

Project Procurement Risk Assessment Report

Project Number: 51418-001
November 2018

People's Republic of China:

Air Quality Improvement in the Greater Beijing–
Tianjin–Hebei Region
—Shandong Clean Heating and Cooling Project

CURRENCY EQUIVALENTS

(as of 12 November 2018)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.1445
\$1.00	=	CNY6.9200

ABBREVIATIONS

ADB	–	Asian Development Bank
EA	–	executing agency
GPL	–	Government Procurement Law
IA	–	implementing agency
MOF	–	Ministry of Finance
PMO	–	project management office
PRC	–	People’s Republic of China
TBL	–	Tendering and Bidding Law
JHG	–	Jinan Heating Group
JTPC	–	Jinan Thermal Power Co., Ltd
QCBS	–	quality- and cost-based selection
OCB	–	open competitive bidding

NOTE

In this report, “\$” refers to United States dollars.

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EXECUTIVE SUMMARY

1. The overall procurement risk for the project is suggested to be categorized as **Low**.
2. **Institutional arrangement.** The Shandong Provincial Government will be the executing agency (EA) for the project. Jinan Heating Group (JHG) and Jinan Thermal Power Co., Ltd. (JTPC), both are state-owned enterprises, will be implementing agencies (IA), of which, JTPC will be responsible for implementing the “East Jinan Low-Emission Combined District Heating and Cooling Project”, it will set up a Project Construction Leading Group and invite experts to act as technical advisors. JHG will be responsible for implementing the subprojects “West Jinan Waste Heat Utilization and Clean Energy Project” and “Shanghe Coal-Free Clean Heating Demonstration Project”, which has previous experience in project implementation of energy efficiency retrofits and has built experience in the operation, implementation, and management of donor-financed projects. A Project Management Office (PMO)¹ has been established in May 2018 to uniformly coordinate development of all the subprojects. The PMO will also manage all procurement and consultant recruitment, conducting coordination between ADB and the two IAs. The two IAs will conduct all Asian Development Bank (ADB)-financing procurements of works, goods and consultants. The project will engage an experienced procurement agency to assist the PMO and IAs for conducting the procurement in accordance with ADB’s Procurement Policy: Goods, Works, Nonconsulting and Consulting Services (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers: Goods, Works, Nonconsulting and Consulting Services (2017, as amended from time to time). A consulting firm, including a Procurement and Contract Management Specialist will be recruited to assist procumbent agency, PMO and IAs to conduct procurement and consultant recruitment, the detailed Terms of Reference is indicated in the Project Administration Manual.
3. Staff of the two IAs that will conduct procurement and/or consultant recruitment for the project has extensive experience in domestic procurement, while rather weak in consultant recruitment. The JTPC has experience in EIB-financed procurement in April 2010-December 2016, and JHG has experience in AFD-financed procurement in 2013–2017. Although both IAs do not have experience in procurement or consultant recruitment for ADB-funded projects and there are differences between ADB and the People’s Republic of China (PRC) in procurement practices, these risks are being and will be mitigated since the IAs have committed to fulfil ADB’s requirements for all procurement and consultant recruitment for the project; capacity development was, is being, and will be conducted by ADB, Procurement Specialist, and procurement agency; and supports will be provided for procurement and consultant recruitment by the Procurement and Contract Management Specialist and procurement agency. Considering these and also that there are not innovative contracts, it has been concluded that the IAs will be able to conduct all procurement and consultant recruitment for the project fulfilling ADB’s requirements.

¹ PMO was established in May 2017, which is led by the Jinan Municipal Public Utilities Bureau, involving Shandong Provincial Department of Housing and Urban-rural Development, Department of Finance, PDRC, Jinan Municipal DRC, Jinan Municipal Bureau of Finance, JTPC, and JHG.

I. Introduction

1. This report contains findings and observations of a project procurement risk assessment for the Air Quality Improvement in the Greater Beijing–Tianjin–Hebei (BTH) Region—Shandong Clean Heating and Cooling Project. The project includes (i) East Jinan Low-Emission Combined District Heating and Cooling Project to utilize long-distance pipelines to transmit hot water recovered from the waste heat of a thermal power plant to provide heating and cooling services to eastern Jinan City; (ii) Shanghe Coal-Free Clean Heating Demonstration Project to build Shanghe as a “coal-free,” clean heating pilot county, the first-of-its-kind in Shandong Province; and (iii) West Jinan Waste Heat Utilization and Clean Energy Project to provide heating services to west Jinan City by multiple heating sources to ensure secure and efficient energy supply, including waste heat from power plants, biomass combine heat and power plant, and distributed natural gas-based heating systems and other renewable energy. The assessment was prepared in accordance with the Guide on Assessing Procurement Risks and Determining Project Procurement Classification (the Guide).²

2. Preparatory activities included review of project documents and Asian Development Bank’s (ADB) ongoing procurement experiences in the People’s Republic of China (PRC); a project procurement risk assessment using the Project Procurement Risk Assessment Questionnaire provided in the Guide; and in-depth discussions with the two implementing agencies (IA). The completed Project Procurement Risk Assessment Questionnaire is presented in Appendix 1.

II. Country Procurement Systems

3. Currently, public procurement in the PRC are governed by two laws: the Tendering and Bidding Law (TBL) and the Government Procurement Law (GPL). The TBL was approved by the People’s Congress and promulgated by the President on 30 August 1999. It became effective on 1 January 2000. On 12 December 2011, the State Council promulgated the Regulation on Implementation of the TBL that became effective on 1 February 2012. The GPL was promulgated on 29 June 2002 and became effective on 1 January 2003. On 31 December 2014, the state council promulgated the Regulation on Implementation of the GPL. The GPL covers requirements for procurements of central and local government-financed goods, civil works, and services.

4. Under the project area, the Shandong Provincial People’s Congresses successively passed relevant regulations for implementing the TBL. Accordingly, Ministry of Finance (MOF) also issued the No.74 Order on Regulation of Non-bidding Procurement Method under the GPL on 28 October 2013 that become effective on 1 February 2014, etc. All government procurement activities are carried out at public resource transaction centers, and relevant monitoring mechanisms are already sound.

5. The following issues of general procurement environment in the PRC tend to increase procurement risk for this project.

- (i) Consulting services are not clearly addressed in the TBL, GPL, or relevant regulations for their implementation.
- (ii) The TBL, GPL, and relevant regulations are not clear on the participation of state-owned enterprises.

² ADB. 2014. *Guide on Assessing Procurement Risks and Determining Project Procurement Classification*. Manila.

- (iii) The TBL, GPL, and relevant regulations do not require collection of nationwide statistics on procurement, and consolidated historical procurement data are not readily available to the public.
 - (iv) There are no comprehensive training programs available by EA for procurement accreditation or professionalization in the PRC.
6. For the PRC, the country and sector procurement risk preliminary rated by ADB is medium.

III. Project Procurement Classification

7. Based on project procurement classification was conducted at the concept stage of the project, project procurement classification of this project is Category A.

IV. Project Procurement Risk Assessment

A. Overview

8. This assessment reviews the proposed arrangements for procurement and consultant recruitment under the project and the capacity of agencies involved in procurement and/or consultant recruitment. A project procurement risk assessment was undertaken based on the IAs' intended arrangements for procurement and/or consultant recruitment for the project. This assessment was conducted using Project Procurement Risk Assessment Questionnaire in Appendix 1. The assessment aimed to (i) evaluate the adequacy of IAs' existing processes adopted for procurement and/or consultant recruitment and their ability to comply with ADB's Procurement Policy: Goods, Works, Nonconsulting and Consulting Services (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers: Goods, Works, Nonconsulting and Consulting Services (2017, as amended from time to time); (ii) identify the need for capacity building and training for the IAs' during project implementation to develop staff's competence in areas relating to procurement and/or consultant recruitment; and (iii) define the appropriate level of review, either prior or post by ADB for each form of procurement and consultant recruitment to be used during implementation. The rest of this section provides a summary of general procurement arrangements, intended arrangements that will apply for all project procurement and consultant recruitment to be funded by ADB, and the summary of the completed project procurement risk assessment, together with proposed measures ADB should take to safeguard ADB's interests and minimize the risk of mis-procurement.

1. Organizational and Staff Capacity

9. The Shandong Provincial Government will be the EA of the project. A PMO has been set up. Jinan Heating Group (JHG) and Jinan Thermal Power Co., Ltd. (JTPC) will be the IAs. The project will recruit ADB-financing consultants through the quality- and cost-based selection (QCBS) method (with a quality-cost ratio of 90:10) for overall project (e.g., for project and contract management, environmental and social safeguards, financial management). The two IAs will manage all procurement and consultant recruitment, PMO will conduct coordination between ADB and the two IAs (e.g. consolidation and submission to ADB of all procurement and consultant recruitment transaction, management of schedules for procurement).

10. The two IAs will conduct all ADB-financing procurements of works, goods, and ADB-financing consultant recruitment. Organizational and staff capacity of each IA is as follows.

- (i) **JHG** implemented an AFD-financed project—Improving the Performance of Urban Heating Networks in Jinan from 2013 to 2017 and has conducted procurement for

this project, except consulting services. However, it has no experience in ADB financed project and foreign-funded consultant recruitment. JHG has (i) Infrastructure Department; (ii) Goods Supply Department; and (iii) Chief Engineer Office, to conduct procurement for works goods, and services respectively. Furthermore, it has 82 full-time staff for procurement and consultant recruitment.

- (ii) **JTPC** implemented an EIB-financed project—Transformation of Steam to Hot Water in the District Heating System of Jinan City from April 2010 to December 2016, and has conducted procurement for this project, except consulting services. However, it has no experience in ADB financed project and foreign-funded consultant recruitment. It has a Goods Supply Company to conduct procurement for goods. Works and services are procured by each project related implementation department in JTPC through the Jinan Public Resources Trading Center. Furthermore, it has 44 full-time staff for procurement and consultant recruitment.

11. The procurement agency and consultants will provide professional services and technical assistances to the PMO and IAs, and ensure that procurement and consultant recruitment for the project will meet ADB's requirements.

2. Information Management

12. The IAs have designated personnel and provided sufficient space and equipment for information management including record keeping. According to the national archives law and relevant government regulations, procurement records will be kept for at least 5 years, while both IAs are keeping records permanently.

13. A risk related to information management is that the recording function is not supported by information technology (IT) in JHG, even though it has established a project management system, the risk can be mitigated by upgrading its project management information system. During the project implementation, the consultant will also prepare relevant training to increase IAs' staff's capacities for procurement and consultant recruitment.

3. Procurement Practices

14. There are following differences between ADB's and PRC's procurement practices, and these were emphasized to the IAs at the procurement training course conducted during project preparation.

- (i) Minimum advertising period is only 5 days for domestic procurements in the PRC, against 30 days for open competitive bidding (OCB) required by ADB.
- (ii) Bids are required to be submitted on the day of bid submission and submission of bid by mail or courier is not allowed.
- (iii) A bid not in an envelope or without cover packing can be rejected at the bid opening.
- (iv) Bid securities are often remitted by cash, which is the most preferred option for most public entities in the PRC.

15. Consultant recruitments in the PRC are not clearly addressed in domestic procurement laws and regulations. Almost all consultant selection committee members are selected by public resources transaction centers. However, it is likely that randomly selected consultant selection committee members are unfamiliar with the project and ADB's requirements for consulting services, which might cause delays and/or mistakes in the selection.

16. Overall, JHG and JTPC have sufficient domestic procurement practices for works and goods following national laws and regulations, while rather weak in the consultant recruitment. Both IAs have some recent procurement experience in bilateral donors' funded project, but they lack procurement experience for projects funded by ADB. The IAs have agreed to adhere to ADB's requirements for procurement of works and goods, and consultant recruitments for this project, which can mitigate the procurement risk significantly.

4. Effectiveness

17. Records of procurements conducted by the IAs show that the past procurements were effectively conducted.

5. Accountability Measures

18. The IAs will conduct all procurement and consultant recruitment activities, ensure compliance of the procurement and consultant recruitment processes with regulations, and ensure that information disclosure requirements are followed. The engaged procurement agency will file all procurement documents and record all bid opening and evaluation processes. The audit bureau will audit all transactions related to procurements and consultant recruitments annually, or as necessary.

19. Accountability is strengthened by provisions of the PRC's laws and regulations on sanctions against anticorruption for both bidders and IAs. Moreover, Article 44 of the Tendering and Bidding Law and Article 62 of the Government Procurement Law provide ethical standards for procurement personnel.

B. Strengths

20. Staff of the IAs have adequate experience in domestic procurement, the list of contracts under implementation and implemented is detailed in Appendix 2. Both IAs also have adequate staff and equipment to support the procurement and consultant recruitment during the project implementation.

21. The IAs agreed to adhere to ADB's requirements for procurement of works and goods and consultant recruitment, for this project.

22. ADB missions provided relevant procurement guidance and instructions on ADB's procurement and consultant recruitment procedures. A procurement specialist of the project preparatory technical assistance consultant team provided staff of the IAs with training on ADB procurement and consultant recruitment procedures. At project start-up and during project implementation, consultants will continue such training. The Procurement and Contract Management Specialist and procurement agency will provide the IAs with professional services and technical assistances and ensure that procurement and consultant recruitment for the project will fulfill ADB's requirements.

C. Weaknesses

23. Although the IAs have adequate experience in domestic procurement, while rather weak in consultant recruitment, they do not have experience in procurement for ADB-funded project, and consultant recruitment for foreign-funded projects. In addition, there are differences between ADB's and PRC's procurement practices.

D. Procurement Risk Assessment and Management Plan

24. The Project Procurement Risk Assessment and Management Plan in Table 1 has been prepared based on the procurement risk assessment questionnaire in Appendix 1, following the Guide.

Table 1: Project Procurement Risk Assessment and Management Plan

Risk	Risk Assessment			Mitigation Measures or Risk Management Plan
	Impact	Likelihood	Risk	
The IAs use practices inconsistent with national procurement Law or bidding documents unsuitable for ADB-funded procurement.	High	Unlikely The Ministry of Finance of the PRC issued standard NCB documents for works and goods (2015). The IAs follow the national procurement law, procurement processes, guidelines.	Substantial	Mitigation: - Using these standard NCB documents, model NCB document for works and model NCB document for goods are being prepared and will be approved by ADB. - The IAs follow the national procurement law, procurement processes, guidelines. If there are inconsistencies with ADB requirements, ADB requirements will be followed. Monitoring: - ADB will closely monitor procurement and consultant recruitment activities of the IAs.
Record-keeping is inadequate to enable internal or external audit of procurement processes.	High	Unlikely The IAs have adequate resources allocated to record keeping infrastructure. The IAs adhere to a document retention policy.	Substantial	Mitigation: - The IAs will keep records to enable internal and/or external audit of procurement process, adhering to the document retention policy and using the resources allocated to record keeping infrastructure. Monitoring: - ADB will closely monitor procurement and consultant recruitment activities of the IAs.
IAs do not promote non-discriminatory participation and transparent tender processes.	High	Unlikely The IAs will conduct procurement and consultant recruitment for the project using non-discriminatory transparent process fulfilling ADB's requirements.	Substantial	Mitigation: - With help from the Procurement and Contract Management Specialist and procurement agency, the IAs will prepare manuals for procurement and consultant recruitment which fulfill ADB's requirements for non-discriminatory participation and
	Risk Assessment			Mitigation Measures or Risk Management Plan
	Impact	Likelihood	Risk	

				<p>transparent bidding processes, at project start-up.</p> <ul style="list-style-type: none"> - The Procurement and Contract Management Specialist will provide training on procurement and consultant recruitment to fulfill ADB's requirements for non-discriminatory participation and transparent bidding processes, at project start-up and during project implementation. - The Procurement and Contract Management Specialist and the procurement agency will help the IAs conduct procurement and consultant recruitment, fulfilling ADB's requirements for non-discriminatory participation and transparent bidding processes. - ADB will continue to give guidance and instructions to the IAs. <p>Monitoring:</p> <ul style="list-style-type: none"> - ADB will closely monitor procurement and consultant recruitment activities of the IAs to ensure non-discriminatory participation and transparent bidding processes.
The IAs have inadequate ethics and anticorruption measures in place.	High	Unlikely	Substantial	<p>Mitigation:</p> <ul style="list-style-type: none"> - ADB continues to remind all relevant parties of requirements for compliance with ADB's Anticorruption Policy. <p>Monitoring:</p> <ul style="list-style-type: none"> - ADB will monitor compliance of procurement and consultant recruitment activities by the IAs with ADB's Anticorruption Policy, through periodical missions and close review of procurement and consultant recruitment documents.

ADB = Asian Development Bank, NCB = national competitive bidding.

V. Project Procurement Methods and Review

A. Procurement Method

25. The applicable methods are in Table 2.

Table 2: Procurement Methods

Methods	Procurement of Works and Goods	
		Comments
Open competitive bidding within national advertising for goods	Roads, pipelines materials and equipment are available locally and local market is competitive	
Open competitive bidding with international advertising for works	Local contractors are experienced	
Consulting services		
Open competitive bidding with international advertising, using quality- and cost- based selection for consulting services	The following submissions are required for prior review and approval by ADB:; Submission 1 (Shortlisting of Consulting Firms and Request for Proposals, draft request for proposal, etc.), Submission 2 (Evaluation of Technical Proposals), Submission 3 (Financial Proposals Evaluation and Overall Ranking of Proposals).	

ADB = Asian Development Bank.

B. Procurement Supervision

26. The first open competitive bidding (OCB) contract for works and the first OCB contract for goods in each of IA will be for prior ADB's review irrespective of the estimated value. All contracts for advance contracting and consultant recruitment will be also for ADB's prior review irrespective of the estimated value. All other contracts are subject to ADB's post review (sampling) after the signing.

VI. Procurement Plan

27. **Scope of procurement.** The procurement of works and goods will be for the establishment of the heating and cooling system in the Jinan City. Consultant recruitment is for project management and capacity building.

28. **Packaging.** A summary of ADB financing contract packages is in Table 3. The procurement plan is included in Linked Document 4: Project Administration Manual.³

³ Project Administration Manual (accessible from the list of linked documents in Appendix 2 of the Report and Recommendation of the President to the Board of Directors).

Table 3: Summary of Financing Contract Packages

Items	Agency	Method	ADB Review Procedure					
			Prior				Post Review (Sampling)	
					For Advance Contracting and Retroactive Financing			
			Number of Contracts	Estimated Value of Contracts (million \$)	Number of Contracts	Estimated Value of Contracts (million \$)	Number of Contracts	Estimated Value of Contracts (million \$)
ADB Financing								
Works	JHG	OCB			1	10.55	17	181.82
	JTPC	OCB			0	0.00	7	39.89
Goods	JHG	OCB			0	0.00	6	87.39
	JTPC	OCB			0	0.00	8	80.20
Consulting Services	JHG/JTPC	QCBS	2	0.74				
ADB Financing Total			2	0.74	1	10.55	38	389.31

ADB = Asian Development Bank, JHG=Jinan Heating Group, JTPC=Jinan Thermal Power Co. Ltd, OCB = open competitive bidding, QCBS = quality- and cost-based selection.

Notes: Numbers may not sum precisely because of rounding.

29. **Advance action and retroactive financing.** The two IAs have requested advance contracting and retroactive financing for urgent civil works and purchase and installation of equipment. A summary of advance contracting and retroactive financing is provided in Table 3, and details are shown in the procurement plan in Linked Document 4: Project Administration Manual.

VII. Conclusion

30. Staff of the IAs that will conduct procurement and/or consultant recruitment for the project had extensive experience in domestic procurement and consultant recruitment. Both IAs have experience for foreign-funded project although do not have experience in procurement or consultant recruitment for ADB-funded projects, and there are differences between ADB's and PRC's procurement practices, these risks are being and will be mitigated since the IAs have committed to fulfil ADB's requirements for all procurement and consultant recruitment for the project; capacity development (including training on ADB's procurement policies) was, is being, and will be conducted by ADB and the Procurement and Contract Management Specialist; and supports will be provided for procurement and consultant recruitment by the Procurement and Contract Management Specialist and procurement agency. Considering these and also that there are not innovative contracts, it has been concluded that the IAs will be able to conduct all procurement and consultant recruitment for the project fulfilling ADB's requirements.

Appendix 1: Project Procurement Risk Assessment Questionnaire

I. Specific Assessment and Ratings

Name of Agency	Jinan Heating Group -Chief Engineer Office -Infrastructure Department -Goods Supply Department	Jinan Thermal Power Co., Ltd		
Questionnaire filled by: Position or Title:	Jia Sen – Chief Engineer Office; Liu Hao – Procurement Director of Infrastructure Department; Shu Dong – Deputy Manager of Goods Supply Department	Sun Qiang		
Tel/Mobile	Jia Sen: +86-13688634418 Liu Hao: +86-531-88027883 Shu Dong: +86-18615628066	+86-13606419172		
Email	Jia Sen: jnrlzgb@163.com Liu Hao: jjb204@126.com	13606419172@163.com		
QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
A. ORGANIZATIONAL AND STAFF CAPACITY				
PROCUREMENT DEPARTMENT/UNIT				
A.1 Does the agency or Government have a Procurement Committee that is independent from the head of the agency?	No, JHG is a state-owned enterprise, most of its procurement are conducted through the Jinan Public Resources Trading Center, and administrated by the Procurement Office under Jinan Urban-rural Construction Committee	Low	No, JTPC is a state- owned enterprise, most of its procurement are conducted through the Jinan Public Resources Trading Center, and administrated by the Procurement Office under Jinan Urban- rural Construction Committee	Low
A.2 Does the agency have a procurement department/unit, including a permanent office that performs the function of a Secretariat of the Procurement Committee?	Yes. JHG has (i) Infrastructure Department; (ii) Goods Supply Department; and (iii) Chief Engineer Office, to conduct procurement for works goods, and services respectively	Low	Yes, JTPC has Goods Supply Company and Engineering Company as its subsidiaries, to be responsible for the procurement of goods and works, through the Public Resources Trading Center. The services are conducted through JTPC	Low
A.3 If yes, what type of procurement does it undertake?	Chief Engineer Office is responsible for procurement of services (except for construction supervision);	Low	Goods (including coal and fuels), equipment and works procurement through	Low

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
	<p>Infrastructure Department is responsible for procurement of works and service for construction supervision through the Public Resources Trading Center;</p> <p>Goods Supply Department is responsible for procurement of goods, fuels and maintenance through the Public Resources Trading Center</p> <p>Sign and implement contracts and contract management</p>		Public Resources Trading Center sign and implement contracts and contract management	
A.4 How many years' experience does the head of the procurement department/unit have in a direct procurement role?	20 years of experience	Low	5–10 years of experience	Low
A.5 How many staff in the procurement department/unit are: i. full time ii. part time iii. seconded	<p>12 full time staff in Chief Engineer Office;</p> <p>17 full time staff in Infrastructure Department;</p> <p>53 full time staff in Goods Supply Department Department;</p> <p>82 full time staff in JHG involving the procurement activities</p>	Low	44 full time staff involving for procurement	Low
A.6 Do the procurement staff have a high level of English language proficiency (verbal and written)?	Fair	Low to medium	Fair	Low to medium
A.7 Are the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	Yes	Low	Yes	Low
A.8 Does the unit have adequate facilities, such as PCs, internet connection, photocopy facilities, printers etc. to undertake the planned procurement?	Yes	Low	Yes	Low
A.9 Does the agency have, or have ready access to, a procurement training program?	Yes	Low	Yes	Low
A.10 At what level does the department/unit report (to the head of agency, deputy etc.)?	<p>(i) Deputy/General Manager, depending on the nature of the consulting service project;</p> <p>(ii) Civil works contracts: Deputy General Manager;</p> <p>(iii) Goods contracts: General Manager</p>	Low	Deputy General Manager	Low

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
A.11 Do the procurement positions in the agency have job descriptions, which outline specific roles, minimum technical requirements and career routes?	Yes, except career routes.	Low	Yes, there is clear job descriptions	Low
A.12 Is there a procurement process manual for goods and works?	Yes	Medium	Yes	Medium
A.13 If there is a manual, is it up to date and does it cover foreign-assisted projects?	The manuals were updated in 2015, but the civil work manual does not cover foreign-assisted projects. There are NCB bidding documents published by MOF, which will be used for this project.		The manuals do not cover foreign-assisted projects. There are NCB bidding documents published by MOF, which will be used for this project.	
A.14 Is there a procurement process manual for consulting services?	Yes	Low	No	Medium
A.15 If there is a manual, is it up to date and does it cover foreign-assisted projects?	The manual is up-to-date, and covers foreign-assisted projects.	Low		
PROJECT MANAGEMENT UNIT				
A.16 Is there a fully (or almost fully) staffed PMU for this project currently in place?	Yes	Low	Yes	Low
A.17 Are the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	Yes	Low	Yes	Low
A.18 Does the unit have adequate facilities, such as PCs, internet connection, photocopy facilities, printers etc. to undertake the planned procurement?	Yes	Low	Yes	Low
A.19 Are there standard documents in use, such as Standard Procurement Documents/Forms, and have they been approved for use on ADB funded projects?	There is a standard procurement document for consulting services; Standard procurement documents for civil works and goods are provided by the Jinan Public Resources Trading Center	Low	There are standard documents for civil works and goods, which are provided by the Jinan Public Resources Trading Center, but they will not be used for ADB-funded project	Low
A.20 Does the agency follow the national procurement law, procurement processes, guidelines?	Yes	Low	Yes	Low

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
A.21 Do ToRs for consulting services follow a standard format such as background, tasks, inputs, objectives and outputs?	Yes	Low	Yes	Low
A.22 Who drafts the procurement specifications?	For services, project implementation departments draft the specifications (who uses, who drafts); For works and goods, usually design institutes are providing the specifications	Low	Project implementation departments draft the specifications (who uses, who drafts), together with Design Institutes	Low
A.23 Who approves the procurement specifications?	Chief Engineer Office	Low	Infrastructure Department in the JTPC	Low
A.24 Who in the PMU has experience in drafting bidding documents?	Staff in Chief Engineer Office, as well as the project leaders	Low	Infrastructure Department/Procurement Company	Low
A.25 Are records of the sale of bidding documents immediately available?	Yes	Low	Yes, through the Procurement Agency	Low
A.26 Who identifies the need for consulting services requirements?	Chief Engineer Office identifies the need proposed by the project implementation departments	Low	Project implementation departments (who uses, who drafts)	Low
A.27 Who drafts the Terms of Reference (ToR)	Chief Engineer Office	Low	Project implementation departments (who uses, who drafts)	Low
A.28 Who prepares the request for proposals (RFPs)?	Chief Engineer Office	Low	Project implementation departments (who uses, who drafts)	Low
B. INFORMATION MANAGEMENT				
B.1 Is there a referencing system for procurement files?	Yes	Low	Yes	Low
B.2 Are there adequate resources allocated to record keeping infrastructure, which includes the record keeping system, space, equipment and personnel to administer the procurement records management functions within the agency?	Yes, JHG has established an online project management system	Low	Yes, Planning Department and Archive Office are keeping adequate records	Low
B.3 Does the agency adhere to a document retention policy (i.e. for what period are records kept)?	Yes, records are kept permanently	Low	Yes	Low
B.4 Are copies of bids or proposals retained with the evaluation?	Yes	Low	No	

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
B.5 Are copies of the original advertisements retained with the pre-contract papers?	Yes	Low	Yes, with also Notice of Contract Awards	Low
B.6 Is there a single contract file with a copy of the contract and all subsequent contractual correspondence?	Yes	Low	Yes	Low
B.7 Are copies of invoices included with the contract papers?	Yes	Low	No	Medium
B.8 Is the agency's record keeping function supported by IT?	No, paper copies are kept	Low to medium	Yes	Low
C. PROCUREMENT PRACTICES				
Goods and Works				
C.1 Has the agency undertaken procurement of goods or works related to foreign assistance recently (last 12 months or last 36 months)? If yes, indicate the names of the development partner/s and project/s.	Yes, AFD-financed project - Improving the performance of urban heating networks in Jinan (implementation period: 2013–2017)	Low	Yes, EIB-financed project - Transformation of steam to hot water in the district heating system of Jinan City, PRC (implementation period: April 2010–December 2016)	Low
C.2 If the answer is yes, what were the major challenges faced by the agency?	No major challenges		Bid evaluation methods, i.e., the lowest price technically acceptable contract award	
C.3 Is there a systematic process to identify procurement requirements (for a period of one year or more)?	Yes, for a period of 1 year	Low	Yes, for a period of 1 year	Low
C.4 Is there a minimum period for the preparation of bids and if yes, how long?	Yes. Preparation of bidding documents–1 day; Review of bidding documents–1 week; Preparation of proposals–20 days	Low	Yes, normally it takes 15–20 days, the minimum period is about 3–5 days	Low
C.5 Are all queries from bidders replied to in writing?	Yes	Low	Yes	Low
C.6 Does the bidding document state the date and time of bid opening?	Yes	Low	Yes	Low
C.7 Are bids opened in public?	Yes	Low	Yes	Low
C.8 Can late bids be accepted?	No	Low	No	Low
C.9 Can bids (except late bids) be rejected at bid opening?	No	Low	No	Low

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
C.10 Are minutes of the bid opening taken?	Yes	Low	Yes	Low
C.11 Are bidders provided a copy of the minutes?	Yes, bidders, Procurement agency and Jinan Urban-rural Construction Committee will be provided a copy of the minutes	Low	Yes, bidders and Procurement Agency will be provided a copy of the minutes	Low
C.12 Are the minutes provided free of charge?	Yes	Low	Yes	Low
C.13 Who undertakes the evaluation of bids (individual(s), permanent committee, ad-hoc committee)?	Ad-hoc committee, who are selected randomly by the Jinan Public Resources Trading Center from the expert pool	Low	Ad-hoc committee	Low
C.14 What are the qualifications of the evaluators with respect to procurement and the goods and/or works under evaluation?	Senior Engineers and Certified Cost Engineers, who have the sufficient technical experience, compatible technical qualification and have the experience in taking part in the evaluation of the bid for related goods	Low	Experts who are selected randomly from the expert pool	Low
C.15 Is the decision of the evaluators final or is the evaluation subject to additional approvals?	Yes, the decision of the evaluators are final	Low	Yes, the decision of the evaluators are final	Low
C.16 Using the three 'worst-case' examples in the last year, how long from the issuance of the invitation for bids can the contract be awarded?	Project 1: Issuance of the invitation for bids (12 May 2016) – contract awarded (8 June 2016) [Contract amount: CNY5,861,800]; Project 2: Issuance of the invitation for bids (12 May 2016) – contract awarded (2 June 2016) [Contract amount: CNY3,884,320]; Project 3: Issuance of the invitation for bids (12 May 2016) – contract awarded (3 August 2016) [Contract amount: CNY14,465,700];	Low	Normally it is about 30–35 days	Low
C.17 Are there processes in place for the collection and clearance of cargo through ports of entry?	No	Low	No	Low
C.18 Are there established goods receiving procedures?	Yes	Low	Yes	Low
C.19 Are all goods that are received recorded as assets or inventory in a register?	Inventory	Low	Recorded as inventory firstly, and eventually transfer to assets	
C.20 Is the agency/procurement department familiar with letters of credit?	No	Medium	No	Medium

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
C.21 Does the procurement department register and track warranty and latent defects liability periods?	Yes	Low	Yes	Low
Consulting Services				
C.22 Has the agency undertaken foreign- assisted procurement of consulting services recently (last 12 months, or last 36 months)? (If yes, please indicate the names of the development partner/s and the Project/s.)	No	Medium	No	Medium
C.23 If the above answer is yes, what were the major challenges?	Not applicable		Not applicable	
C.24 Are assignments and invitations for expressions of interest (EOIs) advertised?	No	Medium	No	Medium
C.25 Is a consultants' selection committee formed with appropriate individuals, and what is its composition (if any)?	Yes, there is an expert pool in procurement agency.	Medium	Selected from the expert pool randomly	Medium
C.26 What criteria is used to evaluate EOIs?	Not applicable		Not applicable	
C.27 Historically, what is the most common method used (QCBS, QBS, etc.) to select consultants?	Selected from the expert pool randomly	Medium	Selected from the expert pool randomly	Medium
C.28 Do firms have to pay for the RFP document?	Yes	Medium	Yes	Medium
C.29 Does the proposal evaluation criteria follow a pre-determined structure and is it detailed in the RFP?	Yes	Medium	Yes	Medium
C.30 Are pre-proposal visits and meetings arranged?	Depends on the scale of project	Low	No	Medium
C.31 Are minutes prepared and circulated after pre-proposal meetings?	Yes if there is a pre-proposal meeting	Low	No	Medium
C.32 To whom are the minutes distributed?	Project-related departments	Low	Not applicable	
C.33 Are all queries from consultants answered/addressed in writing?	Yes	Low	Yes	Low
C.34 Are the technical and financial proposals required to be in separate envelopes and remain sealed until the technical evaluation is completed?	Yes	Low	Yes	Low

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
C.35 Are proposal securities required?	No	Low	No	Low
C.36 Are technical proposals opened in public?	Yes	Low	Yes	Low
C.37 Do the financial proposals remain sealed until technical evaluation is completed?	Yes if the financial proposals are required to be in separate with the technical evaluation	Low	Yes	Low
C.38 Are minutes of the technical opening distributed?	Yes	Low	No	Medium
C.39 Who determines the final technical ranking and how?	Evaluation experts	Low	Evaluation experts	Low
C.40 Are the technical scores sent to all firms?	Not applicable		Not applicable	
C.41 Are the financial proposal opened in public?	Yes	Low	Yes	Low
C.42 Are minutes of the financial opening distributed?	Yes	Low	No	Medium
C.43 How is the financial evaluation completed?	According to the budget	Low		
C.44 Are face to face contract negotiations held?	Yes	Low	Yes	Low
C.45 How long after financial evaluation is negotiation held with the selected firm?	Within one week	Low		
C.46 What is the usual basis for negotiation?	RFP and Proposals	Low		
C.47 Are minutes of negotiation taken and signed?	Yes	Low		
C.48 How long after negotiation is the contract signed, on average?	About 30 days	Low		
C.49 Is there an evaluation system for measuring the outputs of consultants?	Yes	Low	Yes	Low
Payments				
C.50 Are advance payments made?	Yes	Low	Yes	Low
C.51 What is the standard period for payment included in contracts?	For services: Three payment periods: Advance payment, service payment, performance guarantee payment' For goods: 2 heating seasons For works: about one month	Low	Usually it includes four periods: Goods delivered on time to project site – goods installation and trail completed – Equipment operation – performance guarantee	Low
C.52 On average, how long is it between receiving a firm's invoice and making payment?	About 1 week	Low	About 1 month	Medium

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
C.53 When late payment is made, are the beneficiaries paid interest?	No	Low	Yes	Low
D. EFFECTIVENESS				
D.1 Is contractual performance systematically monitored and reported?	Yes	Low	Yes	Low
D.2 Does the agency monitor and track its contractual payment obligations?	Yes	Low	Yes	Low
D.3 Is a complaints resolution mechanism described in national procurement documents?	Yes	Low	Yes	Low
D.4 Is there a formal non-judicial mechanism for dealing with complaints?	Yes	Low	Yes	Low
D.5 Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of negotiation, notices of default/withheld payment?	Yes	Low	Yes	Low
E. ACCOUNTABILITY MEASURES				
E.1 Is there a standard statement of ethics and are those involved in procurement required to formally commit to it?	Yes	Low	Yes	Low
E.2 Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	Yes	Low	No	Medium
E.3 Is the commencement of procurement dependent on external approvals (formal or de-facto) that are outside of the budgeting process?	No	Low	Yes	Low
E.4 Who approves procurement transactions, and do they have procurement experience and qualifications?	Chief Engineer Office/Procurement center under Jinan Urban-rural Construction Committee	Low	Deputy Manager and project implementation departments, they all have procurement experience	Low
E.5 Which of the following actions require approvals outside the procurement unit or the evaluation committee, as the case may be, and who				

QUESTION	Jinan Heating Group	RISK	Jinan Thermal Power Co., Ltd	RISK
grants the approval?				
Bidding document, invitation to pre-qualify or RFP	Chief Engineer Office/Procurement center under Jinan Urban-rural Construction Committee	Low	Deputy Manager and project implementation departments, they all have procurement experiences	Low
Advertisement of an invitation for bids, pre-qualification or call for EOIs				
Evaluation reports				
Notice of award				
Invitation to consultants to negotiate				
Contracts	Report to the Management (Deputy General Manager/General Manager/CEO) according to the thresholds of contracts			
E.6 Is the same official responsible for: (i) authorizing procurement transactions, procurement invitations, documents, evaluations and contracts; (ii) authorizing payments; (iii) recording procurement transactions and events; and (iv) the custody of assets?	Yes	Low	No	Low
E.7 Is there a written auditable trail of procurement decisions attributable to individuals and committees?	Yes	Low	Yes	Low

ADB = Asian Development Bank, EOI = expression of interest, PMU = project management unit, QCBS = quality- and cost-based selection, RFP = request for proposal, TOR = terms of reference, CEO = chief executing officer, EIB = European Investment Bank, AFD = Agence Française de Development.

II. General Ratings

Criterion	Risk	
	Jinan Heating Group	Jinan Thermal Power Co., Ltd
A. Organizational and Staff Capacity	Low	Low
B. Information Management	Low	Low
C. Procurement Practices	Low to Medium	Low to Medium
D. Effectiveness	Low	Low
E. Accountability Measures	Low	Low
OVERALL RISK RATING	Low	Low

Appendix 2: Example of Procurement Experiences

No.	Project Name	Construction Units/Goods Suppliers	Start Date	Completion Date	Contract Amount (CNY million)
Jinan Heating Group					
Civil works contract (completed)					
1.	New pipe network - Gongye South Road	Shandong Lujian Engineering Group Co., Ltd	9-Aug-15	28-Oct-17	25.02
2.	Heating engineering installation - Qilihe Road (Gongye South Road - Huayuan Road)	Jinan Thermal Engineering Co., Ltd	20-Apr-15	30-May-17	8.06
Goods contract (completed)					
1.	Circulating pumps and water supply pumps	Shanghai Xuaneng Electric Co., Ltd	13-Oct-15	13-Oct-17	2.50
2.	Tangye Heat Plant # 1, # 2 boiler, lime - gypsum desulfurization project	Wuxi Pan Asia Environmental Protection Technology Co., Ltd	4-Mar-14	4-Mar-16	11.33
3.	Tangye Heat Plant - boiler for Phase I	Taishan Group Co., Ltd	22-Jul-13	22-Jul-15	9.74
Civil works contract (on-going)					
1.	Heating pipe network (Section I) (Huayuan Road - Jingshiyi Road)	Xinbang Construction Engineering Co., Ltd	9-Mar-18	10-May-20	5.15
2.	Heating pipe network (Section II) (Huayuan Road - Jingshiyi Road)	Shandong Leiyi Construction Engineering Co., Ltd	9-Mar-18	10-May-20	6.61
Goods contract (on-going)					
1.	Circulating pumps and water supply pumps (Caishixin Village)	Shandong Luyuan Pump Industry Co., Ltd	29-Nov-17	29-Nov-19	3.78
2.	Heating pipe network (Huayang Road - CBD)	Shenyang City Liquid Conveying Equipment Manufacturing Co., Ltd	14-Nov-17	14-Nov-27	1.22
3.	Two 70MW coal-water slurry hot water boilers - Lianhuashan Heat Plant	Shandong Hongfeng Environmental Protection Technology Co., Ltd	4-Jul-17	4-Jul-19	5.18
4.	Improvement of 2*70MW Chain Boilers - Lianhuashan	Qingdao Terrell Environmental Protection Co., Ltd	10-Jul-17	10-Jul-19	21.98
Jinan Thermal Power Co., Ltd					
Civil works contract (completed)					
1.	Heating pipe network (Minghu West Road, Minghu North Road, Minghu East Road)	Shandong Lujian Engineering Group Co., Ltd	20-Sep-16	30-Oct-16	17.63
2.	Heating pipe network (Jingliu Road)	Jinan Huaqiang Municipal Engineering Co., Ltd	30-Sep-16	30-Oct-16	24.98
Goods contract (completed)					
1.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Lanxiang Road)-section 1	Tai'an Shuangtai Building Material Co., Ltd.	Jun-17	Mar-18	2.02
2.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Lanxiang Road)-section 2	Jinan Xingyuan Thermal Insulation Engineering Co., Ltd.	Jun-17	Mar-18	2.02
3.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Lanxiang Road)-section 3	Shandong Yitong Energy Saving Co., Ltd.	Jun-17	Mar-18	2.02
4.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Lanxiang Road)-section 4	Shandong Xiandai Chengxin Industrial Co., Ltd.	Jun-17	Mar-18	2.02
5.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Lanxiang Road)-section 5	Jinan Huafeng Thermal Insulation Engineering Co., Ltd.	Jun-17	Mar-18	1.93
6.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Lanxiang Road)-section 6	Tangshan Xingbang Pipeline Engineering Equipment Co., Ltd.	Jun-17	Mar-18	2.37
7.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Lanxiang Road)-section 7	Hebei Zhuowei Steel Pipe Manufacturing Co., Ltd.	Jun-17	Mar-18	4.29

No.	Project Name	Construction Units/Goods Suppliers	Start Date	Completion Date	Contract Amount (CNY million)
8.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Lanxiang Road)-section 8	Cangzhou Xinyida Steel Pipe Group Co., Ltd.	Jun-17	Mar-18	4.38
9.	JTPC Enginnering Company - Division 3--Heating pipeline network (West Bus station, Damiaotun, Kelangshan)-section 1	Hebei Dadong Pipeline Anti-corrosion and Thermal Insulation Engineering Co.	Aug-17	Jan-18	1.05
10.	JTPC Enginnering Company - Division 3--Heating pipeline network (West Bus station, Damiaotun, Kelangshan)-section 2	Tangshan Xingbang Pipeline Engineering Equipment Co., Ltd.	Aug-17	Jan-18	0.72
11.	JTPC Enginnering Company - Division 3--Heating pipeline network (West Bus station, Damiaotun, Kelangshan)-section 3	Cangzhou Spiral Steel Pipe Group Co., Ltd.	Aug-17	Jan-18	0.88
12.	Heating pipeline network (Weifang Road)-section 1	Tangshan Xingbang Pipeline Engineering Equipment Co., Ltd.	Aug-17	Feb-18	1.69
13.	Heating pipeline network (Weifang Road)-section 2	Jinan Xingyuan Thermal Insulation Engineering Co., Ltd.	Aug-17	Feb-18	1.73
14.	Heating pipeline network (Weifang Road)-section 3	Cangzhou Xinyida Steel Pipe Group Co., Ltd.	Aug-17	Feb-18	1.53
15.	Heating pipeline network (Weifang Road)-section 4	Cangzhou Spiral Steel Pipe Group Co., Ltd.	Aug-17	Feb-18	1.36
16.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Wanshou Road)-section 1	Tai'an Shuangtai Building Material Co., Ltd.	Jun-17	Dec-17	1.69
17.	JTPC Enginnering Company - Division 1--High-temperature water pipeline network (Wanshou Road)-section 2	Shengli Steel Tube (Dezhou) Co., Ltd.	Jun-17	Dec-17	1.01
Civil works (on-going)					
1.	Heating pipe network - civil works - Erqi New Village South Road	Jinan Jiancheng Municipal Engineering Co., Ltd	9-Jul-18	30-Sep-18	0.39
2.	Jinan lasha heating source station and heating pipe network	Shandong Jiangong Co., Ltd	Nov-16	Jun-19	110.96
Goods contract (on-going)					
1.	Heaing pipe network (Liuchangshan Road) – supply of insulation pipes (section 1)	Shandong Yitong Energy Saving Co., Ltd	Sep-17	Jul -19	3.73
2.	Heaing pipe network (Liuchangshan Road) – supply of insulation pipes (section 2)	Shandong Modern Chengxin Industrial Co., Ltd	Sep-17	Jul -19	4.04
3.	Heaing pipe network (Liuchangshan Road) – supply of insulation pipes (section 3)	Tai'an Shuangtai Building Material Co., Ltd	Sep-17	Jul -19	4.10
4.	Heaing pipe network (Liuchangshan Road) – supply of insulation pipes (section 4)	Jinan Xingyuan Thermal Insulation Engineering Co., Ltd	Sep-17	Jul -19	3.93
5.	Heaing pipe network (Liuchangshan Road) – supply of insulation pipes (section 5)	Tai'an Shuangtai Building Material Co., Ltd	Sep-17	Jul -19	1.79