

1. Project Data

Summary project data			
GEF project ID		5627	
GEF Agency project ID		46928	
GEF Replenishment Phase		GEF-5	
Lead GEF Agency (include all for joint projects)		Asian Development Bank	
Project name		Improving Clean Bus Operations and Management (ASTUD PRC Clean Bus Leasing)	
Country/Countries		China	
Region		East Asia	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		CCM-4	
Executing agencies involved		Ministry of Transportation, Transport Services Department (lead executing agency)	
NGOs/CBOs involvement		None	
Private sector involvement		Financial leasing companies (unspecified), bus companies (unspecified)	
CEO Endorsement (FSP) /Approval date (MSP)		January 10, 2014	
Effectiveness date / project start		July 16, 2015	
Expected date of project completion (at start)		December 31, 2016	
Actual date of project completion		December 31, 2018	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding		
	Co-financing		
GEF Project Grant		2.315	1.272
Co-financing	IA own	275	275
	Government	0.7	Not available
	Other multi- /bi-laterals		
	Private sector		
	NGOs/CSOs		
	Other		
Total GEF funding		2.315	1.272
Total Co-financing		275.7	275 (at least)
Total project funding (GEF grant(s) + co-financing)		278.015	276.72 (at least)
Terminal evaluation/review information			
TE completion date		April 2019	
Author of TE		Asian Development Bank	
TER completion date		2/24/2020	
TER prepared by		Meghan Jutras	
TER peer review by (if GEF IEO review)		Neeraj Negi	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF IEO Review
Project Outcomes	UA ¹	S ²	-	S
Sustainability of Outcomes		L	-	L
M&E Design		UA	-	S
M&E Implementation		UA	-	MU
Quality of Implementation		S	-	S
Quality of Execution		S	-	S
Quality of the Terminal Evaluation Report		-	-	MS

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The project aims to abate 1.3 million tons of CO₂ equivalent per year, totaling in the range of 2.3-3.6 million tons of direct and indirect CO₂ equivalent abatement over the life of the project, through the roll out of low emission buses and greater use of public transportation across the People's Republic of China (hereafter "China"). (CEO Endorsement pg. 1, 8)

3.2 Development Objectives of the project:

The project's overarching goal was to accelerate the adoption of clean buses for public transportation services in China, which would "directly benefit millions of low-income commuters, improve air quality, and reduce GHG emissions." (CEO Endorsement pg. 7) The project had six components: (1) Lease clean buses (the main, "baseline project"), (2) Develop a guidebook for bus companies to use in selecting clean buses, (3) Promote energy efficient, inclusive, and competitive bus operations, (4) Establish support systems for energy efficient bus operations (such as IT systems), (5) Maintain a clean bus performance monitoring program, and (6) Raise awareness, conduct trainings, and share knowledge. (CEO Endorsement pg. 2-4)

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or other activities during implementation?

Yes: due to changes in project administration, priorities of the new executing agency (the Ministry of Transportation), and the time lapse in launching the project, some project outputs and activities were modified. The project was divided into two new phases³, the small grants scheme component was canceled, and the terms of reference for consultants were modified. (TE pg. 3)

¹ The 2018 PIR states that the overall project rating is "not yet applicable," but that satisfactory impact is expected (pg. 4-5)

² The TE rates project impacts as satisfactory. (pg. 10-11)

³ The TE explains that "Phase 1 was intended to pilot the survey of five cities to determine whether the [project] was still relevant for the cities. Phase 2 was intended to extend the surveys and data collection to the rest of the 12 cities included in the [baseline] program." (pg. 3)

4. GEF IEO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

Relevance can receive either a Satisfactory or Unsatisfactory rating. For Effectiveness and Cost efficiency, a six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess. Sustainability ratings are assessed on a four-point scale: Likely=no or negligible risk; Moderately Likely=low risk; Moderately Unlikely=substantial risks; Unlikely=high risk. In assessing a Sustainability rating please note if, and to what degree, sustainability of project outcomes is threatened by financial, sociopolitical, institutional/governance, or environmental factors.

Please justify ratings in the space below each box.

4.1 Relevance	Rating: Satisfactory
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The TE rates the project's relevance as **Highly Relevant**. This TER, which uses a different scale, provides a rating of **Satisfactory**. The project aligned well with China's national strategies and priorities for sustainable development and climate change mitigation. The government's five year plan (2011-2015) identified clean energy vehicles as a priority industry, while its subsequent five year plan (2016-2020) prioritized green development, with a focus on "promoting low-carbon development, encouraging energy revolution, accelerating energy technology innovation, [and] constructing clean, low-carbon, and highly efficient modern energy systems." (TE pg. 8) China's State Council's Energy Efficient and New Energy Vehicle Industry Development Plan (2012–2020), which aimed to expand clean bus transport, also aligned well with project objectives.

The Asian Development Bank's Country Partnership Strategy with China was fully aligned with the government's five year plan, and highlighted clean energy development in the country as a focal area of the Bank's climate mitigation efforts. The project supported the Asian Development Bank's Sustainable Transport Initiative and Strategy 2020 goals for environmental sustainability and financial sector development. (TE pg. 9) China's 2012 United Nations Framework Convention on Climate Change (UNFCCC) national communication identified mitigation opportunities in urban transport systems, including conversion to cleaner vehicles, increased fuel economy, and intelligent transportation system technology. (CEO Endorsement pg. 6) The TE explains that "in its capacity as a financial mechanism of the UNFCCC, the GEF supports countries to make transformational shifts to a low emission development path. The GEF also supports countries to increase their resilience and adapt to the adverse impacts of climate change." (pg. 9)

4.2 Effectiveness	Rating: Satisfactory
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The TE assesses the project to be **Effective**; this TER, which uses a different scale, rates project effectiveness as **Satisfactory**. The project's objective was to improve the selection, management, and operation of clean buses in the urban, suburban, and intercity public transport markets to maximize

energy efficiency and GHG emissions savings. Despite significant implementation delays, the TE states that, overall, the project “achieved its [objective of] improving selection, management, and operation of clean buses” and “assisting [China] to maximize the environmental, social, and economic benefits of adopting clean bus technology.” (pg. 3-4) Notably, although M&E requirements and responsibilities were clearly established in the CEO Endorsement, multiple transitions in the administration of the project and changes in the project’s scope resulted in limited M&E of project activities, complicating any assessment of the project’s effectiveness. Moreover, the TE does not assess progress against each of the project’s expected outcomes, outputs, and targets in the results framework. This TER has attempted to summarize and categorize the project’s achievements by its component areas, as follows.

- **Component 1: China clean bus leasing baseline project (non-GEF-funded)**

Expected results under this component included (1) At least 5,000 clean buses leased and in operation by bus operators by 2018, (2) Around 420 million vehicle-kilometers of service per year are provided by the buses funded by the program from 2019, (3) Reduced GHG and other emissions (estimated 8.4 million tons GHG savings over 12 years), and (4) Increased use of public transport. The GEF-funded project was to be implemented in parallel with a “baseline” clean bus leasing project (Component 1), with the GEF-funded activities (Components 2-6) designed to maximize performance of the clean buses and related GHG savings. (CEO Endorsement pg. 12) The TE identifies achievements of both the baseline project and GEF-funded components. Under the baseline project, a total of 4,259 clean energy buses were procured and leased by September 2016, with another 1,413 buses planned for lease, surpassing the project’s target of 5,000 buses. The TE indicated that the project was on track to meet its target of overall reductions in GHG emissions (1.31 million tons) by 2019. (pg. 12)

- **Component 2: Develop a guidebook for selecting clean and accessible buses**

Expected results under this component included (1) Improved selection of clean buses that reflect required operating conditions, (2) Estimated average GHG savings of 10% per bus through better selection of clean bus technology, and (3) Estimated direct and indirect GHG savings of 1.3-1.8 million tons. The project reviewed clean bus policies and developed guidelines and recommendations for the selection, dispatching, maintenance, and promotion of clean buses for bus operators. In addition, the project developed the knowledge product “Sustainable Transport Solutions: Low-Carbon Buses in the [People’s Republic of China],” which was translated into Chinese and printed for public usage.

- **Component 3: Promote energy-efficient, inclusive, and competitive bus operations**

Expected results under this component included (1) Increased awareness of the importance and benefits of energy efficiency, (2) Improved management of bus companies to achieve the dual goals of minimizing the energy use while maximizing the number of passengers using public transport, and (3) Estimated direct and indirect GHG savings of 1.1-1.8 million tons. The project provided tools for bus administrators and operators to measure GHG emissions.

- **Component 4: Support systems for energy-efficient bus operations**

Expected results under this component included (1) Adoption of software systems for energy-efficient bus operations by bus companies, (2) Improved monitoring and management of bus fleets and passenger markets, and responsiveness to below standard performance, (3) Reduced GHG emissions from bus operations (target not specified). The development of management tools was not implemented because bus companies did not want to share their financial data. (TE pg. 3) Instead, the project outfitted 100 buses with equipment to monitor ridership for better bus scheduling and service. (TE pg. 4)

- **Component 5: Implement a clean bus performance monitoring program**

Expected results under this component included (1) Improved understanding of the relative performance of different types of clean buses under different operating conditions, and (2) Improved understanding of the factors that affect in-service performance of clean buses. The performance monitoring program was not implemented because bus companies had their own monitoring programs already in place by the time the project started. Instead, the project implemented a clean bus performance survey and gathered first-hand information from 17 bus companies (exceeding the target of 15). (TE pg. 4)

- **Component 6: Raise awareness, provide trainings, and share knowledge**

Expected results under this component included (1) Increased awareness of the importance of selecting and operating clean buses to maximize energy efficiency, (2) Increased uptake of the energy efficiency tools developed in Components 2, 3, and 4, and (3) Improved capacity to effectively utilize the energy efficiency tools. The project organized an International Forum on Zero Emissions of Urban Transport (in Beijing in May 2018) for more than 200 participants; funded the attendance of eight participants at the Asian Development Bank's Transport Forum (September 2018); organized the National New Energy Bus Performance Workshop (November-December 2018 in Chongqing) with 200 participants; and shared project results on electric bus selection and charging station requirements with other Asian Development Bank projects in China. These achievements raised awareness of energy efficiency in bus operations and disseminated the project's knowledge and experience.

Of note, the project experienced a series of transitions in administration that delayed project start (from July 2015 to February 2017) and completion (from December 2016 to December 2018). Originally, China's Clean Development Mechanism Fund (CDMF) in the Ministry of Finance was the executing agency; however, after a change in function, administration was transferred to the Ministry of Transport, first to the Comprehensive Planning Department and then to the Transport Services Department. Additionally, within the implementing agency, the Asian Development Bank, the project was transferred from the Private Sector Operations Department to the Public Management, Financial Sector, and Regional Cooperation Division of the East Asia Department, and then to the East Asia Transport Division. These transitions and related time lapse resulted in changes to some of the project's planned outputs and activities, including implementing the project in two phases: Phase 1 piloted a survey with five cities to determine whether the project was still relevant, and Phase 2 extended the surveys and data collection to the remaining 12 cities included in the baseline program. Despite these

delays and changes, the TE assessed the project as effective overall in achieving its main objectives, and this TER agrees.

4.3 Efficiency	Rating: Satisfactory
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The TE assesses the project to be **Efficient**; this TER, which uses a different scale, rates project efficiency as **Satisfactory**. The project applied an innovative approach to accelerating and maximizing the spread of clean buses by running in parallel to the baseline bus leasing project, with a national reach estimated at 5,000 buses in 15 cities in China. Changes in some outputs and activities following shifts in project administration also had ramifications for the project's budget: the cancelation of the small grants scheme, modifications to consultants' terms of references, and lower actual costs than budgeted left around 45% of GEF funds (US\$ 1.043 million) undisbursed, which were returned. (TE pg. 4, 10) The TE also notes that staff at the implementing and executing agencies used in-house capacity and worked efficiently to manage project costs, while completing planned tasks and achieving outcomes.

The TE indicates that the full amount of co-financing (US\$ 275 million) was provided as expected from the Asian Development Bank. The TE also does not report on the materialization of the US\$ 0.7 million in-kind co-financing expected from the government.

4.4 Sustainability	Rating: Likely
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The TE provides a rating of **Likely** for project sustainability, and this TER agrees. Bus operators and companies adopted the methods they learned for selecting, maintaining, and dispatching clean buses. The project's achievements were recognized by the government, highly relevant to national priorities, and can be replicated and shared with other countries.

Financial Resources

This TER assesses the sustainability of financial resources to be **Moderately Likely**. The TE simply states that "there is no financial risk of the [project]"; rather, the project has supported bus operators in reducing their operating and maintenance costs. (pg. 14) However, there are some financial risks to sustainability: for example, the TE notes that external financial support is still necessary for bus operators to continue to improve their operation and maintenance efficiency and cities must often subsidize bus operators due to high up-front costs. (TE pg. 14, CEO Endorsement pg. 6)

Sociopolitical

This TER assesses sociopolitical sustainability to be **Likely**. China's central and city governments are making significant efforts to reduce global warming, vehicle emissions, and urban traffic congestion by encouraging an innovative energy revolution. The Chinese government's five-year plan (2016-2020) highlighted the goal of promoting low-carbon transport development, increasing public transportation,

encouraging green travel, and promoting clean energy vehicles. The TE states that “improving clean bus operation and management in the public transport of [China] is an essential and urgent task for all city governments and bus operators.” (TE pg. 14) Implementing the project and baseline project is thus wholly consistent with the country’s strategies and plans.

Institutional Frameworks and Governance

This TER assesses the sustainability of institutional frameworks and governance to be **Likely**. The TE indicates that the project reviewed and analyzed government policies in clean bus development. Policy recommendations and city survey data were provided in reports, which may enable the central and city governments to improve their institutional frameworks and governance for clean bus development in China. (TE pg. 15) While the TE does not report on materialization of the government’s expected co-financing of the project (as a signal of potential sustainability), the project’s objectives were highly relevant to government priorities and the project had solid institutional support.

Environmental

No environmental threats to the sustainability of project benefits were noted. The TE states that the project has no environmental risks, only benefits in reducing GHG emissions in line with targets (2.3–3.6 million tons over the project lifetime). (TE pg. 15)

5. Processes and factors affecting attainment of project outcomes

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project’s outcomes and/or sustainability? If so, in what ways and through what causal linkages?

The TE provides limited information on co-financing. The TE indicates that the full amount of co-financing (US\$ 275 million) was provided as expected from the Asian Development Bank for project activities. The TE does not report on the materialization of the US\$ 0.7 million in-kind co-financing expected from the government.

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project’s outcomes and/or sustainability? If so, in what ways and through what causal linkages?

The project experienced a series of administration transitions that delayed project start (from July 2015 to February 2017) and completion (extended three times, from December 2016 to December 2018). Originally, China’s Clean Development Mechanism Fund (CDMF) in the Ministry of Finance was the executing agency; however, after a change in function, administration was transferred to the Ministry of Transport, first to the Comprehensive Planning Department and then to the Transport Services Department. Additionally, within the

implementing agency, the Asian Development Bank, the project was transferred from the Private Sector Operations Department to the Public Management, Financial Sector, and Regional Cooperation Division of the East Asia Department, and then to the East Asia Transport Division. These transitions, shifting priorities, and delay in implementation resulted in changes to some of the project's planned outputs and activities. However, the TE assessed the project as successfully completing its objectives in spite of these modifications and delays, and did not indicate any threat to the sustainability of project benefits.

5.3 Country ownership. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

The TE does not provide sufficient information to assess country ownership.

6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six point scale: Highly Satisfactory=no shortcomings in this M&E component; Satisfactory=minor shortcomings in this M&E component; Moderately Satisfactory=moderate shortcomings in this M&E component; Moderately Unsatisfactory=significant shortcomings in this M&E component; Unsatisfactory=major shortcomings in this M&E component; Highly Unsatisfactory=there were no project M&E systems.

Please justify ratings in the space below each box.

6.1 M&E Design at entry	Rating: Satisfactory
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The TE does not provide a rating for M&E design at entry. This TER assesses M&E design at entry to be **Satisfactory**. The results framework included output, outcome, and impact indicators and targets, with related data sources and reporting mechanisms. It included some baseline data, though not for all indicators. (CEO Endorsement table 6) The TE also noted that the outcome and impact indicators primarily related to the baseline clean bus leasing project, not the GEF-funded activities. (TE pg. 15) The project planned for comprehensive monitoring and evaluation of project performance to be integrated with project management activities. In addition, the project planned to have an M&E system that would track the service performance of clean buses. It delineated responsibilities for monitoring, progress reporting, evaluation, and expense auditing by the implementing and executing agencies. (CEO Endorsement pg. 8)

The project planned to complete inception reports, periodic progress reports (including PIRs), a midterm evaluation, final evaluation, project completion report, and audit. The CEO Endorsement indicated that a budget of US\$ 110,000 (around 5% of total project costs) would be allocated for project management, which included M&E as well as project implementation support and knowledge sharing. It anticipated that the original executing agency would also provide US\$ 700,000 of in-kind co-financing to support project management and M&E, including staff and office space. (CEO Endorsement pg. 12)

6.2 M&E Implementation	Rating: Moderately Unsatisfactory
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The TE does not provide a rating for M&E implementation. This TER assesses M&E implementation to be **Moderately Unsatisfactory**. Although M&E requirements and responsibilities were clearly established in the CEO Endorsement, multiple transitions in the administration of the project resulted in limited M&E of project activities. The TE explains that changes in the project's scope through these shifts left M&E tasks poorly designed, and ultimately they were not conducted. For example, the consultant originally responsible for the bus performance monitoring program had to instead focus on trainings on bus dispatching and maintenance. (TE pg. 16) There was no indication that project documents were formally modified to reflect changes in activities or M&E tasks. The TE notes that the project's consultants prepared and submitted all required reports on time. (pg. 3)

The TE found that, due to changes with the executing agency and project activities, the budget allocated to project management and M&E activities (US \$110,000) was not utilized. (pg. 16) Despite these shortcomings, the TE states that targets on most outcome and output indicators were achieved. Although not included in the report's recommendations, the TE states that "an M&E program urgently needs to be designed and implemented to assess the impacts of the [baseline and GEF-funded projects] as well as overall clean bus development in [China]... The [project] team visited a total of 17 cities in [China], and post-visits are needed to learn and assess the impacts of the [project]. A follow-up program needs to be developed and implemented to maximize the TA benefits." (TE pg. 16)

7. Assessment of project implementation and execution

Quality of Implementation includes the quality of project design, as well as the quality of supervision and assistance provided by implementing agency(s) to execution agencies throughout project implementation. Quality of Execution covers the effectiveness of the executing agency(s) in performing its roles and responsibilities. In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 Quality of Project Implementation	Rating: Satisfactory
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The implementing agency for this project was the Asian Development Bank. The TE rates the Bank's performance as **Satisfactory**, and this TER agrees. The most significant issue was the transfer of project administration from the Bank's Private Sector Operations Department to the Public Management, Financial Sector, and Regional Cooperation Division of the East Asia Department, and then to the East Asia Transport Division. These transitions occurred amidst multiple transfers within the executing agency as well, and resulted in substantial project implementation delays.

During project implementation, the Asian Development Bank performed well, conducting one reconnaissance mission (April 2017), one inception mission (May 2017), and four review missions

(January, April, May, and October 2018). (TE pg. 6) The TE found that the Asian Development Bank also closely monitored the progress of project consultants' work and modified arrangements as needed for more efficient implementation. (pg. 4)

7.2 Quality of Project Execution	Rating: Satisfactory
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The executing agency for this project was the Ministry of Transport. The TE rates the executing agency's performance as **Satisfactory**, and this TER agrees. The most significant issue was the multiple transfers of project administration. Originally, China's Clean Development Mechanism Fund (CDMF) in the Ministry of Finance was the executing agency; however, after a change in function, administration was transferred to the Ministry of Transport, first to the Comprehensive Planning Department and then to the Transport Services Department. These transitions resulted in shifting priorities and a substantial delay in project implementation, which necessitated changes to some of the project's planned outputs and activities. The TE noted that the project initially experienced some difficulty recruiting consultants to fill certain positions, but eventually was fully staffed and brought on additional consultants to support the policy study and project coordination. (pg. 7)

8. Assessment of Project Impacts

Note - In instances where information on any impact related topic is not provided in the terminal evaluations, the reviewer should indicate in the relevant sections below that this is indeed the case and identify the information gaps. When providing information on topics related to impact, please cite the page number of the terminal evaluation from where the information is sourced.

8.1 Environmental Change. Describe the changes in environmental stress and environmental status that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The baseline project surpassed its target of procuring and leasing 5,000 clean energy buses by project end. While it is unclear from the TE whether GHG emissions reductions were calculated at project end, achieving the target for clean bus leasing would put the project on track to achieve its target for GHG emissions reduction, estimated at 2.3-3.6 million tons for the GEF-funded activities over the project lifetime, or around 10.7-12.0 million tons including the baseline project. (TE pg. 11)

8.2 Socioeconomic change. Describe any changes in human well-being (income, education, health, community relationships, etc.) that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities

contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The CEO Endorsement highlights benefits achieved through a reduction in transport sector GHG emissions that are not climate related, including a “reduction of congestion (time saving, service reliability, operating costs), improved air quality (health impacts), and improved safety and security. In addition, public transport in developing countries delivers particular benefits to the poor and to women.” It states that the baseline project and GEF-funded activities would reduce local air and noise pollution from clean bus technology; design for inclusive access; and increase attractiveness of public transport as an alternative to private vehicles. (CEO Endorsement pg. 14) The TE did not indicate whether the project assessed any such changes. However, the TE indicated that the expansion of bus fleets created 200 new jobs. (TE pg. 14)

8.3 Capacity and governance changes. Describe notable changes in capacities and governance that can lead to large-scale action (both mass and legislative) bringing about positive environmental change. “Capacities” include awareness, knowledge, skills, infrastructure, and environmental monitoring systems, among others. “Governance” refers to decision-making processes, structures and systems, including access to and use of information, and thus would include laws, administrative bodies, trust-building and conflict resolution processes, information-sharing systems, etc. Indicate how project activities contributed to/ hindered these changes, as well as how contextual factors have influenced these changes.

a) Capacities

The TE does not provide sufficient information to assess changes in capacities. It indicates that training in international best practices and the introduction of specialized technology “had significant impacts [for] the bus operators,” in improving their operations, maintenance, and dispatching; however, it does not provide further detail or the supporting evidence upon which these conclusions were drawn.

b) Governance

The TE does not provide sufficient information to assess changes in governance. It notes that policy recommendations and city survey data were provided in reports, which may enable the central and city governments to improve their institutional frameworks and governance for clean bus development in China in the future. (TE pg. 15)

8.4 Unintended impacts. Describe any impacts not targeted by the project, whether positive or negative, affecting either ecological or social aspects. Indicate the factors that contributed to these unintended impacts occurring.

The TE does not identify any unintended impacts.

8.5 Adoption of GEF initiatives at scale. Identify any initiatives (e.g. technologies, approaches, financing instruments, implementing bodies, legal frameworks, information systems) that have been

mainstreamed, replicated and/or scaled up by government and other stakeholders by project end. Include the extent to which this broader adoption has taken place, e.g. if plans and resources have been established but no actual adoption has taken place, or if market change and large-scale environmental benefits have begun to occur. Indicate how project activities and other contextual factors contributed to these taking place. If broader adoption has not taken place as expected, indicate which factors (both project-related and contextual) have hindered this from happening.

The TE highlights the project's direct impacts for clean bus administrators and operators, such as increased knowledge of international best practices, introduction of specialized technology, and development of guidelines on clean bus selection, operation, and maintenance. The report states that the project's long-term impacts will be realized in the near future; for example, as the government utilizes the project's policy study and recommendations to further promote clean bus development in the country. (pg. 11)

The TE states that "GEF-funded activities were expected to have a strong demonstration effect. They would have substantial replication potential more broadly in [China's] bus industry and were expected to catalyze substantial indirect impacts through accelerated deployment and diffusion of principles, techniques, and tools for selecting and operating clean buses to achieve maximum energy efficiency/GHG reductions." (pg. 6) The total market for clean buses in China was expected to exceed 500,000 buses by 2020, and total GHG emissions avoided were estimated at 2.3-3.6 million tons for the GEF-funded activities. There is a degree of uncertainty in the estimation of benefits as benefits are sensitive to a shift in level of use of transportation.

9. Lessons and recommendations

9.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report, including how they could have application for other GEF projects.

The TE provides the following lesson learned (pg. 4):

1. Changes in project administration (on the part of both the implementing and executing agencies) cause substantial delays in project implementation. In the future, the implementing agency should take quick action in such situations to avoid delays.

9.2 Briefly describe the recommendations given in the terminal evaluation.

The TE provides the following recommendations (pg. 4):

1. Lessons from the project's knowledge product can be shared outside of China. The knowledge product is the first of its kind, highlighting the promotion, process of selection, and performance of clean energy buses, which is useful for bus operators and policymakers.
2. The Asian Development Bank should follow up on the clean bus development project through continued engagement with the Ministry of Transport.

10. Quality of the Terminal Evaluation Report

A six point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria	GEF IEO comments	Rating
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	The report assesses the project's progress toward achieving its objectives, outputs, outcomes, and impacts. However, these descriptions are brief and on a number components do not provide supporting evidence.	MS
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The TE is internally consistent; however, the evidence presented is limited and at times insufficient to substantiate ratings. For example, the TE rates the performance of both the implementing and executing agencies (the Asian Development Bank and Ministry of Finance, respectively) as satisfactory without further explanation, and despite referencing significant delays in initiating project implementation.	MU
To what extent does the report properly assess project sustainability and/or project exit strategy?	The TE offers a good assessment of project sustainability, addressing all required GEF criteria (financial resources, sociopolitical, institutional frameworks and governance, and environmental). However, these assessments could be supported by more comprehensive evidence.	MS
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The TE provides only one lesson learned, with limited supporting context. This is not comprehensive, and the report neglected to identify a number of additional learning opportunities from the project. Recommendations are also very brief and some are scattered throughout the report.	MU
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report includes actual project costs, but not delineated by activity. The report does not address the materialization (or lack) of co-financing from the government.	MU
Assess the quality of the report's evaluation of project M&E systems.	The report offers a modest evaluation of the project's M&E system at design and in implementation. However, it does not comprehensively address the project's progress against each outcome area in the results framework, and it does not provide ratings.	MS
Overall TE Rating		MS

11. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).