



FG/MR/586/2021

24th November 2020

**Szczecińska Energetyka
Ciepła Sp. z o.o.**

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INVITATION TO TENDER

Szczecińska Energetyka Ciepła Spółka z o.o. with its registered office in Szczecin, ul. Zbożowa 4, (hereinafter referred to as SEC) invites you to participate in the proceedings conducted in an open tender under the provisions of the Civil Code for the task entitled: **„Taking of aerial thermal photographs of the heating network owned by SEC Sp. z o.o.”**

The subject matter of the contract includes the delivery of products for SEC Sp. z o.o. ul. Zbożowa 4.

I. Description of the subject matter of the contract:

As part of the execution of the Subject of the Contract it is necessary to:

1. Take aerial thermal images of the heating network with a total length of approximately 365 km, based on a map provided by the Ordering Party.
2. Analyse the thermal images and, on this basis, prepare and submit to the Ordering Party a report detailing potential faults/leaks/omissions in the network, together with an orthophotomap for the presentation of the thermal images in cartographic mapping.

Dane rejestrowe:
Sąd Rejonowy
Szczecin – Centrum

XIII Wydział
Gospodarczego Krajowego
Rejestru Sądowego
KRS 0000131910

NIP: 851 010 94 44
REGON: 811655650

Kapitał zakładowy:
126.000.000 zł

Zarząd:
Mariusz Majkut

3. The flyovers should be performed under suitable atmospheric conditions, i.e:
 - a) with a cloudless sky,
 - b) at a temperature between -10 and 0°C,
 - c) with a wind speed not exceeding 8m/s.

Moreover, they should take place in snow-free conditions, in the evening or at night, starting not earlier than 2 hours after sunset.

At the same time, it is recommended that the photographs are taken in similar atmospheric conditions.

4. It is necessary to ensure the possibility of importing the created orthophotomap to the GIS system possessed by the Ordering Party and to the AutoCAD 2017 version file (in both cases the map resources are maintained in the "PL-2000" coordinate system). In addition, the following requirements of the Ordering Party should be fulfilled while performing the order:

- a) Maximum field pixel size (GSD): 30x30cm.
- b) Orthophotomap accuracy in relation to the coordinate system: 1m.
- c) A thermal imaging camera meeting the following parameters shall be used to take thermal images:
- d) minimum sensitivity of the thermal imaging camera 0.05 K;
- e) measuring accuracy of 1.5 K;
- f) temperature range -20 do +50°C.
- g) longitudinal coverage not less than 80%,
- h) transverse coverage not less than 40%.

5. The following products should be delivered to the Ordering Party as a result of the work performed:

- a) Thermal orthophotomap (monochromatic) in GeoTIFF format in the "PL-2000" coordinate system. Pixel values are to be expressed as integers, with a "+" or "-" sign, representing hundredths of degrees Celsius.

- b) Colour thermal orthophotomap in GeoTIFF format in the "PL-2000" coordinate system. The colour palette of the orthophotomap should clearly show the temperature differences of the objects, with particular emphasis on the differences near the district heating network. E.g. in colours from blue (minimum temperature) through yellow to red (maximum temperature).
- c) Polygon layer in DXF or DWG format (AutoCAD) with all anomalies / anomalies found in the "PL-2000" coordinate system.
- d) A report prepared on the basis of the photographs taken and their analysis.

The report should include:

- a description of the work performed, broken down into individual stages of the task, including the date and time of taking the photographs, the number of photographs taken and the weather conditions recorded,
- information on the type of aircraft used and the thermal imaging camera used, together with their characteristic parameters,
- tabular summary in editable version (MS Excel - version 365) with a list of anomalies / irregularities found, including for each case the location (the nearest street and the number of property), the difference in temperature ($\Delta T^{\circ}\text{C}$), the priority of the anomaly / irregularity found (high, medium, low) with the indication of the foreseeable reason for the difference in temperature (e.g., probable leakage, large damage to insulation, poor condition of insulation causing heat losses, etc.). Moreover, for each case of identified anomalies /

irregularities, a separate graphic file (JPEG) should be provided with a screen shot of the developed colour temperature orthophotomap and a satellite map (e.g. google maps) with the marked course of the heating network.

A model of such a file has been attached to the Invitation.

- e) The images and the report will be provided to the Ordering Party in a digital form on a portable hard drive with a USB 3.0 interface and of a capacity appropriate for the volume of data. The directory structure shall be described unambiguously.
 - f) The material to be submitted to the Ordering party should be prepared in such a way that the size of a single file does not exceed 60MB.
 - g) Acceptance of the work will be carried out by the Ordering Party within 10 days from the day on which the Contractor submits all required data.
If the Ordering Party finds out that the data provided are inconsistent with the requirements of the subject matter of the contract, the Contractor shall be obliged to transfer the products in a version that takes into account the comments and recommendations formulated by the Ordering Party, within a period not longer than 7 days.
 - h) The Contractor shall be obliged to submit work progress reports at the interval of 2 weeks in writing (by e-mail) starting from the day of signing the contract.
6. The offer should include all other costs necessary for proper execution of the subject matter of the contract, in particular those related to:
- a) Transport of equipment and personnel,
 - b) Third party insurance for equipment and personnel,

- c) Accommodation and maintenance of personnel on site,
- d) Obtaining the necessary permits for the flights.

The total length of the heating network sections to be flown is approximately 365 km.

II. Conditions of participation in the tender procedure:

1. The Ordering Party permits thermal imaging to be performed only by a manned aircraft (aircraft).
2. Contractors who have the professional experience necessary to complete the contract, i.e. who have completed at least 2 contracts within the last 3 years before submitting their offers, can apply for the award **taking aerial photographs with a thermal imaging camera of a heating network with a length of min. 10 km (each contract)**, using a manned aircraft (aircraft), together with an analysis of the thermal imaging photographs and preparation of a report detailing potential faults / leaks / irregularities of the network (references confirming the work carried out must be enclosed with the offer).

III. Completion date:

- a) taking aerial thermal images of the district heating network: **60 days from the day of signing the contract,**
- b) **analysis of thermal images along with preparation of a report with potential defects / leaks / irregularities of the network along with an orthophotomap for presentation of thermal images in cartographic mapping: 21 days after completion of thermal imaging.**

In the event of adverse weather conditions preventing the completion of the subject matter of the Order within the original deadline, the Contracting Authority provides for the possibility of setting a new deadline for its execution.

IV. Criteria for selection of offers:

- a) 100% price.

V. Deadline for submitting offers and how to submit

The Supplier should send the offer using the enclosed offer form by e-mail until **3.12.2021r., 3 pm**, to the following address: magdalena.runowicz@sec.com.pl with the description - Offer for: „**Taking of aerial thermal photographs of the heating network owned by SEC Sp. z o.o.**”

- VI. Offer validity period:** Contractors will be bound by the offer for a period of - 60 days. The offer validity period shall commence with the expiry of the offer submission deadline.
- VII. In formal matters** concerning the price enquiry procedure, please contact - Procurement Department: Magdalena Runowicz, Mobile 663 436 527, email: magdalena.runowicz@sec.com.pl
In matters of substance: Department for Investment Planning and Facilities Management Tomasz Kłodawski, mobile 693 929 331, email: tomasz.klodawski@sec.com.pl
- VIII.** The **Ordering Party** expects to cooperate with the Contractor during the execution of the subject matter of the contract.
- IX.** The Ordering Party reserves the right to cancel the tender in case of lack of at least 3 offers.
- X. SEC Sp. z o.o.** reserves the right to freely choose the Supplier and to cancel the procedure without giving any reason.

Grzegorz Opaluch
Head of Department
for Procurement and Logistics
p.p.

Appendices:

1. Price offer form.
2. Specimen agreement.
3. Environmental Guidelines for Contractors.

4. „General conditions for the performance of services to SEC Spółka z o.o.”
5. Data protection clause.
6. Sample JPG file.

Compiled by: Magdalena Runowicz