

China : Liaoning Green Smart Public Transport Demonstration Project

1. Project Information

Project ID:	P000406	Instrument ID:	L0406A
Member:	China	Region:	Eastern Asia
Sector:	Transport	Sub-sector:	Urban transport
Instrument type:	<input checked="" type="checkbox"/> Loan:130.00 Euro million <input type="checkbox"/> Guarantee	Co-financier(s):	
ES category:	B	Borrowing Entity:	Ministry of Finance, China
Implementing Entity:	People's Government of Liaoning Province		
Project Team Leader:	Hongliang Yang (Responsible DG: Gregory Liu; Responsible Department: INF2)		
Project Team Members:	Jingjing Zhao, Team Member; Suzanne Shaw, Economist; Christopher Damandl, Project Counsel; Liu Yang, Alternate Counsel; Yogesh Malla, OSD - Financial Management Specialist; Guoping Yu, OSD - Procurement Specialist; Chongwu Sun, OSD - Environment & Social Development Specialist; Jingjing Zhao, Back-up PTL; Siyang Wang, Project admin		
Completed Site Visits by AIIB:	May, 2022 Virtual meetings Nov, 2022 Virtual meetings		
Planned Site Visits by AIIB:	Apr, 2023 Physical		
Current Red Flags Assigned:	0		
Current Monitoring Regime:	Regular Monitoring		
Previous Red Flags Assigned:	0		
Previous Red Flags Assigned Date:	2022/06		

2. Project Summary and Objectives

The objective of the Project is to improve the quality and efficiency of public transport service and urban environment by replacing conventional fossil-fueled buses with battery electric buses (BEBs) and applying digital technology to public transport management systems in five small and medium cities of Liaoning Province.

The Project will, above all, substitute modern BEBs for existing diesel-fueled or gas-fueled buses in five small and/or medium cities in Liaoning, including Fuxin City, Hu'ludao City, Jinzhou City, Panjin City, and Yingkou City (together Project cities). Also, public transport management systems in the Project cities will be upgraded using smart digitalized platforms. The Project will demonstrate that: (i) BEBs are viable options to zero-emission public transport systems in Liaoning; and (ii) smart public transport management system can enhance the efficiency of public transport, provide better services, and attract more passengers to use public transport in the Project cities.

Key Project activities include:

(i)

procurement of approximately 1,285 BEBs.

(ii)

construction of approximately 286 new bus chargers.

(iii)

installation of smart public transport management systems and supporting software and equipment in the Project cities, which include smart operations and management platform, automated fare collection terminals, automatic vehicle location system, real-time driving assistance and safety systems, passenger information systems, depot management system, bus stop management system, control center upgrade, and data analytic and cloud infrastructure, etc.

(iv)

construction of the Liaodong Bay Intercity Bus Service Center in Panjin.

(v)

construction of the New Green Bus Maintenance Workshop in Fuxin.

(vi)

technical support and capacity building to the five bus companies on BEBs and smart public transport technology. A team of project management consultants will be engaged, covering technical, financial management, procurement, and environmental and social matters. The consultants will provide technical assistance to the bus companies and help PMO collect data, monitor progress, and verify the implementation results. Trainings will be provided to strengthen PMO's and bus companies' knowledge and understanding on the use of BEBs and smart public transport technology. Good practices and lessons learned during the Project implementation will also be summarized and shared with the wider audience.

3. Key Dates

Approval:	Nov. 11, 2021	Signing:	Dec. 27, 2021
Effective:	Mar. 14, 2022	Restructured (if any):	
Orig. Closing:	May. 31, 2026	Rev. Closing (if any):	

4. Disbursement Summary (EUR million)

Contract Awarded:		Cancellation (if any):	0.00
Disbursed:	0.33	Most recent disbursement (amount/date):	2.00/Dec. 22, 2022
Undisbursed:	129.68	Disbursement Ratio (%) ¹ :	0.25

5. Project Implementation Update

The Project implementation is generally on track.

¹ Disbursement Ratio is defined as the volume (e.g. the dollar amount) of total disbursed amount as a percentage of the net committed volume.

Despite the serious impact of COVID-19 pandemic in 2022, the project implementation has been progressing steadily and well. So far, two project management and capacity building consulting contracts, and four BEB procurement contracts (under four different sub-projects) have successfully been awarded. Two sub-projects, such as Fuxin and Hu'ludao, have already received their first batch of electric buses financed by the loan.

The project disbursement has picked up speed recently. Besides the already disbursed 2.0 million euros, a withdrawal application of 57.5 million euros is currently under review and will be disbursed in early January 2023.

Components	Physical Progress	Environmental & Social Compliance	Procurement
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Financial Management:

6. Status of the Grievance Redress Mechanism (GRM)

Civil construction activities of the Project have not started. No complaint was recorded as per the project management office.

7. Results Monitoring

Despite the serious impact of COVID-19 pandemic on the project implementation in 2022, four BEB procurement contracts (under four different sub-projects) have been awarded, totalling 644 BEBs.

Project Objective Indicators #1

CO2 emissions reduced per year

Year	Target	Actual	Comments, if any
Dec. 31, 2025	20960	8958	

Project Objective Indicators #2

CO emissions reduced per year

Year	Target	Actual	Comments, if any
Dec. 31, 2025	2154	1014	

Project Objective Indicators #3

NOx emissions reduced per year

Year	Target	Actual	Comments, if any
Dec. 31, 2025	200	121	

Project Objective Indicators #4

SO2 emissions reduced per year

Year	Target	Actual	Comments, if any
Dec. 31, 2025	89	60	

Project Objective Indicators #5

PM reduced per year

Year	Target	Actual	Comments, if any
Dec. 31, 2025	2.16	1.0	

Project Objective Indicators #6

Public transport punctuality increased

Year	Target	Actual	Comments, if any
Dec. 31, 2025	70	48	

Project Objective Indicators #7

Passenger satisfaction ratio increased

Year	Target	Actual	Comments, if any
Dec. 31, 2025	88	79	

Project Objective Indicators #8

Bus real-time information sharing ratio

Year	Target	Actual	Comments, if any
Dec. 31, 2025	100	75	

Intermediate Result Indicators #1

Electric buses procured and put in operation

Year	Target	Actual	Comments, if any
Dec. 31, 2025	1285	644	

Intermediate Result Indicators #2

Electric chargers installed

Year	Target	Actual	Comments, if any
Dec. 31, 2025	286	0	

Remarks:
