

Note: All documentation related to the procurement in question is available in Croatian and English language. In the event of a discrepancy in the interpretation of the documentation, documentation in Croatian language takes priority.



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Annex 2

TO ECONOMIC OPERATORS

Based on Article 7 of IRENA's simple procurement procedure rulebook, for **Procurement of sensor equipment for the needs of ARCA project**, IRENA (in further text: Contracting authority) determines the elements for bid preparation and publishes it on its official website

CALL FOR BIDS

1.	PROCUREMENT SUBJECT MATTER DESCRIPTION
1.1.	Procurement subject matter: Procurement of sensor equipment for the needs of ARCA project
1.2.	Procurement number: JN-9/2026
1.3.	Estimated procurement value: 24.000,00 EUR (VAT excluded)
1.4.	Quantity of procurement subject matter: 1 set CPV: 35125100 - Sensors
1.5.	Procurement goal is: Supply, delivery and installation of sensor equipment to be placed on trees in the designated forest terrain at location Gornji Kamenjak, 52100 Premantura (according to <i>Annex 2c – Location</i>) for the purpose of forest ecosystem health monitoring and early detection and better forecasting of risk factors related to natural disasters, primarily forest fires, droughts and storms. Sensor equipment is additionally used for local collection, analysis and processing of valuable data regarding air quality, risk factors for forest fire prediction, and regarding forest biomass health and stability. By installing sensor equipment, a wireless sensor network (Nb-IoT¹) is formed, which enables the collection of valuable data in real time and free flow of data. Collected data is sent to the main server of CMCC Foundation (Centro Euro-Mediterraneo sui Cambiamenti Climatici) based in Lecce,

¹ Narrowband Internet of Things

Italy for further processing for the needs of project ARCA.

Further data processing is based on AI algorithm and machine learning use for the purpose of developing models for better analysis and forecasting of natural disasters.

Procurement foresees the acquisition of one set of sensor equipment. One set comprises of 15 (fifteen) sensor devices with specified technical characteristics, along with additional equipment and technical services described in further detail below.

Selection elimination criteria described in more detail below.

1. Technical characteristics²

Sensor devices must contain the following measuring devices and minimum technical characteristics:

Device name	Measurement range	Device purpose
Air temperature sensor	-10 to +50 °C	Measuring air temperature of surrounding air
Relative humidity sensor	0–95 % relative air humidity	Measuring relative humidity of surrounding air
CO2 sensor	400 - 2000ppm, ± 50ppm maximum allowed deviation	Measuring CO2 concentration of surrounding air
O3 sensor	0 - 5ppm, ± 15 ppb maximum allowed deviation	Measuring O3 concentration of surrounding air
Particulate matter sensor	PM1, PM2,5, PM10	Measurement of particulate matter of surrounding air
Dendrometer	Minimum measurement range 0–20 cm, minimum accuracy ±10 µm	Measuring radial tree growth
Solar radiation measurement sensor	400-900 nm, ± 50nm maximum allowed deviation	Measuring the spectral range of solar radiation that photosynthetic organisms use for photosynthesis

Sensor devices must be resistant to external conditions, including a temperature range of at least -10 to +50 °C, as well as resistance to relative humidity in the range of 0 to 95%. Installation of the device is minimally invasive and does not cause permanent damage to trees used for installation.

Other technical characteristics that sensor devices must meet:

² Additional verification carried out through Annex 2b – Technical data sheet

- Possibility of network connection to NB-IoT grid which enables full functionality of installed equipment
- Possibility of long term data storage via Cloud platform
- Capability to collect data at hourly intervals (minimum setting)
- Ability to process data using the Python programming language

2. Additional equipment³

Additional equipment refers to equipment necessary to achieve full functionality of sensor devices. Additional equipment includes a **power supply system** that enables independent, continuous and uninterrupted power supply of sensor devices without using another (external) power source. The power system can include rechargeable batteries with a battery charger and/or battery charging via solar panels. In the case of the offered power supply system solution that does not include the above mentioned solution, the solution is additionally evaluated by the Contracting Authority.

For the battery system, the following must be provided:

- a) a minimum of two copies of batteries for powering each sensor device (30 pcs in total)
- b) charger for charging batteries, and/or possibility of direct charging of batteries through solar panels.

Additional equipment includes a **prepaid SIM card⁴** for establishing a local digital network for the use of wireless sensors. The SIM card must be compatible for use with sensor devices and Cloud platform.

Additional equipment also includes all other equipment not specified in this Call, which is essential for the continuous and uninterrupted operation of the sensor devices, i.e., equipment without which the full functionality of the sensor devices cannot be achieved. The Bidder is obliged to include in the total bid price all anticipated costs for the procurement, delivery, and installation of such equipment required to achieve full functionality and fulfill all technical requirements of the Contracting Authority.

3. Technical services (technical support)

Contractor undertakes to deliver the sensor equipment to the designated installation site and undertakes to perform the installation and preliminary testing of the functionality of the sensor equipment at on-site location, with prior notification and agreement with User and Contracting Authority. Contractor undertakes to remove the remaining material, equipment, means of work and other things from the location after the completion of the work, and to clean the field of debris.

Contractor undertakes to provide the User of the sensor equipment with technical training for use in person or via video call within a maximum of 30 days from the day of installation.

Contractor undertakes to facilitate the uninterrupted transmission of data collected by the sensor equipment to the main server of the CMCC Foundation (Centro Euro-Mediterraneo sui Cambiamenti Climatici) for further processing. Data collection and transmission shall take place during the duration of the ARCA project and for a period of 5 (five) years following the project's completion (up

³ Additional verification carried out through Annex 2b – Technical data sheet

⁴ For each sensor device

to and including 30 April 2032).

4. Warranty period of installed sensor devices

The Contractor is obliged to provide a warranty period for the installed sensor devices until April 30, 2032. The warranty enters into force upon the mutual signing of the Final Report (Annex 2d), which proves that the Contractor has fulfilled all contractual obligations. Warranty coverage includes the repair and/or replacement of sensor devices in the event of a malfunction at the Contractor's expense. For all associated additional equipment (power supply system, batteries, chargers, solar panels, SIM cards, and other equipment required for full functionality), the Contractor is obliged to guarantee the availability and market supply of compatible replacement components throughout the entire period, concluding on April 30, 2032, in order to ensure the possibility of procurement and delivery in the event of malfunction or wear and tear. Throughout the entire duration of the warranty period and concluding on April 30, 2032, the Contractor is obliged to ensure, at their own expense, the full functionality and continuity of technical services, which includes the uninterrupted transmission of collected data from the sensor equipment to the main server of the CMCC Foundation (Centro Euro-Mediterraneo sui Cambiamenti Climatici) for the purpose of further processing.

As part of the bid, the Bidder shall submit a Statement on the warranty period, availability of replacement components, and continuity of technical services on the prescribed form of the Contracting Authority (Annex 2g).

A prerequisite for signing the Final Report (Annex 2d) and paying the agreed amount is the delivery of individual warranty certificates for the delivered sensor devices with a fixed expiration date of April 30, 2032, as well as CE declarations of conformity and technical documentation.

Additional notes

Deadline for the provision of services is 45 (forty-five) days from the signing of the contract (Annex 2e). Contract is to be completed and signed in both Croatian and English versions⁵. The invoice for the services rendered shall be issued following the signing of the Final Report (Annex 2d). All work must be performed in accordance with applicable technical regulations, standards, and professional practices.

A representative of the Contracting Authority is present on-site during the installation and functional testing of the sensor equipment; following the completion of the work and an inspection of the site conditions, Contracting Authority and Contractor, acting as members of the Commission, sign the Final Report (Annex 2d).

In the event that it is not possible to establish full functionality of the equipment on the day of the installation, Contractor is obliged to submit additional proof of full functionality within 5 days, which is additionally evaluated by the Contracting Authority within 3 days of receipt. In case of a positive evaluation, Contracting Authority submits the Final Report (Annex 2d) to the Contractor for signature⁶. In the event of a negative evaluation, Contracting Authority requests additional proof of functionality from Contractor.

In the case of a domestic bidder, all procurement documents are submitted in Croatian.

In the case of a foreign bidder, all procurement attachments may be submitted in Croatian or

⁵ In the case of a foreign bidder.

⁶ Contracting Authority shall submit the Final Report to the Contractor within 3 days of a positive evaluation. Contractor shall submit the signed Final Report to Contracting Authority within 3 days. A scanned version sent via email is eligible, provided it is subsequently sent by regular mail.

	English, with the exception of Contract (<i>Annex 2e</i>) and Final Report (<i>Annex 2d</i>), which must be signed and submitted in both Croatian and English versions.
2.	PROCUREMENT CONDITIONS
2.1.	Method of execution: single contract (<i>Annex 2e</i>)
2.2.	Term of service: 45 (forty-five) days
2.3.	Contract duration: Expected contract duration is 45 (forty-five) days.
2.4.	Location of sensor devices installation: Gornji Kamenjak, 52100 Premantura Exact location is specified in Annex 2c and includes cadastral municipality Premantura (cadastral plot 917/1, 917/32, 917/33, 917/234) and cadastral municipality Pomer (cadastral plot 845/10, 848/2, 850/6). Location selected based on consent given by Croatian Forests Ltd., Forest Administration Buzet Branch, Pula Forestry Office (Class: BU/26-01/211, Order no: 00-02-03/04-26-03, issued 12. February 2026.)
2.5.	Bid validity: 60 (sixty) days.
2.6.	Price instructions: Bid price excluding VAT includes all costs and discounts of the bidder; Bid price is expressed in euros, and must be expressed in such a way that the bid price excluding VAT is shown, the VAT amount and the total bid price including VAT are shown separately.
2.7.	Payment deadline, method and conditions: Upon delivery within 60 (sixty) days from the date of receiving a valid invoice. Advance payment is not permitted. In order to monitor the performed state and ensure fiscal responsibility of the project, the following form is filled out after sensor equipment installation: • Final report (<i>Annex 2d</i>) – verifies the compliance of the completed work with the criteria of this Call, up to the point of full functionality. Final report confirms that the Contractor has fulfilled all contractual obligations towards the Contracting Authority, thereby effecting the handover of equipment and issuing of the invoice. Final report is considered complete once signed by representatives of the Commission, which comprises representatives of both Contracting Authority and Contractor. Versions in both Croatian and English are to be completed and signed⁷. Contractor is obliged to issue a valid invoice to the Contracting Authority, which must contain:: 1. Contracting authority data as follows: IRENA – Istrian Regional Energy Agency Ltd., Rudarska 1, 52220 Labin, PIN: 15317120721 2. Procurement number: JN-9/2026 3. Bid number 4. Signed contract number 5. Project and programme name: ARCA, Project ID: IPA-ADRION00107, Interreg IPA Adrion Programme
2.8.	Bid selection criterion: lowest price Bid price refers to total single price without VAT and includes: • Supply, delivery, and installation of 1 (one) set of sensor equipment, including: ○ 15 pieces of sensor devices that meet the technical characteristics specified in this

⁷ In the case of a foreign bidder.

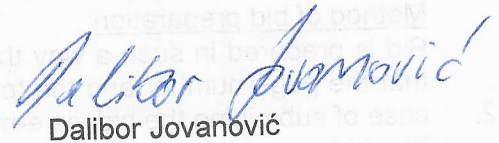
	Call, - o Additional equipment specified in this Call, - o Provision of technical services (technical support) specified in this Call, - o Warranty specified in this Call. Unit prices specified in Bill of quantities (<i>Annex 2a-2</i>) are fixed and include the total cost of performing individual works from the supply of materials to full completion and functionality. In the case of bids achieving the same score, preference is given to the bid submitted earlier.
2.9.	Bidders have to adhere to the procurement objectives defined in point 1.5 of this Call for bids , and deliver the required evidence of capability.
2.10	Evidence of capability, i.e. basic conditions for submitting a bid: - <u>Extract from the court register</u> or other appropriate equivalent document – not older than 30 days. Submission of a link allowing the Contracting Authority to independently verify the specified data is also acceptable. Submission in a foreign language is permitted, subject to the Contracting Authority's right to request a translation at a later stage if necessary. - <u>Completed ESPD⁸ form (Annex 2f)</u> – The form is signed by the Bidder's authorized person. - <u>Extract from the Register of legal subject owners</u> (or foreign equivalent) (not older than 30 days). Alternatively, a link or data enabling the Contracting Authority to independently verify the said information may be provided. Submission in a foreign language is permitted, subject to the Contracting Authority's right to request a translation at a later stage if necessary. Appropriate evidence of the stated conditions must be submitted with the bid. Such evidence may be provided in the form of uncertified copies, originals, or certified copies. An uncertified printout of an electronic document is also considered an uncertified copy. Contracting authority may request the most favorable bidder—with whom it intends to conclude a contract—to submit originals or certified copies of one or more of the requested documents, or it may request the competent authority to verify the submitted documents. If the Contracting authority determines that certain evidence of capability has not been delivered, the Bidder will be contacted by e-mail. The bidder is obliged to submit the requested evidence within 3 (three) days of receiving the notification. Otherwise, the bidder will be excluded from the procurement procedure. The Contracting authority reserves the right to subsequently request additional documentation.
2.11	Regulations related to non-compliance with the contract: Delay in the implementation of contractual obligations is sanctioned by reducing the contract value by 0.5% of the original contract value for each day of delay within the first 30 days of delay and by reducing the contract value by 1% of the original contract value for each day after that period up to a maximum of 10% of the total contract value.
3.	BID REGULATION
3.1.	Bid components: 1. Bid Form (<i>Annex 2a-1</i>) (filled out and signed by the bidder) 2. Bill of quantities (<i>Annex 2a-2</i>) (filled out by the bidder)

⁸ European Single Procurement Document

	3. Technical data sheet (<i>Annex 2b</i>) (filled out and signed by the bidder) 4. Proof of capability 5. Proof of warranty of sensor devices - As part of the bid, the Bidder shall submit a Statement on the warranty period, availability of replacement components, and continuity of technical services on the prescribed form of the Contracting Authority (<i>Annex 2g</i>), confirming the provision of the warranty concluding on April 30, 2032.
3.2.	<u>Method of bid preparation:</u> Bid is prepared in such a way that it forms a whole. Pages of the bid are numbered in such a way that the page number and the total number of pages of the bid are visible, e.g. 1/10 or 10/1. In the case of submitting the bid via e-mail, the bid is submitted in a single file in PDF format. The bids are written in indelible ink. Corrections to the bid must be prepared in such a way that they are visible. Corrections must be confirmed by the signature of the bidder, indicating the date of the correction.
3.3.	Language and script of the offer. The offer can be made in Croatian or English and in the Latin script.
4.	METHOD OF BID DELIVERY
4.1.	Bids are delivered: - in a sealed envelope by registered mail, or directly to the customer's address: <i>IRENA – Istarska Regionalna Energetska Agencija d.o.o., Rudarska 1, 52220 Labin, Procurement number: JN-9/2026, Procurement subject matter: Procurement of sensor equipment for the needs of ARCA project - „DO NOT OPEN“.</i> - or - e-mail to irena@irena-istra.hr, with e-mail subject matter 'JN-9/2026 - Procurement of sensor equipment for the needs of ARCA project'. Bidder may withdraw its submitted bid by written statement before the deadline for bid submission. A written statement shall be submitted in the same manner as the bid, with a mandatory indication that it is a withdrawal of the bid. <u>A bid submitted after the deadline for bid submission shall be recorded as a late bid</u>, marked as late, and returned unopened to the sender without delay. The bidder shall independently determine the method of bid submission and shall bear the risk of possible loss or untimely delivery of the bid.
4.2.	Deadline for bid submission: 04.09.2026., until 16:00 h
4.3.	Deadline for bid opening: 07.09.2026., until 12:00 h Bid opening is not public.
5.	OTHER
5.1.	Notifications regarding procurement subject matter: Contact person: Antonio Franković Telephone no: +385 52 351 550, +385 99/470 6504 E-mail address: antonio.frankovic@irena-istra.hr
5.2.	Notifications regarding procurement technical specifications: Contact person: Antonio Franković Telephone no: +385 52 351 550, +385 99/470 6504 E-mail address: antonio.frankovic@irena-istra.hr
5.3.	Additional information:
	Croatian Public Procurement Act does not apply to this procedure. Contracting authority reserves the right to cancel this procurement procedure at any time, or not to select any bid, all without any obligations or compensation of any kind to the bidders, if none of the submitted bids meet the purpose of the procurement or if they exceed the secured funds, or in other justified cases according to the Contracting authority's decision. Contracting authority will review, evaluate and rank the submitted bids no later than 5 (five) days after

the deadline for submission of bids and deliver a written notification of the procurement results (regarding selection of the most favorable bid or rejection of all bids and cancellation of the procurement procedure) to all bidders.

Internal number: D/04-14/26/146-02
Labin, 14.08.2026.


Dalibor Jovanović

DIRECTOR

IRENA

Istarska Regionalna Energetska Agencija
za energetske djelatnosti d.o.o.
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