

## “Zhytomyr District Heating Project”

### Invitation to participate in public marketing advice on the supply of cogeneration units in Zhytomyr.

The European Bank for Reconstruction and Development (the “Bank” or “EBRD”) is considering financing a project to support Municipal Enterprise “Zhytomyrteplokomunenergo” (the “Employer”) to procure modern modular cogeneration units (hereinafter “CHP”).

Municipal Enterprise “Zhytomyrteplokomunenergo” intends to procure of two sets of modern modular CHP Units (hereinafter - "CHP"), which will be located in the city of Zhytomyr. The new CHP will have one (1) gas engine, each with gross electrical power output around 4.5 MWe and a heat output of not less than 4 MWth. The CHP units will be located on a single site. It is planned to supply two (2) modular containerized CHP units with a waste heat recovery boilers.

The CHP should be the containerized solution based on gas engine technology providing exhaust gas to a heat only boiler producing district heat for the DH system. The new CHP plants will be fired with natural gas.

The new CHP are foreseen to operate in combined heat and power mode as well as electricity only producing mode. It shall be able to deliver electricity market balancing services using its fast start-up features. Security and high levels of availability of power supplies to the electricity network are essential requirements of the project, hence reliability and redundancy are regarded as key factors in the new CHP choice.

Requirements include minimum functional specification for a “supply of goods and related services” contract based on “Supply of Goods and Related Services” (2022) by EBRD.

The supply of new CHP will include the supply of main and auxiliary equipment and related services.

In close cooperation with the Bank, the Employer is carrying out market consultations with prospective companies to develop an optimal procurement and implementation strategy(ies) for the Project. The main purpose of this is to assess the immediate and prospective supplier availability and test the risk appetite of the market in the context of the current situation in Ukraine. This will give the opportunity to interested companies to provide feedback and voice any concerns they may have.

All procurement for the Project shall be subject to the provisions of the EBRD Procurement Policies and Rules (Rev. May 2022, <https://www.ebrd.com/procurement/project-procurement/policies-guidelines.html>).

**Please review the documents provided in Annex IV and fill in and return the Questionary in Annex VI.** You are also invited to submit any questions or comments in advance of the planned market consultation (should you prefer these to remain confidential), or alternatively to attend the event and share your views on the upcoming call..

**Also, be sure to indicate whether you consider any of the following conditions to be a barrier to your company's participation, or whether you require any changes to the terms of the tender to make it more attractive for your participation.**

**You can send your questions in writing to e-mail [effekt-plus@ukr.net](mailto:effekt-plus@ukr.net) until 25.03.2026 12:00 (Kyiv time), and also take part in the online meeting, which will be held on 31.03.2026 using [Zoom](#) at 10:00 London time ( at 12 o'clock Kyiv time).**

Representatives of the European Bank for Reconstruction and Development (EBRD) will also take part in the meeting.

**Annexes:**

Annex I - Eligibility and Qualification Criteria (draft version)

Annex II - Scope of Works

Annex III - Contract implementation schedule

Annex IV - Requirements

Annex V - Key contractual terms and conditions

Annex VI – Questionnaire

## Annex I. Eligibility and Qualification Criteria (draft version<sup>1</sup>)

In order to demonstrate compliance with the qualification criteria, the Participant shall meet the below listed main qualification criteria:

Table 2. Financial Situation <sup>2</sup>						
Criteria	Requirement	Participant				Documents Required
		Single Entity	Joint Venture, Consortium or Association			
			All members combined	Lead Partner	Each other member	
<b>The information shall be provided for the period of 2022 – 2025</b>						
2.1. Historical Financial Performance	Financial soundness shall be demonstrated by annual financial statements for the last two (2) years period from 2023 to 2025: <ul style="list-style-type: none"> <li>confirmed by audit statements; or</li> <li>by tax returns/acceptance by the tax authorities of the Participant's country of incorporation or domicile.</li> </ul>	Must meet requirement	N/A	Must meet requirement	Must meet requirement	Form FIN-1; Balance sheets; Profit and loss accounts
2.2. Average Annual Revenues	A Participant's minimum average annual turnover for any of the three (3) years during the last four (4) years (2022 to 2025) shall be equivalent to: <ul style="list-style-type: none"> <li>eight million euros (8 m EUR) equivalent;</li> </ul>	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN-1; Income statement

<sup>1</sup> these criteria will be further adjusted/subdivided based on final composition of the procurement plan (i.e. contract packaging)

<sup>2</sup> The monetary values shall be expressed in equivalent of EUR.

The values in other currencies should be recalculated into the above stated currency, based on the exchange rate as set by <https://www.xe.com/currencytables/> on the 1<sup>st</sup> of July of each year of substantial completion of respective contracts, or for the current year, on the date of the invitation to submit applications or proposals, as appropriate.

Table 2. Financial Situation						
Criteria	Requirement	Participant				Documents Required
		Single Entity	Joint Venture, Consortium or Association			
			All members combined	Lead Partner	Each other member	
2.3. Financial Solvency	<p>A Participant shall not:</p> <ul style="list-style-type: none"> <li>be bankrupt;</li> <li>be insolvent or in liquidation proceedings;</li> <li>have its assets administered by a liquidator or by the court of law;</li> <li>have its commercial activity suspended by the court of law; or</li> <li>have no outstanding tax obligations in the Participant's country of incorporation or domicile.</li> </ul>	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Documents issued by the relevant authorities in the country, where of a Participant is incorporated or domiciled; Balance sheets; Profit and loss accounts
2.4. Financial Resources <sup>3</sup>	<p>A Participant must demonstrate access to, or availability of financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet:</p> <p>(i) the overall cash flow requirements for this contract taking into account its current commitments and pending awards for the entire duration of the contract; and</p> <p>(ii) the estimated cash-flow requirements:</p> <ul style="list-style-type: none"> <li>Two million euros (2 m EUR) equivalent;</li> </ul>	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN-2; Form IRC-2; Bank letters; Balance sheets; Form FIN-3

<sup>3</sup> The monetary values shall be expressed in equivalent of EUR.

The values in other currencies should be recalculated into the above stated currency, based on the exchange rate as set by <https://www.xe.com/currencytables/> on the 1<sup>st</sup> of July of each year of substantial completion of respective contracts, or for the current year, on the date of the invitation to submit applications or proposals, as appropriate.

Table 3. Experience						
Criteria	Requirement	Participant				Documents Required
		Single Entity	Joint Venture, Consortium or Association			
			All members combined	Lead Partner	Each other member	
<b>The information shall be provided for the period of 2015 – tender closing deadline</b>						
3.1. Specific Experience	<p>A Participant shall demonstrate its experience as a supplier of goods similar to those required under the Contract in:</p> <ul style="list-style-type: none"> <li>• at least 2 contracts that have been substantially completed, each with a quantity of goods of at least one containerised CHP with a minimum capacity of 4 MWE; or</li> <li>• fewer than the above number of contracts with the specified minimum quantity of goods, but contracts with a total quantity of goods exceeding 2 containerised CHP.</li> </ul>	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP-1; Documents, demonstrating substantial completion of contracts and services, as appropriate; Form IRC-1

Table 4. Historical Contract Non-Performance						
Criteria	Requirement	Participant				Documents Required
		Single Entity	Joint Venture, Consortium or Association			
			All partners combined	The Lead Partner	Each Other Partner	
<b>The information shall be provided for the period of 2019 – tender closing deadline</b>						
4.1 History of non-performing contracts	The applicant, or any partner in a JVCA, shall not have a consistent history of litigation and/or arbitration resulting in awards against the applicant, or any partner in a JVCA.	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Form HIS-1
4.2 Pending Litigations	All pending litigation shall in total not represent more than <b>25 (twenty-five)</b> percent of the Participant’s net worth and shall be treated as resolved against the Participant.	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Form HIS-1

Table 5. Environmental, Social, Health and Safety (ESHS) (Works)						
Criteria	Requirement	Participant				Documents Required
		Single Entity	Joint Venture, Consortium or Association			
			All partners combined	The Lead Partner	Each Other Partner	
<i>The information shall be provided for the period of 2019 to tender closing deadline</i>						
<b>5.1 ESHS Certifications and Documents</b>	<p>Availability of a valid ISO certification or internationally recognized equivalent (equivalency to be demonstrated by Participant), such as Environmental management certificate ISO 14001; and Health and safety certificate OHSAS 18001.</p> <p>In absence of the above certificates, availability of in-house policies and procedures for ESHS management.</p>	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Form ESHS-1W

## Annex II - Scope of Works

The new complete gas engine cogeneration units including Related Services

<b>1.1. List of Goods:</b>			
<b>№</b>	<b>Name</b>	<b>Brief description of Goods</b>	<b>Quantity</b>
1)	A new complete gas-fired CHP with total output of approximately 4.5 MWel.	New containerized gas engine CHP including spare parts and consumables, equipment and tools for maintenance, repair and related services in accordance with the Requirements.	2 units
2)	Documentation	In accordance with Requirements	3 sets
<b>1.2. List of Related Services:</b>			
<b>№</b>	<b>Name</b>	<b>Brief description of Works</b>	<b>Quantity</b>
1)	Warranty obligations;	In accordance with the Requirements	1 set
2)	Purchaser's Maintenance and Repair Support during the warranty period;	In accordance with the Requirements	1 set
3)	Assistance in developing project documentation	In accordance with the Requirements	1 set
4)	Technical supervision during installation works	In accordance with the Requirements	1 set
5)	Technical supervision during start-up works	In accordance with the Requirements	1 set
6)	Carry out performance tests;	In accordance with the Requirements	1 set
7)	Provide training of the Employer's personnel;	In accordance with the Requirements	1 set
8)	Submit a list of spare parts and consumables, including their lifetimes, prices, availability on stock in Ukraine and delivery terms for emergency supply;	In accordance with the Requirements	1 set
9)	Submit all needed documentation for operation and technical maintenance of all the equipment which forms part of the new CHP;	In accordance with the Requirements	1 set

10)	Supply consumables for the first filling (all chemicals, lubricating oils and lubricants not fuel);	In accordance with the Requirements	5 set
11)	Supply key spare parts;	In accordance with the Requirements	1 set
12)	Special tools and maintenance equipment for all plant and equipment, including lifting tackle;	In accordance with the Requirements	1 set

## Annex III. Contract implementation schedule

The Participant shall fill the Implementation Schedule below and send it to the Employer.

№	Brief description	Implementation schedule from the Commencement Date (month)
1	First delivery of complete gas engine CHP	[...] * No later than 2 months from the date of commencement of work
2	Second delivery of complete gas engine CHP	[...] * No later than 3 months from the date of commencement of work
3	Supply of other equipment	[...] * No later than 4 months from the date of commencement of work
4	<i>Tests on Completion</i>	[...] * Not later than 6 months from Commencement Day

\* To be filled in by the Participant

The milestone specified above starting from the “Commencement Date”, which is the date of receipt of the advance payment by the Supplier.

The goods will be delivered to the site in Zhytomyr under the terms of DDP Incoterms 2020.

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## **Annex IV - Requirements (Preliminary)**

### **Operating conditions**

New complete gas engine cogeneration units (hereinafter “CHP”) designed for the generation of electrical energy from the energy of natural gas from internal combustion gas piston engines, as well as generating heat for district heating system. The installations are subject to the requirements of the regulatory documents in force in EU and Ukraine (national standards (DSTU), technical standards (TOR) and other standards and regulations established by the official legislation of Ukraine) for this type of installation. The new CHP shall comply with all EU and Ukrainian emission requirements in force. New CHP shall meet the requirements set forth in EU Best Available Techniques (BAT) for the selected technology.

The Employer intends to procure CHP. The minimal electrical capacity of one engine must be 4.5 MWe. The new CHP shall ensure supply of heat to the district heating (DH) network in all existing modes.

The CHP should be based on gas engine technology providing exhaust gas to a waste heat boiler producing heat for the DH system or alternative technologies. The new CHP will be a containerized solution and will be using natural gas as fuel.

The new CHP is foreseen to operate in combined heat and power mode, as well as electricity only producing mode. It shall be able to deliver electricity market balancing services using its fast start-up features. Security and high levels of availability of power supplies to the electricity network are essential requirements of the project, hence reliability and redundancy are regarded as key factors in the CHP supply.

The Employer expects that a single comprehensive contract will be concluded for the supply of new modular container-type CHP units and related services, namely assistance during project work, technical supervision of installation work and start-up works.

The scope of supply also includes the delivery cables, heat exchangers, shut-off valves, pumps, pre-insulated pipelines, chimneys and other equipment necessary to connect the new CHP to the city's networks and further operation.

The scope of supply will include according to Ukrainian legislation, procurement, packaging, shipping, transport, delivery to Site, unloading at Site and obligations for the defects under the liability period of the complete CHP. Goods will be delivered to the site in Zhytomyr by the rules prescribed in the Incoterms 2020, on DDP terms (construction site unloaded base).

### **Standards and certificates**

All the equipment in the scope of supply shall be certified in the Ukraine.

### Testing, acceptance and commissioning

1) Factory Acceptance Tests of gas engine units shall be carried out with the Employer's Representative at the manufacturer's production facility prior to shipment. The Employer reserves the right to attend any intermediate tests as well as the final tests. The Factory Acceptance Tests program shall be provided for the Employer's Representative in advance.

2) The first complete gas engine unit shall be delivered to the site after a test period of continuous operation for 72 hours non-stop work.

Any defect found during testing and commissioning shall be rectified within twenty (20) days at the Contractor's expense. Final acceptance is subject to the correction of all remaining defects.

### Functional specification of complete cogeneration unit

Purchaser's requirements			Answer: YES / NO If YES: specify the manufacturer, brand, link to the supporting document If NO: indicate the reasons
№	Employer's requirements		
		Description	Value
1.	Type of power plant:	gas piston	
2.	Single engine power, MW:	4.5 MWe	
3.	Output voltage level, kV:	10.5 kV	
4.	Frequency, Hz:	50 Hz	
5.	Fuel:	natural gas	
6.	Engine Speed, rpm:		
7.	Exhaust manifold:	dry	
8.	Execution method:	containerized type	
9.	Quick start mode support:	Yes	
10.	Island mode paralleling and load sharing with other existing CHP power modules:	Yes	
11.	Synchronization with an external network:	Yes	
12.	Availability of a heat energy recovery module:	Yes	
13.	Warranty period, years:	not less than 2 years	
14.	Installation supervision services:	Yes	
15.	NOx emission level	Not more than 95 mg/nm <sup>3</sup>	
16.	Designed DH network water supply temperature	95°C	
17.	Designed DH network water return temperature	70°C	

## Annex V - Key contractual terms and conditions

### 1. **Terms of payment:**

Payment for Goods delivered from outside the Buyer's country shall be made as follows:

- advance payment: thirty (30) per cent of the Contract Price shall be paid upon submission of the relevant invoice and provision of advance payment security;
- upon shipment: sixty (60) percent of the Contract Price of the shipped Goods shall be paid after submission of the documents specified in clause 6 of the General Terms and Conditions of the Contract;
- upon acceptance: ten (10) percent of the Contract Price of the Goods received shall be paid upon acceptance of the Goods after submission of the relevant invoice, confirmed by the Acceptance Certificate and after passing the guarantee tests issued by the Buyer for the relevant delivery.

Payment for Goods delivered from the Buyer's country shall be made as follows:

- advance payment: thirty (30) per cent of the Contract Price shall be paid upon presentation of the relevant invoice and provision of advance payment security;
- upon delivery: sixty (60) percent of the Contract Price of the delivered Goods shall be paid upon receipt of the Goods against the invoice and after the documents specified in clause 6 of the General Terms and Conditions of the Contract have been provided;
- upon acceptance: ten (10) percent of the Contract Price for the Goods received shall be paid upon acceptance of the Goods upon provision of the relevant invoice, confirmed by the Acceptance Certificate issued by the Buyer for the relevant delivery acceptance and after passing the guarantee tests.

Payment for Related Services shall be made upon receipt of an invoice confirmed by an Acceptance Certificate issued by the Buyer for the provision of the relevant Related Services. Local and Foreign Supplier will be required to pay taxes, duties, fees and other impositions levied under the Applicable Law (current legislation of Ukraine).

### 2. **Insurance:**

a. **Cargo Insurance.** Insurance coverage shall be equal to one hundred and ten (110) percent of the value of the Goods delivered from 'warehouse to warehouse' on an 'all-risks' basis, including war risks and strikes.

3. **Retention Money** is fixed at 5%.

4. **Dispute Resolution Method** used: DAB (Dispute Adjudication Board)

5. **Delay damages:** 0.5% of the final Contract Price per week. The maximum amount of delay damages under the Contract shall not exceed 10% of the Contract Price.

6. **Time For Completion** shall be 180 days.

7. **Defect Notification Period** shall be 365 days.

8. **Price Adjustment:** not applicable
9. **Bank guarantees:**
  - 9.1 Advance payment security in the amount of the advance payment to be provided in the form of unconditional bank guarantee;
  - 9.2 Performance bond in the amount of 5% of the Accepted Contract Price, provided in the form of an unconditional bank guarantee using the standard text attached to the Contract, valid until the expiry of the Supplier's warranty obligations under the Contract.
10. **Delivery terms** shall be governed by the rules prescribed in the Incoterms 2020, on DDP terms (construction site unloaded base).

## Annex VI - Questionnaire

We will appreciate if you fill in and send the completed questionnaire to our e-mail: [effekt-plus@ukr.net](mailto:effekt-plus@ukr.net) by March 25, 2026.

**Project Name:** Zhytomyr District Heating Project

**Procurement:** "Supply of two sets of Modular CHP Units with a capacity of approximately 4.5 MWe each, with a waste heat recovery boilers, additional necessary equipment and related services".

№	Question	Answer
	Date of filling: Company name: The contact person: Tel: e-mail:	
1.	Will your company be able to deliver the gas engine CHP units on the territory of Ukraine?	
2.	Is your company capable and interested in providing technical support for design work?	
3.	Will representatives of your company be able to be present on a site physically and supervise the installation and commissioning of the gas engine power plant units? If not, does your Company have experience in remote/distance supervision?	
4.	Does the information specified in the Eligibility and Qualification Criteria in "Financial Situation" correspond to your capabilities?	

№	Question	Answer
5.	Does the information specified in the Eligibility and Qualification Criteria in “Experience” correspond to your capabilities?	
6.	Does other information specified in the Scope of Works correspond to your capabilities?	
7.	Does other information specified in the Implementation schedule correspond to the proposed manufacturers capabilities?	
8.	Does the information specified in the Requirements correspond to your capabilities?	
9.	Does the information specified in the Key terms of the contract correspond to your capabilities?	
10.	Is complete information on the subject of procurement given in the Requirements and are there any limiting factors?	
11.	Are there any questions about the quantitative and qualitative content of the documentation?	
12.	Please provide dimensions of cogenerations units, as well as required height and span of engine compartment.	
13.	Please provide suggestions for alternative unit configuration, together with pros and cons	
14.	What is the expected lead time in supply off at the beginning of 2026? Are there any restrictions in manufacturing facility?	

Questions of the Participant (if available):

1.	
...	

Participant's comments and suggestions (if available):

1.	
...	