

1. Project Data

Summary project data			
GEF project ID		3534	
GEF Agency project ID		4039	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNDP	
Project name		Promoting Clean Electric Buses for the Beijing Olympics (CEBBO)	
Country/Countries		China	
Region		Asia	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		SP5: Promoting Sustainable Innovative Systems for Urban Transport	
Executing agencies involved		Beijing Municipal Environmental Protection Bureau	
NGOs/CBOs involvement		None involved	
Private sector involvement		None involved	
CEO Endorsement (FSP) /Approval date (MSP)		April 16, 2008	
Effectiveness date / project start		April 2008	
Expected date of project completion (at start)		December 2008	
Actual date of project completion		December 2008	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding	0	0
	Co-financing	0	0
GEF Project Grant		1.0	0.84
Co-financing	IA own	0	0
	Government	12.3	12.45
	Other multi- /bi-laterals	0	0
	Private sector	0	0
	NGOs/CSOs	0	0
Total GEF funding		1.0	0.84
Total Co-financing		12.3	12.45

Total project funding (GEF grant(s) + co-financing)	13.3	13.3
Terminal evaluation/review information		
TE completion date	July 2009	
Author of TE	Rogelio Aldover, Wei Guo, Xin Liu, and Jinghan Hu	
TER completion date	March 2019	
TER prepared by	Spandana Battula	
TER peer review by (if GEF IEO review)	Cody Parker	

2. Summary of Project Ratings

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

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The Global Environmental Objective of the project was to avoid greenhouse gas emissions from the operation of the E-Buses during the Olympics and in their lifetime (TE pg 1).

3.2 Development Objectives of the project:

The Development Objective of the project was “supporting the Chinese efforts in greening the 2008 Olympic Games in Beijing through the demonstration of electric buses solely powered by Li-ion batteries” (CEO endorsement pg 1). The project aimed to achieve its objectives through two components, and they are:

Component 1: Procurement, operation, and maintenance of Li-ion electric buses to transport athletes and media during the Olympics; and

Component 2: Outreach of the GEF and Green Olympics.

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

There have been no changes to the objectives or the activities of the project during implementation.

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 project was relevant to GEF's Operational Programme 11 on promoting environmentally sustainable transport, and was consistent with climate change strategic programme (SP-5) in promoting sustainable innovative systems for urban transport. Additionally, the project aligned to Government of China's program of actions to mitigate greenhouse gas emissions according to the China National Climate Change Strategy. As per the TE "the awareness-raising activities proposed in this project were among the priorities for building China's capacity to implement the UNFCCC" (CEO endorsement document pg 4). Thus, the TER find the relevance of the project to be Satisfactory.

4.2 Effectiveness	Rating: Satisfactory
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The project was successful in achieving its objective to procure 50 Li-ion electric buses (LEB) which fulfilled transport requirement in the Olympic Games for the participants and media. Due to the usage of LEBs, the project was able to achieve 2 tons of CO2 emission reduction per Li-ion battery powered electric bus amounting to total of 111.6 tons CO2 emission reduction. The project also was successful in achieving two of its components to secure procurement and operation of LEBs and spread outreach of GEF and Green Olympics. The TE gave a highly satisfactory rating, and the TER agrees and assigns a Satisfactory rating to the effectiveness of the project.

Component 1: Procurement, operation and maintenance of Li-ion electric buses:

The project purchased 50 Li-ion electric buses, carried out series of test operations, and set-up battery charging and exchange stations for the buses. Each bus had charging capacity for 10 batteries, and the charging station was located in a 5,000-square-meter lot in the vicinity of the Olympic Village. The TE reported that "from the end of the Olympic games up to May 2009, the 50 LEBs had traveled 1,073,500 km, consumed 1,239,300 kwh and carried 835,000 passengers" (TE pg 8). Under this component, the project helped in improving air quality as the TE mentioned that Beijing had better air quality and blue sky days for 274 days against the target of 257 days, however, it should be noted that air quality can be attributed to vehicle utilization reduction, the use of alternative fuels, clean energy transport technologies and many other factors (TE pg 14).

Component 2: Outreach of GEF and Green Olympics:

The project achieved in enhancing public image of GEF as a global entity with initiatives to improve level of awareness and visibility such as displaying GEF/UNDP logo on the buses. As per the TE, the project held a press conference in collaboration with UNDP-GEF which created high visibility for GEF. The project also presented a TV program on Green Olympics which was shown during the Olympic Games. The project used multimedia resources to gain wide outreach, and distributed series of leaflets and brochures among schools and communities to educate about usefulness of electric vehicles (TE pg 7).

4.3 Efficiency	Rating: Satisfactory
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The TE mentioned that the project was “highly efficient in making use of available resources from the different partners which derived maximum advantage” (TE pg 27). The project received expected co-financing and used them to buy 46 buses and supported various activities which helped in success of the project. The budget was audited and reported to proper authorities applying accepted government procedures. The project did not face any delays and it completed the activities on time. Although the TE did not provide a rating, the TER finds that the efficiency of the project is satisfactory.

4.4 Sustainability	Rating: Likely
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The TE did not provide a rating for sustainability of the project, but the TER gives a Likely rating as the financial, institutional, socio-economic and environmental risks are low.

Financial: the project does not have financial risks as it received financing from GEF and co-financing partners as was originally expected. The financing was used to invest for 50 LEBs and a charging station for the Beijing Municipal Government that helped to create a need for scaled-up operation of LEB system which is “valuable for improvement/innovation of technical, management, and commercial aspect towards establishing the LEB market that will make the LEB economical and commercial” (TE pg 12). The buses continued to be used for local transport under the Beijing Public Transportation Holding.

Institutional: The TE stated that Beijing was planning to promote LEBs and other environmentally friendly transportation. The government had decided to subsidize 860 Hybrid buses, 50 additional LEBs, and a certain number of CNG buses. In order to meet the recharging needs of the additional new 50 LEBs, the Beijing Municipal government has arranged for the original charging station’s reconstruction and expansion to increase its capacity. These efforts show that there is “a forward-looking urban comprehensive sustainable transportation planning in the city level” (TE pg 13). Thus, the project does not face institutional risks affecting its benefits.

Socio-economic: Although during the Olympics the LEBs were free of charge, later the LEBs were used for normal transportation with low charge policy which made more residents and visitors especially those with low income choose to use public transportation more. The design of LEBs for Paralympics allowed the disabled athletes, officials, media staff easy to use them. Those designs could help the children, the elders, the disables, the pregnant women and other passengers when the 50 LEBs serve as the normal buses.

Environmental: There were no environmental risks to sustainability of the project.

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 project's actual co-financing amount of \$12,450,000 was slightly higher than the expected amount of \$12,300,000. The amount was used to invest in 46 LEBs (the other 4 were purchased through GEF grant) and a host of support activities. The TE noted that the "actual total co-financing inputs are very significant (though unquantified) which reflects the highly cooperative and effective partnership strategy among the project participants" (TE pg 24).

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 did not face any delays.

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:

There was significant ownership by the Beijing Municipal Government towards promoting the project and using the buses purchased during implementation for later activities as well.

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 project design had provision for M&E and developed a monitoring plan based on a log frame. It provided for monitoring planning matrix with indicators, baseline data, quarterly targets and a total M&E budget of \$15,000. The TE noted that “project development process identified a baseline for which the objectives and targets were reckoned with as stated in the CEBBO Project Logical Framework Analysis (LFA) with its outcome-output-activities structures and verifiable performance indicators” (TE pg 20). Thus, the TER finds that the M&E design was Satisfactory.

6.2 M&E Implementation	Rating: Satisfactory
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The TE did not provide a detailed assessment of M&E implementation but noted that “monitoring and evaluation were completed for the duration of the Olympics and continued measurements and evaluation to complete the assessment up to the end of July 2009” (TE pg 8). The TE also noted that the project monitored exhaust emissions, noise monitoring, and conducted questionnaires survey of the passengers of LEBs. The final evaluation was done on time and the log frame provides expected and actual targets achieved. Thus, the TER gives a Satisfactory rating to M&E implementation.

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: UA
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The TE did not provide an assessment of UNDP’s quality of project implementation.

7.2 Quality of Project Execution	Rating: Satisfactory
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The Beijing Municipal Government along with Environmental Protection Bureau were the executing agencies. The TE noted that the Bureau’s “leadership organized a strong team to do the major project tasks leading to the successful implementation of the activities and realization of targets” (TE pg 24). It also mobilized the co-financing amount to meet the investment needs. The TER find that quality of project execution was Satisfactory.

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.

As per the TE, project helped in “2.306 tons CO2 emission reduction per LEB during the whole operation distance of 6,000 km” (TE pg 10). The total emission reduction for 50 LEBs was about 115.3 tons CO2.

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 TE does not mention socioeconomic changes.

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: no capacity changes occurred at the end of the project.

b) Governance: To put LEBs the list of sustainable transportation promotion policy, the government of Beijing is developing the application plan of new energy buses over the next few years, and it has subsidized hybrid and electric buses.

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.

No unintended impacts occurred due to the project.

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 project helped in creating a “need for scaled-up operation of LEB system, i.e. 50 buses and a station with the function of charging and first class maintenance” (TE pg 12).

9. Lessons and recommendations

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

The TE did not provide key lessons but noted that “the best practice that can be cited is having an MSP-scale of activities to derive large scale impact with far-reaching promotional value and scope” (TE pg 29).

9.2 Briefly describe the recommendations given in the terminal evaluation.

The following were recommendations provided by the TE:

- a) The experience achieved by the CEBBO Project can be exhibited in similar regional and world events such as the Shanghai World Expo 2010.
- b) The government should sustain its support to include a recharging station in the Beijing Development Plan.
- c) The government should develop further the needed policy guidelines and more incentives on the technology development and cost reduction to encourage the use of economical and clean transport modes including more LEBs being a very promising alternative clean transportation scheme.

- d) Public awareness of LEBs should be continued and further increased including the support technical and operational improvements.

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 TE elaborately describes the relevant outcomes and impacts and gives a good overview of outcomes that were expected in the project design.	S
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The ratings and description of evidence evaluation criteria are consistent and convincing.	S
To what extent does the report properly assess project sustainability and/or project exit strategy?	The TE assessed sustainability of the project but did not provide an exit strategy.	MS
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The TE did not provide lessons learned but presented recommendations for evaluation team	MS
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The TE provides project costs per component as well as co-financing information	S
Assess the quality of the report's evaluation of project M&E systems:	The TE did not give rating for M&E system and did not provide any evidence or explanation of the M&E process	MU
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).

The TER did not use any other sources.