

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

The risk assessment for the proposed Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Shandong Clean Heating and Cooling Project was conducted following the Asian Development Bank’s governance and anticorruption policy to identify risks associated with project implementation. It defines the mitigation measures built into the project design and assesses the residual risk once the mitigation measures are in place.

Risk Description	Rating	Mitigation Measures	Responsibility
A. Public financial management			
1. The national accounting system differs from international accounting standards.	L	No mitigation measures are considered necessary based on the most recent ADB country financial management assessment. National standards are equivalent to international standards and acceptable to ADB.	Government of the PRC
2. Both JHG and JTPC have a high financial leverage ratio.	M	The financial leverage of both JHG and JTPC should be controlled below 80%. This will be included in the loan covenants.	JHG and JTPC
3. Potential market risks lead to subproject default.	L	JHG and JTPC will each establish a project account for receiving and paying back the ADB loan proceeds. Money in the account can only be used for the designated purpose.	JHG and JTPC
4. JHG’s internal auditing staffing is insufficient.	L	JHG will hire an internal auditor in line with the subproject implementation schedule.	JHG
5. JHG and JTPC project management team are insufficiently experienced to implement the ADB loan.	M	ADB trained all related staff in JHG and JTPC on ADB requirements and procedures for disbursement and procurement in advance, and further training will be provided during implementation.	JHG and JTPC
6. Insufficient capacity to operate and maintain advanced heating/cooling technologies delays implementation.	M	The attached technical assistance is designed to strengthen the knowledge and understanding of JHG and JTPC in advanced heating and cooling technologies.	ADB, JHG, and JTPC
7. Lack of availability of financing from commercial banks delays project implementation.	M	Both JHG and JTPC have signed letters of intent with commercial banks to secure the financing.	JHG and JTPC
8. Adverse foreign exchange rate movements impact the profitability of JHG and JTPC and reduce their debt service capability.	H	Both JHG and JTPC should set aside a mandatory reserve in a separate bank account equivalent to 1% of their ADB loan amount to mitigate the foreign exchange and interest mismatch risks. The money in the reserve account can only be used for making up the loss arising from the risks. JHG and JTPC will report the status of their reserve account in their regular monitoring report.	JHG and JTPC
9. Accounting policies and procedures and financial management systems differ from	L	Capacity training on ADB requirements and procedures for disbursement will be provided to ensure staff understand	ADB, JHG, and JTPC

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ADB requirements and procedures.		them in advance.	
10. JHG and JTPC do not fully meet day-to-day project accounting, monitoring, reporting, and auditing responsibilities.	L	JHG and JTPC will conduct routine internal audits during implementation and will adjust as necessary to meet ADB monitoring and reporting requirements.	JHG and JTPC
11. Reporting and monitoring falls short of required standards.	L	The PAM will include guidance on preparing progress reports and annual reports.	ADB, JHG, and JTPC
Overall financial management risk assessment	M		
B. Procurement			
12. Unfamiliarity with ADB procurement guidelines results in irregularities and potential implementation delays.	M	ADB will provide capacity training on ADB requirements and procedures for procurement to ensure that procurement follows the ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).	ADB, JHG, and JTPC
Overall procurement risk assessment	M		
C. Project implementation			
13. An unanticipated shift in the PRC government priorities leads to fewer air pollution control projects.	L	The Shandong Provincial Government is focusing on switching to advanced and clean technologies toward low carbon footprint.	Government of the PRC
14. Waste heat supply is lower than anticipated due to reduced operation of industries and power plants.	L	The plants selected to supply waste heat are not on the provincial government's shut-down list and they are using advanced and clean technologies.	JHG and JTPC
Overall implementation risk assessment	L		
D. Governance and corruption			
15. There is lack of clarity in responsibility for anticorruption measures.	L	The PAM includes anticorruption responsibilities and measures. ADB will provide JHG and JTPC with copies of ADB's Anticorruption Policy (1998, as amended to date).	ADB, JHG, and JTPC
16. Anticorruption measures are not enforced.	L	The Government of the PRC has introduced an integrity program for corruption prevention and punishment.	Government of the PRC
17. JHG and JTPC lack transparency in information disclosure.	L	The PAM includes promotion of transparency and public availability of information, including procurement opportunities and contract awards.	ADB, JHG, and JTPC
Overall Governance and Corruption Risk Assessment	M		

ADB = Asian Development Bank; H = high; JHG = Jinan Heating Group; JTPC = Jinan Thermal Power Co., Ltd.; L = low; M = moderate; PAM = project administration manual; PRC = People's Republic of China.

Source: Asian Development Bank.