projects/programmes and/or that will contribute to the overall outcome of the proposed GEF project. Some of such projects are: a) Green Neighbourhood Initiative; (b) GBI Township; (c) Entry Point Projects; (d) Green Technology Financing Scheme (GTFS); (e) Federal Town and Country Planning Department's MURNI-net; and, f) Implementation of the Melaka Green Technology Blueprint. The results of several of these initiatives are reported to the National Council on Green Technology and Climate Change. The project development team will identify any other relevant similar projects and/or programs during the PPG phase. It will endeavor to establish and strengthen linkages with such projects and/or programs through focused and regular consultations with their implementers and stakeholders both at national and subnational levels. A detailed stakeholders' involvement plan will be designed during the PPG phase.

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 all key national strategies related to climate change and low carbon growth.

1. At the United Nations Climate Change Conference (COP 15, 17 Dec 2009), Malaysia committed to a voluntary reduction of up to 40% of emission intensity by GDP from the level of 2005 by the year 2020 conditional upon transfer of technology and financing support from developed countries.
2. The 10th Five Year Plan of Malaysia (2011-2015) outlines major national policies including (a) National Green Technology Policy; and, (b) National Climate Change Policy. The Government in the Budget (2010) pledged to develop Putrajaya and Cyberjaya as pioneer green townships. Consequently, Green Township Malaysia was launched.
3. Low Carbon City Framework (LCCF) (2011) is a national framework and a city assessment system to measure the impact of development decision in terms of carbon emissions and abatement.
4. National Electric Vehicle Master Plan is under progress and focuses on the strategies and policies, on the use of EVs and in line with the national target of having 10% of new cars as EVs by 2020.
5. Second National Communication to the UNFCCC underscores the need for a holistic and integrated strategy to promote green, low carbon and climate resilient sustainable development. It recognizes the role of green technology application in achieving low carbon cities and transition to a low carbon economy.
6. Other related National legislation related includes the Federal Department of Town and Country Planning (FDTCP)'s Green Neighborhood Planning Guideline (GNG) (2011); National Urbanisation Policy (2006); National Policy on Environment (2002); Renewable Energy Act (2011); National Energy Efficiency Act (scheduled for approval in 2013).

Furthermore, related local level initiatives and assessments – completed and ongoing - developed by the local authorities and private sectors include Putrajaya and Cyberjaya Green Cities 2025; Low Carbon Society of Iskandar Development Region; GBI Township.

The proposed project is in line with the above mentioned low carbon development national policies and specifically helps the government to implement low carbon approaches for cities while simultaneously meeting the national GHG reduction targets.

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

The proposed project is in line with the GEF 5 Strategic Objective CCM 4 on the promotion of energy efficient low carbon transport and urban systems. It consists of interventions across cities in Malaysia to facilitate the implementation of low carbon initiatives and showcase a clear and integrated approach of successful low carbon city development.

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

The project is in line with UNDP’s strategic objectives and fits into the Country Programme Action Plan, CPAP (2008-2012) and CPAP (2013-2015) where climate change mitigation is one of the priorities. The new country programme *Strengthening Climate Resilient Development: To address institutional and policy challenges related to environmental concerns* - underpins the use of renewable energy and energy efficient practices; and developing frameworks on sustainable financing options for widespread green technology applications through the low carbon cities’ initiatives. Furthermore, the project fits neatly with the *Signature Programme (SP-2) Urban Infrastructure: Promoting low emission urban and transport infrastructure* of the UNDP GEF Energy, Infrastructure, Transport and Technology team.


UNDP Malaysia is well-positioned to implement the proposed project given its experience in working closely at the central and local levels with policy makers, private sector and the civil society. It has a proven track record and expertise to successfully implement low carbon, renewable energy, energy efficiency projects in the country. It is the leading UN-agency in Malaysia supporting the government in addressing climate change issues with decades of experience in successful implementation of GEF projects. A dedicated program officer will solely be responsible for project implementation oversight, quality assurance and reporting requirements. UNDP-Malaysia will be backstopped by technical expertise available in the UNDP Asia-Pacific Regional Centre (APRC) in Bangkok, Thailand.

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
Dr. Lian Kok Fei	Undersecretary, Climate Change and Environmental Conservation Division	Ministry of Natural Resources and Environment	18/12/2012

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	Project Contact Person	Telephone	Email Address
Adriana Dinu UNDP GEF Officer-In-Charge		April 09, 2013	Rakshya Thapa Regional Technical Advisor	+66-2-304 9100 ext. 5038	rakshya.thapa@undp.org

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