

Pathways for Decarbonizing Transport towards Carbon Neutrality in China

Part I: Project Information

GEF ID
10790

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT No
NGI No

Project Title
Pathways for Decarbonizing Transport towards Carbon Neutrality in China

Countries
China

Agency(ies)
World Bank

Other Executing Partner(s)
Ministry of Transport

Executing Partner Type
Government

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, Sustainable Development Goals, Climate Change, Climate Change Mitigation, Renewable Energy, Sustainable Urban Systems and Transport, Financing, Influencing models, Deploy innovative financial instruments, Demonstrate innovative approaches, Transform policy and regulatory environments, Stakeholders, Private Sector, Capital providers, Large corporations, SMEs, Communications, Awareness Raising, Civil Society, Academia, Type of Engagement, Consultation, Participation, Gender Equality, Gender results areas, Access to benefits and services, Sex-disaggregated indicators, Gender Mainstreaming, Capacity, Knowledge and Research, Knowledge Exchange, Peer-to-Peer, Knowledge Generation, Workshop, Innovation, Capacity Development

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 2

Climate Change Adaptation

Climate Change Adaptation 0

Duration

60 In Months

Agency Fee(\$)

908,257.00

Submission Date

3/23/2021

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCM-1-2	GET	10,091,743.00	110,000,000.00
	Total Project Cost (\$)	10,091,743.00	110,000,000.00

B. Indicative Project description summary

Project Objective

The objective of the proposed project is to enhance the national policy framework, establish national and sub-national roadmaps, and pilot emerging technologies in selected provinces, to decarbonize transport towards carbon neutrality.

Project Outcomes

Component 1: Policy Framework and Roadmap for Transport Carbon Peaking and Neutrality

Outcomes:

Enhanced national policy framework and established roadmap for decarbonization of the transport sector towards carbon neutrality

Outputs:

1A: a framework of policies and technical standards to enable decarbonization of transport towards carbon neutrality;

1B: a strategy and roadmap to achieve carbon peaking and neutrality in the transport sector, featuring emerging innovations in mobility systems;

1C: an evaluation framework for transport emissions.

Component 2: Pilot Implementation for Transport Carbon Peaking and Neutrality in Diverse Regions

Outcomes:

Pilot localities have set out strategies and roadmaps towards transport carbon neutrality

New technologies and measures successfully piloted

Outputs:

2A: pilot implementation in Yantai: a strategy and roadmap for achieving transport carbon peaking and neutrality, a big data platform for traffic management, transport operations and emission monitoring, piloting emerging energy-efficient technologies and techniques (e.g. green hydrogen application, renewable energy supply in the transport sector), and decarbonizing port operations;

2B: pilot implementation in Henan: a strategy and roadmap for achieving transport carbon peaking and neutrality, demand study on rural passenger and logistics services, expanded new energy vehicle use, a digital platform and associated operational plans for on-demand mobility and logistics services with electric vehicles;

2C: pilot implementation in Jiangsu: a strategy and roadmap for achieving transport carbon peaking and neutrality, a green financing mechanism to support low-carbon mobility projects (including new technology application that entail high commercial risks), enhanced institutional capacity for green financing; institutional and implementation arrangements to support cross-jurisdictional decarbonizing transport projects, zero-emission pilot port at Jiangyin Port (e.g. electrification of machinery operations)

Additional proposals from other provinces may be identified and considered during preparation (e.g. green hydrogen use in transport in Qinzhou Port of Guangxi Province).

Component 3. Capacity building

Strengthened institutional capacity for implementing policies, strategies, and investment for decarbonizing transport towards carbon neutrality

Outputs:

knowledge and capacity building workshops; trainings; dissemination activities

Component 4. Monitoring and evaluation

Outcome: Strengthened institutional capacity for implementing policies, strategies, and investment for decarbonizing transport towards carbon neutrality

Output: Project monitoring reports, including carbon emission reduction results

Project Component	Financing Type	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1: Policy Framework and Roadmap for Transport Carbon Peaking and Neutrality	Technical Assistance	GET	2,591,743.00	1,000,000.00
Component 2a: Pilot Implementation for Transport Carbon Peaking and Neutrality in Diverse Regions (Yantai)	Investment	GET	2,033,333.00	34,813,334.00
Component 2b: Pilot Implementation for Transport Carbon Peaking and Neutrality in Diverse Regions (Henan)	Investment	GET	2,033,333.00	34,813,333.00
Component 2c: Pilot Implementation for Transport Carbon Peaking and Neutrality in Diverse Regions (Jiangsu)	Technical Assistance	GET	2,033,334.00	34,813,333.00
Component 3. Capacity building	Technical Assistance	GET	800,000.00	
Component 4. Monitoring and Evaluation	Technical Assistance	GET	200,000.00	200,000.00
Sub Total (\$)			9,691,743.00	105,640,000.00

Project Management Cost (PMC)

GET	400,000.00	4,360,000.00
Sub Total(\$)	400,000.00	4,360,000.00
Total Project Cost(\$)	10,091,743.00	110,000,000.00

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Ministry of Transport	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Ministry of Transport, Transport Departments/Bureaus of pilot provinces and municipalities	Public Investment	Investment mobilized	74,000,000.00
GEF Agency	World Bank	Loans	Investment mobilized	35,000,000.00
Total Project Cost(\$)				110,000,000.00

Describe how any "Investment Mobilized" was identified

The Ministry of Transport will provide cash and in-kind contribution for policy and strategy development at the national level. The local pilots will mobilize public investments to support the deployment of emerging technologies to decarbonize the transport sector. In parallel, the Bank is preparing a Program for Results (PforR) Operation on Green Mobility for City Clusters that supports green mobility investments in a selected city cluster or metropolitan region. Some of the IBRD loan will be used to finance decarbonizing interventions identified under this GEF project. An indicative amount of US\$35 million is included as co-financing at this stage.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
World Bank	GET	China	Climate Change	CC STAR Allocation	10,091,743	908,257	11,000,000.00
Total GEF Resources(\$)					10,091,743.00	908,257.00	11,000,000.00

E. Project Preparation Grant (PPG)

PPG Required **false**

PPG Amount (\$)				PPG Agency Fee (\$)			
Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
Total Project Costs(\$)					0.00	0.00	0.00

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	7733436	0	0	0
Expected metric tons of CO ₂ e (indirect)	19403270	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	7,733,436			
Expected metric tons of CO ₂ e (indirect)	19,403,270			
Anticipated start year of accounting	2023			
Duration of accounting	20			

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	2,730,000			
Male	2,730,000			
Total	5460000	0	0	0

Part II. Project Justification

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.



Coordinates:

Zhengzhou, Henan Province: 34.7466° N, 113.6253° E

Yantai, Shandong Province: 37.4645° N, 121.4479° E

Jiangyin, Jiangsu Province: 31.9207° N, 120.2849° E

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

During the identification phase, key stakeholders that have participated in consultations include the public sector, civil society organizations and private sector entities. MOT solicited proposals from the provincial and municipal transport departments for innovative interventions to decarbonize the transport sector. MOT and the Bank collected feedback on the project design through their ongoing engagement with think-tanks, civil society organizations and private sector entities. The Bank also consulted other international organizations on the project design through ongoing sector dialogues.

A preliminary stakeholder analysis has been conducted and the following key stakeholder groups and their roles in the project have been identified:

Stakeholders	Roles in the project
Ministry of Transport (MOT)	MOT is the central agency for the planning, management, coordination and monitoring of decarbonizing strategies in the transport sector. It is the project implementing agency. It will provide overall guidance on project implementation and coordinate the local pilots.
Local project management office (PMO)	The local PMOs will be responsible for the implementation of the pilot activities. These PMOs will be established in the respective transport department and/or transport bureau and will be fully staffed. They will also be responsible for organizing the consultations with the local communities in their respective jurisdiction for the project.
Local governments	Local governments are accountable for endorsing and funding the interventions as set out in the decarbonizing roadmaps. They will be engaged during the preparation of the roadmaps to ensure its sustainability and implementability.
Communities	Communities will be the main actor as well as the main beneficiary of this project. They will be actively engaged during project preparation and implementation. Specific local communities will be identified after the precise geographical location of the pilot activities are determined. Vulnerable groups such as women, children and the elderly will be empowered to provide input to project design and strategy development.
CSO	CSO that promote green mobility in China will be actively engaged during project preparation and implementation. EV100 is an NGO that brings all key players including academic, industry and policy makers for e-mobility deployment in China. The project has been working with EV100 during the identification stage.
Private sector	The private sector has an important role to play in the project, in particular for the application of latest technologies and techniques. They will be consulted during the project design and the development of sector strategies and technical standards. They will also participate in some of the pilots.
Other agencies and development donors	The World Bank has been partnering and will continue to partner with other development organizations in China on the transport decarbonizing agenda.

During the preparation stage, a comprehensive stakeholder engagement plan will be prepared. The engagement plan will identify local communities and social groups that will be affected by and/or have an impact on the specific project activities. The project will engage with the local women's federation in the participating provinces to ensure that women are consulted with, and their needs taken into account, in the design and implementation of the pilot investments. Subsequently, inclusiveness and affordability aspects that may be relevant to particular social groups such as ethnic minorities, the elderly, women and the poor will be incorporated into the engagement plan. For the sector strategy development, the preparation will further consult civil society organizations and private sector entities, particularly for those activities related to new technology and techniques.

For Guangxi province, of which inclusion in the pilot was suggested by MOF at a late stage in project identification, stakeholder consultations have not yet been carried out. The provincial government is currently preparing a technical proposal for hydrogen use in Qinzhou Port; stakeholder consultations will be carried out when the proposal is submitted to and reviewed by the MOT.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

New mobility solutions for decarbonizing transport towards carbon neutrality, either through innovative service platforms, new energy vehicles or newly integrated transport modes, are likely to affect transport users of different genders differently. For example, women tend to use more public transport, make trips with multiple purposes and stops, and travel more during off-peak hours, compared to men. These differences in travel patterns would need to be considered in designing electric bus services, providing charging infrastructure, setting prices of mobility services and infrastructure use, and developing on-demand mobility services. While personal security and safety of trips are important to all transport users, certain groups including women, elderly and children may be more vulnerable than others, which needs to be considered in providing mobility services. In setting out policies and piloting these new mobility solutions, the proposed Project will assess and take into consideration of their impacts on genders, including on personal security and how they would address differing mobility needs by gender. The project will promote gender equality through incorporating gender considerations in project design, implementation, and M&E. The stakeholder engagement plan to be prepared will ensure meaningful consultation with women to inform project design. The project will engage the local women's federation in the participating provinces to ensure that women are consulted with, and their needs taken into account, in the design and implementation of the pilot investments. Gender-differentiated feedback will be incorporated into the project design and M&E and will inform the development of roadmaps, policies and strategies. During implementation, full consideration will be given to increasing the number of jobs generated for women; the policies and strategies for decarbonizing transport will incorporate gender considerations. In the capacity building component, the ratio of female participants in the training of low-carbon related fields will be 50 percent.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources;

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The Project is expected to create an enabling environment for private sector engagement in developing and implementing solutions for decarbonization and eventual carbon neutrality in China. The proposed Project would create a favorable policy environment and clearly articulated technical standards that would promote private sector-led technology innovations. The roadmaps for carbon peaking and neutrality to be developed both at the national and pilot levels would, when they are adopted and announced by respective governments, provide confidence and help mitigating risks of private investments into new technologies and infrastructure in the same directions, accelerating allocation of private capital for greener investments. The green financing mechanism to be established for Jiangsu Province would help attracting private sector investments in scaling up of technologies of which feasibility would be demonstrated under the Project. In order to maximize such impacts, key private sector players will be engaged in the project design (particularly those related to emerging technologies and private financing mobilization) and consulted during the preparation of relevant policies and standards.

5. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF

CEO Endorsement/Approval MTR

TE

High or Substantial

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

1. The proposed project consists of technical assistance (TA) activities at both national and regional level, and pilot subprojects tentatively to be carried out in Yantai Municipality, Henan and Jiangsu province. The overall environmental risk is rated Substantial and the social risk is classified Substantial given the pilot subprojects uncertainty and potential downstream environmental impacts and risks from TA activities. The environmental and social risk classification will be rechecked prior to project appraisal.
2. The project has overall environmental benefits of promoting clean and low-carbon development and improving the efficiency of transport operation in China and the pilot provinces/cities, and therefore reducing greenhouse gas (GHG) emission, improving air quality, and contributing to climate change mitigation. By undertaking targeted TA work in identifying low carbon transport options, the project will allow specific social development and inclusion aspects also to be fully considered which will in turn improve the social outcomes from subsequent transport and financing proposals.
3. Implementation of TA studies will not cause any direct adverse impacts but will involve significant stakeholder engagement and potentially have downstream impacts during the implementation of the products/outcomes of TA. As a result of TA recommended strategies or plans, there could be increased infrastructure investments, such as road or bridge rehabilitation, construction of renewable energy generation, storage and transmission facilities, construction or upgrading of logistic centres, bus depots, charging piles, etc. The downstream environmental and social issues and implications associated with the potential infrastructure construction and operation would need to be considered and assessed during the TA studies, including conducting environmental and social risk scoping as part of detailed and alternative analysis. This is supported by building the counterpart capacity for integrating environmental and social objectives into their work, and have the terms of reference (ToRs) reviewed by the Bank team to ensure that the relevant ESSs of the ESF are complied with.
4. Based on current project design, the pilot subprojects will be largely composed of studies (e.g. regulatory framework and incentive system for onshore electricity, transport and logistics demand, green financing), but may involve small to medium scale civil works and equipment installation associated with dock infrastructure upgrading, battery energy storage systems (BESS), heating system experiments and data platform establishment. The civil works are anticipated to be on existing land or existing buildings, located in urban or suburban area already disturbed by human activities, and unlikely to be in vicinity of any legally protected or customarily recognized cultural heritage. Although, the project design will exclude new construction or rehabilitation that would require large scale land acquisition, TA work will include the preparation of resettlement planning instruments proportionate to the identified risks and scale of acquisition such as resettlement policy frameworks (RPFs) and/or resettlement action plans (RAPs). Similar assessments associated with operational aspects of potential downstream investments such as the asphalt plants which may include community health and safety, labor and other aspects will be defined by the ToR for this work.
5. The potential adverse environmental impacts during construction phase would mainly include general construction nuisance of dust, noise, soil disturbance, traffic safety, waste disposal, and disturbance to modified habitats, which are generally temporary, short-term, localized, of small to medium scale, and could be effectively avoided, reduced or mitigated through adopting mature civil work techniques and good management practice. No long-term irreversible adverse environmental impacts are expected. Operation of asphalt producer could bring about environmental impacts such as air emissions, noise, wastewater and waste, and occupational health and safety (OHS) concerns. In domestic practice, the plant owner will be held responsible for conducting operational phase impacts monitoring through engaged external third parties, and are subject to supervision by local environmental authorities. The environmental risks during operation phase are thus expected to be manageable under current domestic regulatory system. Fire and explosion risks during BESS operation can be well controlled by following national design standards with safety considerations, including placement criteria, fire and explosion prevention measures and emergency response requirements. Planning for battery waste management will require the review of current recycling technologies and practices in China. The environmental impacts assessment will compare domestic standards with Good International Industry Practice (GIIP) and determine more stringent performance criteria for the asphalt production, battery operation and disposal.
6. At the national level, the key counterpart is Ministry of Transport (MOT), and a national Project Management Office (PMO) will be established either under its Comprehensive Transport Division or one of its affiliated agencies. The national PMO will be in charge of day-to-day management of the overall project, including environmental and social (E&S) risk monitoring of the national components. Three local PMOs will be established respectively by the Jiangsu Provincial Transport Department, the Henan Provincial Transport Department and the Yantai Municipal Transport Bureau, which will be in charge of the day-to-day management of their respective parts of the projects. Although this project will be the first for MOT and the three participating provinces/cities to prepare and implement under the new Environmental and Social Framework (ESF), in general, national and provincial/municipal borrowers have the technical capacity to implement the project to meet the objectives of the ESSs, including GIIP. A time-bound capacity development plan will be prepared in the Environmental and Social Management Framework (ESMF) (and key actions will be committed to under the ESCP), through which the capacity of national and local PMOs will be strengthened with regards to ESF implementation. Both national and local PMOs will have dedicated focal points to coordinate E&S risk management for the project, and will hire E&S consultants to support preparing, updating, and implementing relevant environmental and social instruments.
7. As details of TAs and pilot subproject activities will not be confirmed until project preparation/implementation, the PMO will prepare an ESMF, a Stakeholder Engagement Framework (SEF) and an Environmental and Social Commitment Plan (ESCP) consistent with relevant ESSs prior to project appraisal. Once a pilot and specific subproject activities are known, the PMO will carry out screening to determine their eligibility for financing. The grant

applicants will develop appropriate E&S documents proportionate to the risks and impacts of the particular activity, consistent with the ESMF. The E&S documents will provide sufficient details to inform stakeholder engagement and the Bank's decision making and also establish adequate risk management systems for key aspects such as data use and management. The PMO and the grant applicants will submit to the Bank and disclose the E&S documents as specified in the ESCP.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
Concept ESRS P175561	

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 with this template).

Name	Position	Ministry	Date
Xiang Peng	Deputy Director, International and Economic and Financial Cooperation Department	Ministry of Finance	3/10/2021

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

Please see section II part 1.