

**Bidding for Research on Optimal Operation and Coordinated Regulation of New Energy Storage Resources at the Zero-carbon Airport under Taiyuan Wusu Zero-carbon Airport Project financed by NDB Loan**

**(Bid No.: 0773-2540GNOEFWKG1051)**

**Project Location: Taiyuan, Shanxi Province**

**I. Conditions for Bidding**

This project is the Research on Optimal Operation and Coordinated Regulation of New Energy Storage Resources at the Zero-carbon Airport under Taiyuan Wusu Zero-carbon Airport Project financed by NDB Loan (Project No.: M1401000155900185009, NDB Contract No.: TY-S-016). The project funding comprises New Development Bank loan and self-raised funds from the enterprise, and the Client is Shanxi Aviation Industry New Energy Co., Ltd. The Project is now ready for bidding and is hereby open for public bidding.

**II. Project Overview and Scope of Bidding**

**Project overview:** Located within the Taiyuan Wusu International Airport, the Project is aimed and tasked to achieve zero-carbon operation for building structures, equipment and facilities owned by Shanxi Aviation Industry Group Co., Ltd. within the territory of Taiyuan Wusu Airport. Construction Content: The Taiyuan Wusu Zero-carbon Airport Project consists of 6 subprojects, namely: ① Zero-carbon cooling and heating engineering; ② Zero-carbon power engineering; ③ PSDF (charging) building demonstration and upgrade engineering in the terminal area; ④ Near-zero carbon building pilot engineering; ⑤ Solar-powered low-carbon street lamp; ⑥ Flexible resource data management platform for virtual power plant and photovoltaic-storage applications.

**Content of bidding:** This bidding is the Research on Optimal Operation and Coordinated Regulation of New Energy Storage Resources at the Zero-carbon Airport under Taiyuan Wusu Zero-carbon Airport Project financed by NDB Loan

**Scope of bidding:** (1) Key Technologies for the Collaborative Interaction of "Vehicle-Airport-Grid" at Zero-Carbon Airports: This part will involve studying the travel and energy consumption patterns of various types of vehicles on the airside and landside of the airport based on actual operational data to establish an equivalent energy storage model for airport vehicles, and building an optimization calculation framework for the airport vehicle charging and discharging system based on the vehicle equivalent energy storage model to propose methods for the intelligent control of vehicle charging and discharging. Additionally, a "vehicle-airport-grid" collaborative energy system architecture for zero-carbon airports will be developed, and based on the actual situation of the Taiyuan Wusu International Airport Phase III Reconstruction and Expansion Project, a demonstration application of key technologies for the collaborative interaction of "vehicle-airport-grid" at the zero-carbon airport will be carried out. (2) Key

Technologies for the Intelligent Operation of Heating and Cooling Systems at Zero-Carbon Airports: Focusing on the coordinated low-carbon operation of heating and cooling sources, the part will analyze the heating and cooling energy usage patterns at the airport across different seasons and propose methods for characterizing the cooling and heating loads at different time scales throughout the year, with an analysis of the key influencing factors. An equivalent energy storage model for each part of the cooling and heating system "source-transmission and distribution-terminal" is established, and based on the equivalent energy storage model for the cooling and heating systems, an optimization calculation framework of the airport's heating and cooling systems will be developed, along with a method for the intelligent control of cooling and heating storage and release. Additionally, the work will involve studying a year-round intelligent operation strategy for the airport's cooling and heating systems and establishing a method for the coordinated optimal operation of chillers, heat pump systems, and water storage tanks. A demonstration application of key technologies for the intelligent operation of heating and cooling systems at zero-carbon airports will be carried out based on the actual situation of the Taiyuan Wusu International Airport Phase III Reconstruction and Expansion Project. For detailed information, please refer to Section 5: "Requirements for Work Content ."

### **III. Bidders' Eligibilities**

The following eligibility requirements of bidding apply to bidders from all member countries of the NDB. For China specific eligibilities, the bidders from NDB other member countries shall be equipped with equivalent ones.

1. Qualification requirements: The registration place of the bidder shall be from the member countries of NDB, and the bidder shall have a valid business license or provide relevant certificates and qualifications equivalent to the business license;
2. Credit requirements: The bidder shall not be included in the list of untrustworthy enterprises with serious violations or abnormal business operations of the "National Enterprise Credit Information Publicity System", nor be included in the list of judgment defaulters on the "Credit China" website;
3. Qualifications requirements for the project leader: The project leader shall hold a master's degree or higher, with a senior engineer title or associate professor or associate researcher title or above in the related fields of Architecture, HVAC(Heating, Ventilation and Air Conditioning), Energy and Power, or Electrical Specialty;
4. Performance requirements: In the past eight years (from January 1, 2017 to bid submission deadline), the bidder shall have at least one research project related to the regulation and control of flexible energy consumption in buildings or parks;
5. Other requirements:
  - (1) Different units with the same person in charge or different units with controlling or management

relationship shall not bid for this project at the same time, otherwise the relevant bids are invalid;

(2) The bidder shall have not been restricted from bidding by the governments of the member countries of NDB. (The bidder shall provide a letter of commitment that has not been restricted from bidding by the governments of the member countries of NDB in the format required by the bidding documents.)

6. Bids from joint venture will be accepted; If the bidding is in the form of a joint venture, the following requirements shall be met:

(1) The bids submitted by a bidder and the contract agreement signed after being awarded the contract shall be legally binding on all members of the Joint Venture;

(2) The members of the Joint Venture shall sign a Joint Venture Agreement to stipulate their respective work and responsibilities and submit this Joint Venture Agreement along with the bids to the Client;

(3) Each member of the Joint Venture shall not submit a separate bid in its own name, nor participate in two or more Joint Venture bids simultaneously. In either case, the bids submitted in its own name and the bids of the Joint Venture to which it belongs will both be rejected;

(4) If the Joint Venture wins the bid, the members of the Joint Venture shall jointly sign the contract with the Client and bear joint and several liabilities to the Client for contract performance;

(5) The members of the Joint Venture shall jointly nominate a Joint Venture leader and submit a power of attorney to prove such Joint Venture leader's authority. This power of attorney shall be submitted to the Client as part of the bids.

#### **IV. Acquisition of Bidding Documents**

Acquisition Time: From 14:00 on August 8, 2025 to 17:00 on August 15, 2025

Acquisition Method: Online through the Yangguang Procurement Platform of Shanxi Aviation Industry Group (<http://aviagroup.jcebid.com>). Bidding documents are priced at CNY 500, non-refundable after sale.

Bank Account Information:

Name: China Capital Tendering Co., Ltd.

Deposit bank: China Merchants Bank, Beijing Haidian Science and Technology Finance Sub-branch

Account: 8670 8011 2810 001

#### **V. Submission of bids**

Deadline for Submission: 14:00 on September 2, 2025

Submission Method: Online Submission

Place for Submission: Yangguang Procurement Platform of Shanxi Aviation Industry Group (<http://aviagroup.jcebid.com>)

#### **VI. Time and Venue for Bid Opening**

Bid Opening Time: 14:00 on September 2, 2025

Bid Opening Method: Online bid opening through the Yangguang Procurement Platform of Shanxi Aviation Industry Group (<http://aviagroup.jcebid.com>)

## **VII. Other Public Announcements**

The Notice will be released simultaneously on NDB website (<https://www.ndb.int>), China Tendering And Bidding Public Service Platform (<http://cebpubservice.cn>), Shanxi Provincial Tendering and Bidding Association/Shanxi Tendering and Procurement Service Platform (<https://sxtba.com>), Yangguang Procurement Platform of Shanxi Aviation Industry Group (<http://aviagroup.jcebid.com>) and website of Shanxi Aviation Industry Group Co., Ltd. (<http://www.sxairport.org.cn/>)

Note: 1. All interested bidders shall register at the column of “Trading Market Entity Database” of <http://prec.sxzwfw.gov.cn> (National Public Resource Trading Platform (Shanxi)), and the registration guide is available at: <http://jyzt.sxzwfw.gov.cn/ztxxc/index.jhtml>.

2. If you need to apply for a CA digital certificate, please check the column of “digital certificate cross mutual recognition” (<http://prec.sxzwfw.gov.cn/cajchrpt/>) of National Public Resource Trading Platform (Shanxi) (<http://prec.sxzwfw.gov.cn/>). Customer service hotline for Yangguang Procurement Platform of Shanxi Aviation Industry Group: 400-0351-097 (working hours: 9:00-12:00, 13:30-17:30).

## **VIII. Supervision Department**

The supervisory department of this bidding project is: Shanxi Aviation Industry New Energy Co., Ltd. Comprehensive Office

## **IX. Contact Information**

Client: Shanxi Aviation Industry New Energy Co., Ltd.

Address: No. 199, Taiyu Road, Xiaodian Street, Xiaodian District, Taiyuan City, Shanxi Province, China

Persons of Contact: Jianping Liu

Tel No.: 0351-7286345

Procurement Agency: China Capital Tendering Co., Ltd.

Address: Floor 15, Jiuling Plaza, No.21 Xisanhuan Bei Road, Haidian District, Beijing City, China

Persons of Contact: Ping He

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