APPLICATION FOR CTF PROJECT PREPARATION GRANT

A. TASK MANAGER FOR CTF FUNDING REQUEST

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B. PROPOSAL SUMMARY

1. Geographic Focus of Proposed Activity:

X	Individual Country *(please specify)*: Vietnam
	Regional or Multi-Country*(please specify):*
	Global

2. Project Title:

Sustainable Urban Transport for Ho Chi Minh City MRT Line 2 Project

3. List of Deliverables from CTF Project Preparation Grant

1. Feasibility analyses and due diligence completed
2. Draft Project proposal to be considered by ADB Board of Directors

C. PROPOSAL DETAILS

4. Summary of Proposed Activities

By submitting this CTF Project Preparation Grant Proposal, the Government of Vietnam wishes to finance, through Asian Development Bank, the Project Preparation Technical Assistance (PPTA) for the Sustainable Urban Transport for Ho Chi Minh City MRT Line 2 Project (the Project). The PPTA will provide the necessary assessments for the ensuing investment project, to be co-financed by Asian Development Bank and CTF. Feasibility analyses and due diligence will be conducted according to ADB and GoV procedures and will include the following key items:

(i) **Technical.** Technical viability including site selection and facility design, integration of urban transport modes, station access and egress by motorized and non-motorized transport, traffic management, pedestrian and road safety, feasibility and efficiency of public transport reorganization plans and feeder systems for MRT2 stations.

(ii) **Economic and financial.** Economic and Financial viability and sustainability assessments.

(iii) **Governance.** Financial management, procurement, anticorruption, policy and legal, capacity, and other institutional issues and mechanisms.

(iv) **Poverty and social.** Poverty reduction, social impacts and gender issues for components. Other social impacts such as HIV/AIDs, anti-human trafficking, and labor impacts, will be addressed if found relevant during project development

(v) **Safeguards.** Environment, involuntary resettlement, and indigenous peoples of project components, if found relevant. This will also include an assessment of GHG mitigation potential of a range of proposed measures.

(vi) **Private Sector Participation.** Several of the project components could benefit from private sector participation and opportunities for this will be explored in the PPTA.

The PPTA shall produce a mutually agreeable project design, scope, schedule, and implementation plan for the ensuing Project.

5. Rationale for CTF grant funding, including consistency with CTF Investment Plan:

The ensuing Project is part of the CTF Investment Plan for Vietnam. The project is additional to the business-as-usual scenario, will have transformational impact, and is replicable at scale in other cities in Vietnam and the Asia region.

The Project will develop an integrated public transport system in six districts of Ho Chi Minh City (HCMC) that will support effective utilization of HCMC Urban Mass Rapid Transit (MRT) Line 2. Improved public transport will facilitate connectivity and greatly enhance access to transport services in six districts of HCMC, as well as support the HCMC Urban Transport Master Plan (HUTMP) objective of increasing public transport usage to over 40% of demand and reducing dependency on private vehicles. The Project will support HCMC's climate change mitigation efforts in adopting a low carbon transport growth path, which is more energy efficient and lowers GHG emissions.

The Government of Viet Nam (GOV) is planning major public transport infrastructure investments intended to induce a substantive modal shift from private transport to public transport modes. Currently three MRT lines are at early stage of preparation and all are expected to be operating in 2018. The Viet Nam Socio-Economic Development Plan for 2011-2015 supports transport sector investment to promote economic growth and protect the environment through a low carbon growth path. ADB's Viet Nam Country Strategy and Program 2006-2010 supports the Government's program to improve urban transport infrastructure and reduce transportation costs, and the proposed project is included in the draft Viet Nam Transport Assessment, Strategy and Roadmap.

HCMC is moving into the higher growth period of transport urbanization, shifting increasingly from heavy usage of motorcycles to cars. Private vehicles dominate urban transportation, with motorcycles being the most prevalent means at about 85% share. High private vehicle usage has resulted in poor road safety and severe congestion: many major routes have travel speeds below 10 kilometers per hour. The situation is worsening, with transport growth around 10%

and more motorbike owners converting to cars[1]. The existing public transport system consists of a non-integrated bus network that cannot compete with private transport modes, which is expected to be improved to some extent by 2017 under a proposed World Bank loan[2]. Traffic planning and management is weak and inadequate to effectively control traffic and discourages public transport. Importantly, there are no policy and regulatory measures to reduce private transport modes nor is there an attractive public transport system that can attract people who currently use private vehicles.

HCMC People's Committee (HCMC PC) plans to develop a MRT system with the first stage of three metro lines under implementation. Phase 1 development of MRT Line 2 (MRT2) will be financed by ADB[3], European Investment Bank and Kreditanstalt für Wiederaufbau (KfW), and is expected to be operational in 2017. MRT line 1, financed by the Japan International Cooperation Agency, and MRT line 5, financed by the Spanish government, are expected to be operational in 2016 and 2018, respectively. In order the make the MRT lines viable, there is a need to design complementary measures to ensure an integrated public transport system that is attractive, accessible and affordable. The Project will directly support integration of MRT2 as part of a multimodal, environmental friendly transport system to attract passengers from using individual private vehicles to urban public transport services to promote inclusive low carbon transport thus reducing greenhouse gas (GHG) emissions and other environmental pollution.

The Project will be additional, as it will provide infrastructure for improving accessibility to MRT2 stations, implement feeder bus links, integrated multi-modal stations with "park and ride" facilities where appropriate, as well as a parking plan for the city. Project management and institutional capacity building measures, together with expected policy and regulatory reforms, will also help achieve an improved public transport system and reduce GHG emissions. The project components, public transport services and other facilities will be designed to incorporate gender sensitive features that will complement similar measures under the MRT2 project. In addition, any policy and regulatory measures developed will be fully inclusive.

The Project will be transformational, as it will establish an integrated sustainable public transport system in six districts of HCMC. The primary outcome is improved public transport accessibility and services connecting to the MRT2 corridor, which will be efficient and competitive to attract existing private transport users.

The Project outputs will be:

(i) improved accessibility features in and around MRT2 stations;

(ii) integrated and innovative public transport services and measures connecting to MRT2

[1] Typically when GDP reaches about $2,000 per capita, motorization rate increases rapidly. With GDP of about $1,300, if it continues to grow at current rates the "tipping point" will be reached within the next 5 – 8 years.

[2] The proposed World Bank project, expected to be approved in late 2012, will implement two bus rapid transit systems, upgrade a large portion of the existing bus fleet and improve bus operations and management.

[3] ADB 2010. *Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program,* Manila

stations; and

(iii) support for transformational policies and regulatory measures to encourage modal shift to public transportation modes. Measures related to the bus system will be closely coordinated with proposed institutional reform and system improvements.

The project is being replicated in Ha Noi, where urban rail lines are currently in planning and early development stages. Most of the project outputs can be replicated in other districts of HCMC and other cities which are not yet large enough to justify urban rail systems.

The Project is one of the first transport projects in Asia funded by the CTF. Globally it is one of the first non-BRT projects to be provided CTF funding and hence is an important benchmark for future low carbon transport projects. Knowledge learned will be valuable for developing low carbon transport capabilities and skills, which will be used for both dissemination to developing member countries and development of similar projects in other countries. On this basis, the project is considered to be additional, transformational, and replicable at scale. The project is also very closely aligned with ADB's Sustainable Transport Initiative Operational Plan which seeks to increase lending for urban transport to 30% of transport sector lending by 2020.

6. Government Approval of Country-Specific Activities

Name of responsible official: Duong Hong Thanh		
Position: Vice Director		
Ministry/Agency: Department of Transport, under Ho Chi Minh City People's Committee		Country: Vietnam
Tel: +84 8 3822 4759	Fax: +84 8 3829 0458	Email: duongthanh@hcm.vnn.vn

D. IMPLEMENTATION AND FINANCING PLAN

7. Implementation Approach

Executing Agency: The executing agency (EA) will be the HCMC PC and the implementing agency (IA) will be the HCMC Department of Transport (DoT). The EA and IA are deemed to have sufficient experience, technical, financial and managerial capacity to implement the grant-funded activities efficiently. Asian Development Bank will administer the grant funds, and will manage procurement and oversight of consultant services. The overall PPTA processing and implementation timeline and activities are summarized in Tables 1 and 2 below.

Procurement: Consulting services contracts will be procured by international and national competitive bidding in accordance with ADB's *Guidelines on the Use of Consultants (2007)*, as amended from time to time. Consulting services will be provided for project management, concept and detailed design, construction supervision, safeguards implementation and monitoring, and capacity building. Consultant services will be provided through firms to be recruited using quality-and-cost based selection process or individual consultants.

Disbursement: Disbursement of the Grant resources will follow Asian Development Bank procedures for grant-funded technical assistance projects. Disbursements will be made in accordance with milestones and deliverables agreed to in the consultants contracts.

Reporting: Reporting requirements are outlined Table 2 and in the draft terms of reference for consulting services in Annex I.

8. Implementation Schedule: major outputs, activities, and milestones are summarized in the Tables 1 and 2 below.

Table 1: Proposed Processing Schedule

Milestones	Expected Completion Date
Concept Paper / PPTA Approvals	II September 2011
Consultant Recruitment	II October 2011
PPTA Tripartite Meeting	II January 2012
Draft Final Report	II May 2012
Loan Fact Finding Mission	III June 2012
Management Review Meeting	I August 2012
Loan Negotiations	IV September 2012
Board Consideration	I November 2012
Loan Effectiveness	March 2013

Source: Asian Development Bank

Table 2: Summary of Major Outputs and Activities

Major Activities	Expected Completion Date	Major Outputs	Expected Completion Date
Scoping of project components by specialists	January 2012	Draft report that details definition of measures in each of three project areas identified.	December 2011
		Concept designs	February 2012
Preparation and finalization of priority measures	May 2012	Preparation of feasibility design	April 2012
		Draft Final report	May 2012

Source: Asian Development Bank staff

9. Cost Estimates and Financing Plan:

The total cost of the PPTA is estimated at $1.1 million equivalent, of which $1 million equivalent will be financed on a grant basis by the Clean Technology Fund. The Government will finance the remaining $100,000 equivalent. The detailed cost estimate and financing plan is presented in Table 3 (see next page).

Table 3: Cost Estimates and Financing Plan
($'000)

Item				Total Cost
A.	**ADB Financing**[a]			
	1.	Consultants		
		a.	Remuneration and per diem	
			i. International consultants (23 person-months)	575.0
			ii. National consultants (61 person-months)	148.0
		b.	International and local travel	74.0
		c.	Reports and communications	25.0
	2.	Workshops, training, seminars, and conferences [b]		30.0
	3.	Surveys		50.0
	4.	Miscellaneous administration and support costs		28.0
	5.	Contingencies		70.0
		Subtotal (A)		**1,000.0**
B.	**Government Financing**			
	1.	Office accommodation, meetings and transport		55.0
	2.	Remuneration and per diem of counterpart staff		35.0
	3.	Contingencies		10.0
		Subtotal (B)		**100.0**
		Total (A) + (B)		**1,100.0**

[a] Financed by the Clean Technology Fund.
[b] Workshops, training, seminars, and conferences

Purpose	Venue
Urban transport coordination meetings	Ha Noi, Viet Nam
PPTA: Tripartite meetings	Ho Chi Minh City, Viet Nam

Source: Asian Development Bank staff

E. SUPPLEMENTARY INFORMATION AND MATERIALS

10. Additional Information:

The CTF grant will support preparation of a project which is integral with the HCMC MRT2 urban rail project and other lines which are being supported by a project loan from Asian Development Bank and co-financing from KfW and other donors as discussed above. The outline terms of reference for consulting services are presented in Annex I. The project context in the CTF Country Investment Plan is presented in Annex II.

ANNEX I: Summary of Draft Terms of References of Consulting Services for Preparation of the Sustainable Urban Transport for Ho Chi Minh City MRT Line 2 Project

A. Background and Justification

This project preparatory technical assistance (PPTA) is needed to develop sustainable low carbon urban transport programs and projects in Ho Chi Minh City (HCMC). The outcome of the PPTA will be the identification of energy efficient urban transport solutions which, in conjunction with the HCMC Mass Rapid Transit (MRT) Line 2 Project, can lead to significant greenhouse gas (GHG) emission reductions. The assistance will focus on identifying and developing a series of innovative and transformational interventions which enhance the quality of public transport systems and which can significantly increase the modal share of public transport in HCMC.

B. Major Outputs and Activities

The PPTA outputs will consist of two major components, as follows:

- Component 1: Assessment and definition of public transport measures to be implemented under the Project in the three main areas including:
    - (i) Improved accessibility in and around MRT2 stations: Assessment and development of measures, including; MRT station enhancements, improved pedestrian infrastructure including pedestrian priorities and facilities to and from stations, traffic management measures at junctions in proximity of stations, restricting parking on public pavements and commercial development opportunities
    - (ii) Integrated and innovative public transport services and measures connecting to MRT2 stations: detailed plan to reorganize and improve the public transport network connected to MRT2, including (a) a plan for routing and rationalization of public transport routes and franchising arrangements, (b) a program for public transport fleet renewal to promote low emission vehicles that are suitable to serve different levels of demand in various areas of the city, (c) feeder services, and (d) multi modal interchange(s) and Park and Ride facilities.
    - (iii) Support for transformational policies and regulatory measures to encourage modal shift to public transportation modes: Assessment and development of framework program of key public transport integration policy and regulatory measures required for parking, reduction of support measures to private transport modes and development of an integrated ticketing system.
- Component 2: Preparation of concept or feasibility designs for MRT2 priority measures that have been identified, which will include (i) multi-modal interchange for five stations[4] with other public transport metro line 2A and its surrounds, (ii) review and coordination assistance for measures at Ben Thanh station being prepared by other

[4] Tao Dan, Hwa Hung, Bay Hien, Ba Quao and Tham Luong

agencies, (iii) concept design of stations and surrounding areas access for remaining five MRT2 stations, and (iv) development of an innovative public transport technologies and measures program for all stations.

The PPTA will closely coordinate with proposed technical assistance to be provided by the Singapore government under a cooperation agreement with ADB, which will provide support for review of PPTA outputs, specific advice on MRT related technical measures and development of capacity building program for HCMC urban transport authorities. Coordination of urban transport measures will be enhanced with Ha Noi urban transport officials both informally and joint meetings.

The major outputs and activities are summarized in Table 2 in the main text above.

C. Consulting Services

For the PPTA, 23 person months of international and 61 person-months of domestic consultants services will be required. Consultant tasks will cover both PPTA components. A summary of the consulting service requirements is listed in Table A1.1.

Table A1.1: Summary of Consulting Services Requirements

International Name of Positions	Person-months	National Name of Positions	Person-months
Urban Transport Planner	5.0	Transport Planner	6.0
Public Transport/Institutional Specialist	4.0	Bus operations/urban transport specialist	6.0
Urban Transport Engineer	5.0		
Climate change economist	2.5	Safeguards/social specialist	11.0
Low carbon transport specialist	2.5	Engineer/technical specialist	28.0
Resettlement/Social Development Specialist	2.0	Technical support staff	10.0
Environment Specialist	2.0		

Source: Asian Development Bank

The outline terms of references for the PPTA consultants are described below, with further elaboration of required tasks to be defined in the detailed terms of reference.

Urban Transport Planner (5.0 international and 6.0 national person-months): Minimum of bachelor degree in urban transport planning and 10 years experience, including developing countries. The Urban Transport Planner is expected to be the team leader for the services. Tasks will include assessment of public transport planning, a policy and regulatory assessment of all public transport modes, development of parking and integrated ticketing strategies, review of applicability of public private partnership for modal interchange infrastructure, review commercial development opportunities in station areas and development of integrated transport modes and facilities.

Public Transport/Institutional Specialist (4.0 international and 6.0 national person-months): Minimum of bachelor degree in a related degree for bus or public transport operations or public organization management and 10 years experience, including in developing countries. Tasks will include assessment of existing public transport operations, proposed and ongoing developments, requirements for bus route changes, determination of improvements to improve physical

arrangements and assessment of organizational arrangements of all public transport modes and assessment of capacity of proposed implementation agencies, including recommendation for necessary capacity development programs.

Urban Transport Engineer (5.0 international and 28.0 national person-months): Minimum of bachelor degree in a related degree for bus or public transport operations and 10 years experience. Tasks will include assessment and design of MRT stations features and inter-modal transfer facilities, development of park and ride measures and needed complimentary measures around MRT stations.

Climate Change Economist (2.5 international person-months): Minimum of bachelor degree in transport economics and experience in latest approaches in GHG methodologies. Tasks will include the completion of economic evaluation of all components, assessment of all proposed measures for GHG emission reductions, assessment of economics of measures to capture indirect benefits and identification and development of approaches to utilize other climate mitigation fund sources for the Project.

Low Carbon Transport Specialist (2.5 international person-months): Minimum of bachelor degree in transport engineering and experience in latest technology developments. Tasks will include an assessment of suitable alternative technologies, and development of pilot schemes for selected measures, including capacity building assessment and program.

Resettlement/Social Development/Environment Specialists (4.0 international and 11.0 national person-months): Will consist of several positions to cover environmental, resettlement, social development and gender issues. Minimum of bachelor degree in a relevant degree for specialist area and 10 years experience. Tasks will include initial and extended assessment of all proposed measures, including completion of necessary documentation for compliance with ADB safeguard policy statement 2009, development of consultation process, determine social development enhancements to measures and development of relevant gender sensitive features in project components.

D. Implementation Arrangements

The executing agency will be the HCMC Peoples Committee and the main implementing agency will be the HCMC Department of Transport (DoT). The government will provide in-kind contributions of counterpart staff with facilities and transportation, arrangements for project and consultation meetings, provision of relevant documentation and provision of office space for use by consultants. The proposed TA processing and implementation schedule is listed in Table 1 in the main text above.

ANNEX II. Project Context

Vietnam's transport sector currently contributes about one fourth of energy-related GHG emissions, slightly less than electric power generation. GHG emissions are projected to increase at approximately the same rate as for power generation and industry. A large percentage of the population now owns motorbikes, with a smaller percentage owning cars; car ownership is expected to increase dramatically as incomes continue to increase.

Table A2.1 shows GHG-reducing interventions in the transport sector in Vietnam. The Table lists the potential savings compared with current trends and government plans, and associated order-of-magnitude costs. The Table also shows that the planning and construction of urban rail systems in Vietnam's two major cities has begun and that GOV is working on biofuels and CNG busses.

Table A2.1: GHG Reductions in the Transport Sector in Vietnam

Sector/Sub-sector	Activities planned or underway	Potential Emissions Reductions	Indicative Costs
Urban Rail	Initial construction on 5 lines in Ha Noi; initial design stage for 6 lines in HCMC	1.6 $MtCO_2e$/y reductions in major cities (from rail lines plus connectivity investments)	US$50-150 million / km
Bus Rapid Transit	n/a	0.33 $MtCO_2e$/y reductions in Ha Noi and HCMC	US$2-10 million / km
Electric vehicles	n/a	4.2 $MtCO_2e$/y reductions by introduction of electric motorcycles replacing 50% of fleet	(US$3500 / motorcycle)
Fuel switching (CNG, LPG, and biofuels)	Pilot testing of CNG in HCMC buses; initial biofuel production	E10 and B10 targeted by 2020; E20 potential is 1.6 $MtCO_2e$/y reductions	Development funding needed for feasibility studies and front-end engineering design

Sources: CTF Joint Mission notes; GHG reduction estimates from ADB (for urban rail) and World Bank Carbon Finance Assist (for other interventions).

Transport options appear limited to the expansion of urban rail and bus systems, complemented by the use of improved vehicle technology and modest contributions of renewable fuels. CNG expansion is technically possible but would depend on securing reasonably priced gas supplies under long-term contracts. GOV is mobilizing substantial investment in public transport systems in the large urban areas, with the objective of expanding public transport from about 10-15% to 50% of total passenger-kilometers travelled by 2020.

GoV is committed to addressing Vietnam's urban transport problems. Urban rail systems are under development with support from ADB as the core investments for private to public modal shift in Ha Noi and HCMC. The rail projects will be complemented by high-efficiency bus systems and "connectivity" systems such as park-and-ride services – and an associated ADB project is included in this investment plan. Bus Rapid Transit (BRT) is under development in Ha Noi to complement the urban rail system. BRT systems have been considered for HCMC but are not practical due to space limitations of the

existing road network. Other options under consideration include: energy efficiency standards for new vehicles, optimization of urban transport routes, restriction and control of private transport in urban areas, introduction of hybrid technology buses, and possible fuel switching for buses.

Transport Master Plans exist for Ha Noi and HCMC, which set targets of a 40-50% modal share for public transport by 2020, which is very high by international standards. The plans include the 6 urban rail lines for HCMC and 5 for Ha Noi. ADB will finance some of these lines. However, these lines alone are insufficient to achieve the government's targets unless they will be fully integrated within a comprehensive transport system. This is what the proposed CTF project targets.

Petroleum fuels will continue to be used as the primary energy source for transport. Liquefied petroleum gas (LPG) will be introduced on a pilot basis in the near future. Compressed National Gas (CNG) is being pilot-tested in HCMC busses at present, but expansion will be depending on securing long-term supplies at reasonable prices. A nascent renewable fuels program is being led by Petrovietnam, with the objective of 10% biodiesel (B10) and 10% ethanol blending (E10) by 2020. Vietnam's first commercial biofuel plant located in the Dung Quat industrial zone began initial production in mid-2009, and two other plants are beginning initial front-end engineering design.

GOV has developed a "Strategy on Development of Vietnam's Transport Until 2020", which includes environmental considerations. A new environment department in the Ministry of Transport (MOT) is charged with environmental planning and is preparing a climate change action plan mandated by the National Target Program to Respond to Climate Change. Future plans that may reduce GHG emissions from the transport sector include vehicle inspections, fuel efficiency standards and buses using compressed natural gas (CNG).