

THIS DOCUMENT IS MERELY AN INFORMATIVE TRANSLATION TO HELP FOREIGN ECONOMIC OPERATORS (I.E. SUPPLIERS/ CONTRACTORS) UNDERSTAND THEIR RIGHTS AND OBLIGATIONS IN THE BELOWMENTIONED PROCUREMENT PROCEDURE AND HAS NO LEGAL EFFECTS WHATSOEVER. LEGALLY BINDING IS THE PROCUREMENT DOCUMENTATION IN CZECH LANGUAGE. PLEASE TAKE THIS IN ACCOUNT WHEN READING THIS INFORMATIVE DOCUMENT.

PROCUREMENT DOCUMENTATION

Name of public contract: 045_Ve_ANTeTUL_Emulátor/Tester vysokonapěťové baterie vč. příslušenství-High voltage battery tester with battery emulation function with accessories

Int. no. of public contract: 19/9615/045

Name of program: Operational Program Research, Development and Education
Project title: Modular platform for autonomous chassis of specialized electric vehicles for freight and equipment transportation

Registration number: CZ.02.1.01/0.0/0.0/16_025/0007293

Contracting authority: Technická univerzita v Liberci/Technical university of Liberec
Address: Studentská 1402/2, 461 17 Liberec I-Staré Město
Reg. no.: 46747885; DIČ: CZ46747885

Represented by: doc. RNDr. Miroslav Brzezina, CSc., rector

Contact person: RNDr. Ivana Večeřová; tel.: +420 485 353 044;
email: zakazky@tul.cz

Internet address of the profile of the contracting authority and the electronic tool E-ZAK: <https://zakazky.tul.cz/>

1 Subject of the public contract

Type of public contract: Public supply contract.

Type of public contract according to the estimated value: Above-threshold.

SUBJECT OF THE PUBLIC CONTRACT: High voltage battery tester with battery emulation function with accessories

Technical Specification of HW:

Device DC power output:

- at least 240 kW DC continuous power,
- short time overload of 25 % with switch-on time at least 30 sec each 15 min;

Number and channel specifications:

- minimum 2, up to 4 channels, installed in at least two stand-alone cabinets,
- each channel can be operated separately in the master-slave configuration,
- all channels can run in parallel,



- all channels have a sinusoidal regenerative discharge function back into the AC supply network;

Channel DC power output:

- at least 60 kW continuous power,
- short time overload of 25 % with switch-on time at least 30 sec each 15 min;

Channel DC voltage range:

- at least 50-600 Vdc in 2Q mode, respectively. ± 600 Vdc in 4Q mode,
- there may be more switchable ranges;

Channel DC current range:

- at least 2 user selectable current ranges:
 1. channel full DC current range:
 - at least ± 300 Adc continuous from at least 50 Vdc to channel power limitation,
 - short time overload of 25 % with switch-on time at least 30 sec each 15 min;
 2. Output current ripple $\leq 1\%$ rms FS (resistive load);
- 2. Second range with a lower output current ripple:
 - from at least ± 40 Adc up to ± 100 Adc continuous from at least 50 Vdc,
 - output current ripple $\leq 1\%$ rms FS (resistive load);

Channel DC measurement accuracy:

- at least 2 user selectable voltage ranges:
 1. channel full DC voltage range with basic accuracy:
 - measurement accuracy of at least $\pm 0.1\%$ FS,
 - resolution of current measurement at least ± 30 mA (BT), ± 200 mA (BE),
 - resolution of measured voltage at least ± 20 mV;
 2. Second range with higher measurement accuracy:
 - from at least ± 100 Vdc up to ± 150 Vdc,
 - measurement accuracy of at least $\pm 0.1\%$ FS;

Data acquisition rate / data recording:

- data acquisition rate at least 10 ms;

Safety / protection of the device:

- short-circuit output protection,
- reverse polarity output protection,
- overload output protection,
- overvoltage output protection,
- emergency stop button to switch off all channels of the device;

Data connection / communication buses:

- TCP/IP Ethernet, CAN bus, RS-232;

Connection of the device to the power supply network:

- 3x230 / 400 Vac, 50 Hz with moving lead,
- device is galvanically isolated from the power supply network,
- maximal inrush current for the whole device is ≤ 600 Aac,
- device power factor $\geq 0,95 \cos \phi$ at rated power,
- device efficiency $> 90\%$ at rated power;

Device cabinets technical parameters:

- cabinets on castors,
- cabinet height with castors ≤ 1995 mm, width ≤ 1200 mm, depth ≤ 900 mm;



Technical specification and features of SW:

- software provides graphical user interface, easy data analysis, automated generation of measurement reports with output to .pdf or Microsoft Excel;

Battery emulator function (BE):

- multi-channel battery pack simulation,
- battery pack charge / discharge simulation,
- battery charge/discharge curve setting,
- total battery capacity with initial capacity setting,
- battery pack DCIR simulation,
- use as a CC/CV power source / sink with regenerative function;

Battery tester functions (BT):

- multi-channel battery pack testing,
- charge mode: CC, CV, CP, CC-CV, waveform power / current, DCIR,
- discharge mode: CC, CV, CP, CR, CP-CV, waveform power / current, DCIR,
- waveform generator with time interval at least: 10ms-999s, and at least 700 000 data points with data import from .csv, .txt,
- advanced programming function of test recipes: >999 steps, loops, cycle in cycle function, subroutines and jumps,
- life cycle testing;

Device accessories:

- ground fault indicator (Insulation monitoring) of the DC output to earth (PE) for all channels / cabinets with program and visual fault signal indicator,
- wiring for control interconnection of all channels with a length of min. 10 m,
- personal or industrial computer with at least 24" LCD monitor
- integration of user-programmable CAN bus communication with BMS,
- device can be controlled via CAN bus by an external control system;

Future scalability of the device:

- possibility to add additional channels to the device to at least 320 kW / 1200 A_{dc} total continuous power / output current,
- possibility to connect an external data logger for analog data (voltage, temperature sense) and control of digital I/O,
- possibility of integration of the temperature chamber control routine via RS-232, Ethernet;

Other requirements:

- Warranty: minimum 24 months
- transport to the Purchaser's seat
- installation,
- commissioning;
- verification of defect-free functioning of the equipment;
- delivery must include min. 12-hours training on the equipment operation at the at Buyer's headquarters for min. 5 employees and divided at least into two working days; training will be conducted in Czech or English;
- equipment documentation (1 set printed, 1 set on CD-ROM) containing among other things:
- user manual in English or Czech language, declaration of conformity;



- provision of warranty service; prescribed periodic service inspections during the warranty period free of charge; provision of post-warranty service for at least 5 years from the expiry of the warranty period;

CPV code: 38552000-9

2 Estimated value

Maximum allowed value of the public contract (excluding VAT): 5 500 000,- CZK

The offer exceeding the maximum allowed value of the public contract do not meet the award criteria and the contracting authority will exclude a participant from a procurement procedure according to § 48 (2) a) of ZZVZ.

3 The method of defining the tender price

The participant is obliged to include the tender price in the tender and in the following structure:

- price excluding VAT
- VAT (optional),
- price including VAT (optional).

Tender price must include **all costs of performance of the public contract** and **must be set as maximal and must not be exceeded**.

Tender price must also be determined with taking into account the development of prices in the relevant market, including the development of the exchange rate of the Czech currency to the foreign currencies until the fulfillment of the subject of the public contract.

If the tender price should be in a foreign currency (i. e. other than CZK) the tender price shall be converted in CZK for the purposes of tender assessment and evaluation. The contracting authority will use the exchange rate determined by the Czech National Bank (Česká národní banka) as of the commencement date of the public contract, i.e. on the date of sending the contract notice to the Tenders Electronic Daily and the Official Journal of the European Union. This date is shown on the E-ZAK the contracting authority's profile.

4 Time limit and address for receipt of tenders

Time limit for receipt of tenders:

A tender can be submitted until 30th April 2019 to 10:00

Tender submitted (delivered) after this time limit shall not be considered as submitted and it shall not be taken into consideration during the procurement procedure.

Tenders must be submitted:

In electronic form: via electronic tool E-ZAK (website <https://zakazky.tul.cz/>).

5 Time and place of performance of the public contract

Delivery term: 126 days from the date on which the Contract enters into force.

Place of delivery: Technická univerzita v Liberci/Technical university of Liberec, CXI, Budova „L“/Building „L“, Bendlova 1409/7, 461 17 Liberec, Czech Republic.



6 Qualification criteria and evidence of their fulfillment

In accordance with the ZZVZ, the contracting authority shall establish the following qualification requirements:

- a) Basic qualification,
- b) Professional qualification.

A. Basic qualification

(1) An economic operator shall not be qualified if it

- a) was convicted by final judgement in the country of its registered seat of a crime specified in Annex No. 3 to ZZVZ or another similar crime pursuant to the law of the country of its registered office in the past five years preceding the commencement of the procurement procedure; expunged convictions are disregarded,
- b) has outstanding tax arrears registered in tax records in the Czech Republic or in the country of its registered office,
- c) has outstanding arrears in respect of payments and penalties of public health insurance in the Czech Republic or in the country of its registered office,
- d) has outstanding arrears in respect of payments and penalties of social security contributions and contribution to the national employment policy in the Czech Republic or in the country of its registered office,
- e) is in liquidation, has been declared insolvent, in respect of whom the receivership has been imposed under another legal regulation or it is in a similar situation pursuant to the law of the country of its registered office.

(2) If the economic operator is a legal person, both this legal person and every member of its governing body shall meet the condition specified in paragraph a) of subsection (1). Where a legal person is a member of the governing body of the economic operator, the condition specified in paragraph a) of subsection (1) shall be met by

- a) this legal person,
- b) every member of the governing body of this legal person, and
- c) the person representing this legal person in the governing body of the economic operator.

(3) If a participant in the procurement procedure is a branch of a business of

- a) a foreign legal person, the condition specified in paragraph a) of subsection (1) shall be met by this legal person as well as the head of the branch,
- b) a Czech legal person, the condition specified in paragraph a) of subsection (1) shall be met by the persons referred to in subsection (2) as well as the head of the branch.

The economic operator shall prove that it fulfils the basic qualification requirements in relation to the Czech Republic by submitting

- a) a copy of an entry in the Criminal Records in respect of Section 74 (1) a) ZZVZ,
- b) a confirmation from a relevant tax office in respect of Section 74 (1) b) ZZVZ,
- c) a written affirmation regarding excise duty in respect of Section 74 (1) b) ZZVZ,
- d) a written affirmation in respect of Section 74 (1) c) ZZVZ,
- e) a confirmation from a relevant district social security administration in respect of Section 74 (1) d) ZZVZ,
- f) a copy of an entry in the Commercial Register, or a written affirmation in the event that the economic operator is not incorporated in the Commercial Register, in respect of Section 74 (1) e) ZZVZ.



B. Professional qualification

The economic operator shall prove its professional qualification in relation to the Czech Republic by submitting a copy of an entry in the Commercial Register or other similar records provided that registration in such records is required pursuant to another legal regulation.

C. Summary

According to the above mentioned conditions, the participant must prove the fulfillment of qualification requirements either with an Affirmation (Annex P1) which replaces the qualification documents or the following documents (**in relation to Czech Republic**):

- a) a copy of an entry in the Criminal Records in respect of Section 74 (1) a) ZZVZ,
- b) a confirmation from a relevant tax office in respect of Section 74 (1) b) ZZVZ ((issued under the law of the country in which the economic operator has its seat and issued by),
- c) a written affirmation regarding excise duty in respect of Section 74 (1) b) ZZVZ,
- d) a written affirmation in respect of Section 74 (1) c) ZZVZ,
- e) a confirmation from a relevant regional social security administration in respect of Section 74 (1) d) ZZVZ,
- f) a copy of an entry in the Commercial Register, or a written affirmation in the event that the economic operator is not incorporated in the Commercial Register, in respect of Section 74 (1) e) ZZVZ,
- g) a copy of an entry in the **domestic or Czech** Commercial Register or other similar records provided that registration in such records is required pursuant to another legal regulation , in respect of Section 77 (1) ZZVZ,
- h) or eventually other required documents if the economic operators participates in the procurement procedure jointly or proves qualification through other persons, if it is a foreign participant, if it is registered in the List of Approved Economic Operators or if it has a certificate from the System of Certified Economic Operators.

D. Common provisions governing qualification

I. The List of Approved Economic Operators and the System of Certified Economic Operators

Participants registered in the List of Approved Economic operators (Section 226 and following of ZZVZ) can prove the fulfillment of qualification requirements with the extract from the List provided that on the last day on which the basic qualification or professional qualification is to be proved, the extract is not older than three months.

Participants who were issued certificates under the System of Certified Economic Operators (Section 233 and following of ZZVZ) can prove the fulfillment of qualification requirements or their certain part by submitting a valid certificate to the extent recorded in the certificate.

II. Proving of qualification obtained abroad

Where qualification has been obtained abroad, it shall be proved by documents issued under the law of the country in which it has been obtained. This document shall be submitted along with its translation into Czech language. A document in Slovak language and a certificate of education in Latin language shall be submitted without a translation. Where pursuant to the relevant legal order the required document is not issued, it may be substituted by an affirmation.

This affirmation must declare the absence of the required document in accordance with the relevant legislation and its own declaration of fulfillment of the requirements that would otherwise have been proved by the relevant document (e.g. a declaration of absence of a criminal record Register and the fact that the economic operator was not punished).

III. Qualification in the case of joint participation of economic operators



In the case of joint participation of economic operators, the basic and professional qualifications pursuant to Section 77 (1) ZZVZ (a copy of an entry in the Commercial Register) shall be proved by each economic operator separately.

E. The Validity and the form of the qualification documents

The documents demonstrating basic qualification under Section 74 ZZVZ and professional qualification under Section 77 (1) ZZVZ shall demonstrate the fulfilment of the required qualification criterion not later than three months before the date of the commencement of the procurement procedure. The economic operator shall submit copies of the relevant documents.

Before the contract is concluded, the contracting authority shall always request the selected economic operator **to submit the originals or certified copies of the qualification documents**, unless they have already been submitted during the procurement procedure.

7 Award period

The contracting authority does not set an **award period**.

8 Other requirements for the tender

1. Electronic form of the tender

Where an economic operator submits a tender via electronic tool E-ZAK the rules set out in Section 211 of the ZZVZ must be observed.

2. Structure of tender

- A. Affirmation of the fulfillment of the basic and professional qualification criteria (annex P1)
 - signed by authorized person/ or the documents demonstrating fulfillment of basic qualification under Section 74 ZZVZ and professional qualification under Section 77 ZZVZ,
- B. Completed contract proposal (annex P2)
- C. Description of the subject of the public contract (technical specification demonstrating compliance with the requirements of the contracting authority) including the tender price.

The economic operator may submit in the procurement procedure only one tender. The economic operator which has submitted a tender in the procurement procedure shall not be at the same time a person through which another economic operator proves qualification in the same procurement procedure. The contracting authority shall exclude a participant which has submitted several tenders either separately or together with other economic operators or a participant which has submitted a tender and is at the same time a person through which another economic operator proves qualification in the same procurement procedure.

9 Information about variants

Variants will be not accepted.

10 Tender language

The tender must be submitted **either in Czech or in English**.

Annex P1 - Affirmation of the fulfillment of the qualification is bilingual, (Czech and English), Annex P2 – Contract is bilingual (Czech and English), contractor has to fill in the text boxes in both languages.



11 Business and payment conditions

Business conditions:

Business conditions are included in contract proposal (annex P2).

Payment conditions:

Payment conditions are included in contract proposal (annex P2, Art. II. 3.).

The participant will fill in the text boxes in accordance with his tender and shall attach to the tender.
The participant is not entitled to change any of the contract's provisions to the detriment of the contracting authority.

12 Technical specification

Technical specification means requirements for the properties of the subject of the public contract. The technical specification is listed above in the specification of the subject of the public contract.

13 Evaluation criteria

Tenders will be evaluated on the basis of their economic advantageousness. The contracting authority shall evaluate the economic advantageousness of tenders on the basis price-quality ratio.

Evaluation criteria and their weighting:

1) Tender price 90 %

The best tender will be the tender with lowest tender price. The calculation of the points that will be awarded to the evaluated tender will be done according to the formula:

$$\frac{\text{lowest tender price in CZK excl. VAT}}{\text{rated tender price in CZK excl. VAT}} \times 90$$

2) Warranty period 10 %

The participant indicate the duration of the warranty period (minimum 24 months) to the contract, which is part of his tender. The contracting authority shall allocate the points for the duration of the warranty period as follows:

24 months	0 points
36 months	3 points
48 and more months	5 points

The calculation of the points that will be awarded to the evaluated tender will be done according to the formula:

$$\frac{\text{Assigned points for Warranty Period}}{5} \times 10$$

3. Result of evaluation

The percentage points obtained for the tender price and the warranty period, rounded to the first decimal place, will then be summed up and then the tenders will be sorted according to the number of points earned. The best tender will be the tender with highest point score.



In order to conclude a contract, the contracting authority will select the participant whose tender has been evaluated as the most economically advantageous.

14 Explanation of tender documentation

Requests for an explanation of tender documentation must be received in writing via electronic tool E-ZAK (<https://zakazky.tul.cz/>) or email zakazky@tul.cz. The request must be received by the contracting authority no later than **8 labour days** before the deadline for submission of tenders. If the contracting authority provides an explanation upon a request that has not been delivered in time, it is not obliged to observe the time limits under subsection 98 (1) ZZVZ.

The contracting authority may explain the tender documentation without an economic operator's request.

15 Opening of tenders

Electronic tenders will be opened in accordance with Section 109 ZZVZ.

16 Other conditions and reserved rights

- The contracting authority is entitled to set aside the award procedure before signing the contract in cases defined in Section 127 ZZVZ.
- Costs of drawing-up a tender will not be reimbursed by the contracting authority. Submitted tenders will not be returned.
- The contract will be published in the Register of contracts if the conditions for publishing in accordance with Act no. 340/2015 Coll. (on Register of contracts) are met and eventually on the contracting authority's profile in accordance with ZZVZ.
- The contracting authority points out that the contracting authority must exclude from the procurement procedure a participant that is a joint-stock company or has a legal form similar to a joint-stock company and has issued other than exclusively booked shares according to § 48 of ZZVZ. If the selected economic operator has its registered office abroad and is a joint-stock company or has a legal form similar to a joint-stock company, the contracting authority shall require it to submit an affirmation in writing within a reasonable time limit showing which persons are holders of shares whose aggregate nominal value exceeds 10 % of the registered capital of the participant, and indicating the source on which the information on the amount of the share of shareholders is based; this request shall be considered a request under § 46 of ZZVZ. Abovementioned does not apply to a participant that is a joint-stock company whose shares in the aggregate nominal value of 100 % are owned by the state (i.e. Czech Republic), a municipality or a region.

In Liberec 28/3/2019

On behalf of the contracting authority: RNDr. Ivana Večeřová

Annex P1 - Affirmation on basic and professional qualification criteria

Annex P2 – Contract proposal



EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání



MINISTERSTVO ŠKOLSTVÍ,
MLÁDEŽE A TĚLOVÝCHOVY