

Call for bids

Pursuant to point 2.4 of the SAMRS financial guide No.1 / 2019 (Principles of awarding contracts - goods, services and construction works intended for official development assistance of the Slovak Republic)

Call number: 46230/0007/2021

1. Contracting authority: FCHPT STU v Bratislave
Address: Radlinského 9
City: Bratislava
Postal code: 812 37
ID: 00397687
Contact person: Ing. Barbora Dudášová
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2. Object of contract

Supply of laboratory equipment within the SAMRS / 2019 / AFG / 01/01 project and securing the delivery of goods at the destination.

3. Type of contract

Contract for supplying goods and services

4. Short description of contract

Laboratory equipment and devices specified in the attached table. It is a laboratory facility designed for the educational process in the renewable energy demonstration. Delivery of all equipment as a whole from one supplier is required. Tenders containing only part of the facilities and services will not be accepted. The facilities are procured under the official development assistance of the Slovak Republic for Afghanistan. The place of delivery and operation of these facilities is Kabul Afghanistan. The offer must include export-related costs and cost of transporting the goods to the destination.

5. Estimated value of contract: EUR 24300

6. Date of delivery (contract duration)

The goods must be transported and delivered at the place of delivery within two months after an official order is delivered to the supplier.

7. Main place of delivery of goods / provision of services

DAT Kabul, Afghanistan

8. Financing conditions and payment arrangements

The subject of the contract will be financed from the resources of the Slovak Development Aid for Afghanistan under the SAMRS / 2019 / AFG / 01/01 project.

The costs will be paid by the customer in three payments:

1. 20%: when the equipment are ordered
2. 60%: when the equipment are prepared for shipping

3. 20%: up two weeks after delivery of equipment at the destination (Kabul airport)

9. Conditions of participation

1. The participant must submit an offer, which is complete and contains all the items listed in the attached table, the goods shall meet European quality standards, the participant must list all required information (price, producer and internet link) for each item.

2. The participant should provide services for delivery of the goods to the final destination (Kabul, Afghanistan)

3. The participant must provide warranty and post-warranty service of the equipment at the destination (Kabul, Afghanistan)

3. The participant shall prove the ability to carry out this contract at least by 3 references of similar performance, installation of similar equipment in developing countries.

10. Bid evaluation criteria

All offers will be evaluated in the first step to meet the equipment's technical requirements. Offers which are not complete or do not meet the required technical requirements shall be excluded. Subsequently, it is assessed whether the requirements of this call for delivery of goods in the place of destination are met, and also to guarantee the warranty and post-warranty service in Afghanistan. Offers that do not include these requirements will be excluded. Bidders who meet all the conditions set out in point 9 will be listed in ascending order, with the successful bidder being the first. We will start negotiating the delivery of the goods with the successful tenderer and sign the contract.

11. Tender deadline

Date and time: all offers must be supplied until January 15, 2021 at 4:00 pm

12. Tender Place

FCHPT STU in Bratislava, Department of Chemical and Biochemical Engineering,
Radlinského 9, 812 37 Bratislava

Contact address: barbora.dudasova@stuba.sk

Offers must be sent to the e-mail address listed

13. Content of offer

The offer must contain, in addition to the quotation, the following documents and documents in paper form (signed scans are required):

- a completed table annexed to this call
- company business licence
- min. 3 references of similar performance

In Bratislava January 5, 2021	Signature of the Contractor authority:
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No.	1
Name of the device	PV-KIT-300W. 300W Photovoltaic Kit with Regulator and Measurement Instrumentation
Specifications of the device	<ul style="list-style-type: none"> • LP-3/C. 3 Lamps Panel with Remote Control. Power: 3 x 500 W. Aluminium structure. • N-REG-AC/LR. AC Local/Remote Current Regulator Module. 16 A fuse. Switch for control modes: Local or SCADA. ENABLE/DISABLE switch. Potentiometer for manual intensity control. Current signal control connector. ON/OFF switch. Power connector. Module supply voltage: 230 VAC. Working intensity range: 0 - 6, 5 A. Maximum motor output power: 1500 W. • N-REG02. Current Electronic Regulator Module 2. 16 A fuse. 4-stage PWM charge controller. USB output. Input connectors with auxiliary terminals. ON/OFF switch. 12 V batteries *. DC Output Power Terminals. Module supply voltage: 230 VAC. Nominal operating voltage: 24 V. Rated discharge current: 20 A. Admissible DC voltage range: 12 - 50 V. Voltage load Floatation / Absorption / Equalization: 13 - 15 V. • N-MED81. DC Ammeter (0 - 30 A). Analogue Ammeter. Connection terminals. Intensity range: 0 - 30 A. • N-MED16. DC Voltmeter (0 – 50 V). Analogue Voltmeter. Connection terminals. Voltage range: 0 - 50 V. • PV-24/300W. Photovoltaic Panel, 24 VDC, 300 W. Number of cells: 6 x 12. Maximum power: 335 W. Voltage at maximum power: 38.2 V. Current at maximum power: 8.77 A. Short circuit current (Isc): 9.38 A. Open circuit voltage (Voc): 46.1 V. Module efficiency: 17.2. • BAT2. 70 Ah Battery (2 units). Nominal voltage: 12 VDC.
Your catalogue name of the device and web	

link to the device description	
Your price DAT Kabul (EUR)	

No.	2
Name of the device	LABORATORY SET-UP "Thermal solar system"
Specifications of the device	<p>The required laboratory unit have to be a computer controlled unit for the study of the conversion of wind energy into electricity. The unit should enable at least the following measurements:</p> <ul style="list-style-type: none"> • Identification and familiarization with all components of the unit and how they are associated with its operation. • Familiarization with the regulator parameters and the wind energy measurements. • Study of the conversion of kinetic wind energy into electrical energy. • Study of the power generated by the aerogenerator depending on the wind speed. • Determination of the typical parameters of the aerogenerator (short circuit current, open-circuit voltage, maximum power). • Determination of the I-V curve. • Study of voltage, current and power in function of different loads. • Study of the influence of the load variation on the aerogenerator. • Determination of the maximum power output of the aerogenerator. • Determination of the P-air speed curve. • Study of the power generated by the aerogenerator depending on the incident angle of the air. • Study of the characteristic curve of the rotor. • Study of the connection of loads to direct voltage. <p>The unit should include:</p> <ul style="list-style-type: none"> ○ Stainless steel tunnel of 2000 x 550 x 550 mm approx. (78.74 x 21.65 x 21.65 inches approx.), which includes two transparent windows of 1000 x 130 mm approx. (39.37 x 5.11 inches approx.). ○ Aerogenerator: <ul style="list-style-type: none"> ○ Diameter: 510 mm. Starting air speed: 2.0 m/s. ○ Max. power output: 60 W. Voltage: 12 V. ○ Max. charging current: 5 A. ○ It includes a set of six blades. ○ The aerogenerator incidence angle can be modified to simulate different weather conditions and it is possible to set different blade configurations (aerogenerator with six, three or two blades). ○ This unit allows to change the angle of every blade, as each one embeds its own calibrated protractor. The blades can be adjusted in a 360° range. ○ Low friction alternator, which provides a smooth and silent output. <ul style="list-style-type: none"> ○ Friction less alternator and fixed shaft. ○ Axial fan with variable speed (computer controlled) for wind simulation: <ul style="list-style-type: none"> ○ Max. flow rate: 10650 m³/h. Max. power: 1.5 kW. It includes a finger guard. ○ DC Load Regulator: <ul style="list-style-type: none"> ○ It regulates how power generated in the aerogenerator is distributed to and from the auxiliary battery and to the load. A display informs about the state of the charge, operating parameters and fault messages. The functions of the electronic protection are: <ul style="list-style-type: none"> ○ Overvoltage disconnection, short circuit protection of load and module, overvoltage protection at module input, over-temperature and overload protection, and battery overvoltage shutdown. ○ Auxiliary battery charger: <ul style="list-style-type: none"> ○ It carefully assesses the battery and then delivers the optimum charge required. ○ Battery: Nominal voltage: 12 V. Rated capacity (20 hours rate): 24 A/H. ○ DC Loads Module: <ul style="list-style-type: none"> ○ Metallic box with diagram in the front panel. ○ Two lamps of 12 V. ○ One DC motor: voltage: 24 V, power: 5 W. ○ Rheostat of 500 W. ○ Two manual switches. ○ Independent connection for every load with the help of the four position load selector: <ul style="list-style-type: none"> ○ Position 1: The aerogenerator or regulator operates at open circuit

	<p>voltage.</p> <ul style="list-style-type: none"> ○ Position 2: The DC lamps and the rheostat are directly connected to the aerogenerator or regulator, depending on the selection made in the computer. These loads can be connected independently or in parallel with the help of manual switches. ○ Position 3: The DC motor is directly connected to the aerogenerator or regulator. ○ Position 4: Bypass mode, there are no DC loads. ○ Sensors: ○ "J" type temperature sensor to measure the air temperature inside of the tunnel. ○ The air speed is measured with a sensor placed in the tunnel; sensor range: 0.20 – 10 m/s. ○ An optical sensor measures the rotational speed of the aerogenerator (r.p.m.). ○ DC voltage and current sensor. It is possible to know, in real time, the value of the DC voltage and the current given by aerogenerator, measured before and after the regulator. ○ Force sensor to measure the mechanical torque of the wind turbine, range: 0 – 600 g. ○ Force sensor to measure the thrust force on the wind turbine, range: 0 – 3000 g.
<p>Your catalogue name of the device and web link to the device description</p>	
<p>Your price DAT Kabul (EUR)</p>	