



Supported by a grant from Norway through the Norwegian Financial Mechanism 2014-2021, in the frame of the Programme "Business Development and Innovation Croatia"



INVITATION TO TENDER

PROCEDURE FOR NON-OBLIGATORS OF THE PUBLIC PROCUREMENT LAW

PROCUREMENT NUMBER: 2020/563117-02A3

NAME OF THE PROCUREMENT: **Delivery of VFD inverter drive set for permanent magnet AC motor (PMAC)**

NAME OF THE PROJECT: **BlueDrive - hybrid power split marine propulsion**

NAME OF THE PROGRAMME: **Business Development and Innovation Croatia**

Zagreb, June 2022

1. GENERAL INFORMATION

1.1. Information about Contracting Authority:

Contracting Authority: Novamina centar inovativnih tehnologija d.o.o.

Address: Zagrebačka cesta 145 A, 10 000 Zagreb, Hrvatska

Identification / Registration number: 65897449812

Phone number: +385 1 34 99 854

E - mail: novamina@novamina.hr

URL: <https://www.novamina.hr>

The Contracting Authority applies the procurement procedure with mandatory publication of Invitation to tender on official web page of company Novamina centar inovativnih tehnologija d.o.o., <https://www.novamina.hr> and electronic copy national newspaper <https://www.poslovni.hr/>.

Procurement is carried out on the basis Procurement Guidelines, based on the Standard Terms and Condition on EEA and Norway Grants from Innovation Norway.

1.2. Contact person:

Name and surname: Davor Linarić

Phone number: +385 1 34 99 854

E -mail Address: novamina@novamina.hr

Communication and any other exchange of information between the Contracting Authority and the tenderer shall be carried out electronically via e-mail address of above mentioned contact person in the English language and the Latin script.

1.3. Explanations and modifications of Invitation to tender

Tenderer may request additional information, clarification or modification related to the Invitation to tender conditions.

The written request of interested economic entities shall be submitted by e-mail to the e-mail address: novamina@novamina.hr

The request is submitted on time if it is delivered to the Contracting Authority at latest during the fourth (4.) calendar day prior the deadline for the submission of tenders.

Provided that it has been requested on time, the response shall be delivered at latest during the third (3.) calendar day before the deadline for the submission of tenders.

If during the publication there is a need to modification of Invitation to tender, it will be transparently and at the same time published on the same website where Invitation to tender was published.

If there is a need to modificate the Invitation to tender during the last 5 (five) days before the expiration of the initial deadline for submission of tenders, the deadline for submission of tenders will be extended by at least 5 (five) days from the date of publication of the modification.

1.4. Website/source where additional information/documentation is available:

<https://www.novamina.hr>

<https://www.poslovnih.hr/>

1.5. List of economic subjects with which the Contracting Authority is in conflict of interest:

1. EMERGO društvo s ograničenom odgovornošću za projektiranje u likvidaciji, Il Vrandučka 4, Zagreb

Members of the Procurement Committee, persons authorized to represent the Contracting Authority and the person appointed to conduct the procurement procedure shall act in accordance with the principles of avoiding conflicts of interest and shall be excluded from the procurement procedure in the event of a conflict of interest. The contracting authority shall take appropriate measures to effectively identify, prevent and eliminate conflicts of interest in relation to the procurement procedure, in order to avoid distortions of competition and to ensure equal treatment of all economic operators. Conflicts of interest between the Contracting Authority and an economic operator include situations where the representatives of the Contracting Authority or the service provider acting on behalf of the Contracting Authority, who are involved in the procurement procedure or may influence the outcome of that procedure, have, directly or indirectly, financially, economically or what other personal interest that could be considered detrimental to their impartiality and independence.

1.6. Estimated value of procurement

The estimated value of the purchase without VAT is 16.500.00 EUR

1.7. Subject of the procurement

Novamina centar inovativnih tehnologija d.o.o. has started the implementation of the project " BlueDrive - hybrid power split marine propulsion ". The project is supported by a grant from Norway through the Norwegian Financial Mechanism 2014-2021, in the frame of the Programme "Business Development and Innovation Croatia".

The subject of procurement is the delivery of one permanent VFD inverter drive set for permanent magnet AC motor (PMAC)

By submitting the tender, it is considered that the Bidder is fully informed with the documentation of the Invitation, which includes all Annexes.

1.8. Announcemen of the procurement procedure

The procurement procedure begins on the day of publication of the Invitation to tender on the websites:

<https://www.novamina.hr>

<https://www.poslovni.hr/>

2. INFORMATION ABOUT THE SUBJECT OF PROCUREMENT

2.1 Place of delivery

The place of delivery of the entire subject of this procurement is the location at the address: Zagrebačka cesta 145 A, 10 000 Zagreb.

The subject of procurement must be delivered in accordance with the terms of delivery DAP Zagreb, Croatia, according to Incoterms 2020.

2.2 Delivery period of the subject of the procurement

The delivery deadline is no later than 140 calendar days, from the date of entry into force of the Contract.

The Contract shall enter into force on the date of signature of the last Contracting Party.

The subject of procurement is considered delivered when the delivery of the total subject of procurement

to the address of the Client has been made and when the Handover declaration is signed.

Duration of the Contract may be changed only with the written consent of both parties.

2.3. Technical specifications of the subject of procurement

The subject of procurement is delivery of one VFD inverter drive set for permanent magnet AC motor (PMAC), as described below

Item	Characteristics	Specification required
1.	Unit used to transfer power between the AC input and intermediate DC circuit	Active Front End unit (AFE)
	AC input voltage	400...500VAC ($\pm 10\%$)
	DC output voltage	500...800VDC
	Input frequency	50...60Hz ($\pm 10\%$)
	Supply network	TN, TT, IT
	Short circuit current	<100kA
	Max output voltage	1.35 x input voltage
	Continuous output current	min. 460A
	High overloadability current (at + 50% load)	min 300A
	Internal brake chopper	Yes
	Switching frequency:	1..12kHz
	Ambient operating temperature min. range:	-10°C (no frost)...+50°C
	Ambient relative humidity min. range:	min 5-95% (non condensing)
	Ambient altitude min range	0...3000m
	Vibration resistance	in accordance to EN 50178/EN 60068-2-6
	Shock resistance	in accordance to EN 50178/EN 60068-2-27
	Enclosure protection	IP00
	EMC immunity	in accordance to EN 61800-3
	Prevention of torque on motor shaft	Yes
	Control connections:	min. 1 x analogue input current 0(4)-20mA min. 1 x analogue output 0(4)-20mA min. 4 x digital input 24VDC ($\pm 10\%$) min. 1 x digital output change-over relay min 2 spare slots for additional boards
	Fiber connection board	Yes
	Protections:	Overvoltage trip limit, Undervoltage trip limit, Earth fault protection, Input phase monitoring, Output phase monitoring, Overtemperature protection, Overcurrent protection, Overheat protection, Short-circuit protection of +24V and +10V
	Cooling	Liquid-cooled module with aluminium heatsink (allowed cooling agents: drinking water and water-glycol mixture)
	User interface:	Alphanumeric control keypad
	Special requirements	Approvals and certification form marine applications

2.	Unit used to transfer power between AC input and intermediate DC circuit and AC output (to motor)	Inverter unit
	DC input voltage	500...800VDC
	Supply network	TN, TT, IT
	Short circuit current	<100Ka
	Output voltage range	0...Input voltage
	Continuous output current	min. 460A
	High overloadability current (at + 50% load)	min 300A
	Output frequency	= 0...320Hz
	Control methods	Frequency control/ Open Loop Sensorless Vector Control/Closed Loop Vector Control
	Internal brake chopper	Yes
	Switching frequency	1..12kHz
	Ambient operating temperature	min. range: -10°C (no frost)...'+50°C
	Ambient relative humidity min. range	min 5-95% (non condensing)
	Ambient altitude min range	0...3000m
	Vibration resistance	in accordance to EN 50178/EN 60068-2-6
	Shock resistance	in accordance to EN 50178/EN 60068-2-27
	Enclosure protection	IP00
	EMC immunity	in accordance to EN 61800-3
	Prevention of torque on motor shaft	Yes
	Control connections:	<ul style="list-style-type: none"> - min. 1 x analogue input current 0(4)-20Ma - min. 1 x analogue output 0(4)-20Ma - min. 4 x digital input 24VDC (±10%) - min. 1 x digital output change-over relay - min 2 spare slots for additional boards
	Fiber connection board	Yes
	Protections:	Overvoltage trip limit, Undervoltage trip limit, Earth fault protection, Input phase monitoring, Output phase monitoring, Overtemperature protection, Overcurrent protection, Overheat protection, Short-circuit protection of +24V and +10V
	Cooling	Liquid-cooled module with aluminium heatsink (allowed cooling agents: drinking water and water-glycol mixture)Yes
	User interface:	Alphanumeric control keypad
	Special requirements	Approvals and certification form marine applications
3.	LCL filter for AFE unit	Liquid Cooled
	AC input voltage	400...500VAC (±10%)
	Input frequency	50...60Hz (±10%)
	Supply network	TN, TT, IT
	Short circuit current	<100Ka
	Continuous output current	min. 460A
	Switching frequency	3,6kHz
	Ambient operating temperature	min. range: -10°C (no frost)...'+50°C
	Ambient relative humidity	min. range: min 5-95% (non condensing)
	Enclosure protection	IP00
	Protections	Overtemperature protection,
	Cooling	Liquid-cooled module with aluminium heatsink (allowed cooling agents: drinking water and water-glycol mixture)

	Special requirements	Approvals and certification form marine applications
4.	Water cooling station	Heavy duty, open frame, single pump, bypass valve, heat exchanger and control pane
	AC input voltage	380...480VAC (±10%)
	Input frequency	50Hz (±10%)
	Enclosure open frame	Yes
	Min flow rate	30 l/min
	Cooling power at ΔT 5°C	≥ 40kW
	Redundant pumps	No
	Heat exchanger design	Water-to-water heat exchanger with stainless steel flow channels and copper brazing
	Water temperature control	Yes
	Min. process measurements:	coolant temperature, coolant pressure, coolant tank level, coolant flow, leakage detector sensor
	Control system	PLC control + pump frequency converters
	Bypass valve	PLC-controlled 3-way valve

Detailed technical specifications can be found in Annex 4 of this Invitation to tender. The requirements defined by the Technical Specifications represent minimum technical characteristics that the offered goods must meet and must not be changed by the tenderer. For all items listed in the technical specifications stating the brand, norm or standards, patent, type or an origin, tenderer can offer "equally valuable" for all defined items.

In the process of reviewing the offered technical specifications (Annex 4), the Contracting Authority may invite Tenderers to remove errors, shortcomings or ambiguities in which the errors, shortcomings or ambiguities in which may be removed, provided that clarification or supplementation in relation to the technical specifications must not result in a modification of the tender.

Non-compliance of the offered equipment with the technical and other requirements in the technical description or the inability of the Tenderer to prove it in an appropriate manner, may result in the rejection of the bid.

3. EXCLUSION CRITERIA

3.1. The Contracting Authority shall exclude the tenderer from participation in the procurement procedure:

- if the tenderer or person authorised under the law to represent tenderer (a person who is a member of an administrative, management or supervisory body or has the power to represent, make decisions or supervise that economic operator) has been convicted by final judgement for any of the following criminal offenses or for appropriate criminal offenses according to the regulations of the state of the tenderer's seat or the state of which the person authorised by law to represent the tenderer is a citizen: participation in a criminal organisation, criminal association, committing a criminal offense as a member of a criminal association, associating for the commission of criminal offenses, terrorism or criminal offenses related to

terrorist activities, money laundering or terrorist financing, child labour or other forms of trafficking in human beings, corruption, accepting a bribe in business activities, giving a bribe in business activities, abuse in public procurement procedure, abuse of position and authority, unlawful favouritism, accepting a bribe, giving a bribe, trading in influence, giving a bribe for trading in influence, abuse of position and authority, abuse in performing governmental duty, illegal intercession, fraud, business fraud, tax or customs evasion, subsidy fraud.

- if tenderer has not fulfilled the obligation to pay salaries to employees, pay contributions to finance compulsory insurance (especially health or pension insurance) or pay taxes in accordance with the regulations of the Republic of Croatia as the state in which the tenderer is established or in accordance with the regulations of the state of establishment (if they are not established in Republic of Croatia), unless, in accordance with special rules, a deferral of payment of the stated obligations has been granted and if the amount of due and unpaid obligations do not exceed 200 HRK.

- if tenderer has faulty stated, presented or provided false information related to conditions the Contracting Authority has defined as necessary.

3.2. For the purpose of proving it is not in the situations described under point 3.1. of this Invitation to tender, the tenderer shall sign and submit the statement of the person authorised under the law to represent tenderer, which makes Annex 3 of Invitation to tender – Statement of absence of exclusion criteria.

3.3. In the case of a group of tenderers or candidates, the circumstances in connection with exclusion criteria shall be established for all members of the group separately and required statement shall be signed by every member of Consortium.

3.4. In the case of subcontractors, the circumstances in connection with exclusion criteria shall be established for all subcontractors separately and required statement shall be signed by every subcontractor. If any of circumstances of exclusion criteria exists at subcontractor, the Contracting Authority shall require replacement of that subcontractor in the examination and evaluation process.

3.5. Contracting Authority may at any time during the procurement procedure and before signing the Contract require from tenderer to submit relevant updated supporting documents that are issued or can be accessed through the competent authorities or public registers and which confirm that the tenderer is not in any of situations described in point 3.1. In the case of group of tenderers (Consortium)/subcontractors, Contracting Authority can request each member of Consortium/subcontractor separately to prove absence of exclusion criteria.

3.6. Tenderer may deliver documents in original, certified or uncertified copy.

3.7. Documents related to the exclusion criteria must be written in Croatian or English and the Latin script.

If the document is written in a language other than Croatian or English, the translation in Croatian or English must be enclosed.

4. TENDER AWARD CRITERIA

The lowest price criterion will be used in the selection of the tender.

5. TENDER INFORMATIONS

5.1. Content of the tender

The tender consists of the following documents:

- filled Bid sheet (Annex 1 of Invitation to tender). Bid sheet need to be signed and stamped;
- filled Bill of Quantities (Annex 2 of Invitation to tender). Bill of Quantities need to be signed and stamped;
- filled Statement of absence of exclusion criteria (Annex 3 of Invitation to tender);
- filled Technical specifications (Annex 4 of Invitation to tender).

5.2. Making of tender

The tender must be made in paper form, printed or written in indelible ink (handwritten or printed on a printer), and submitted as a scan of the original tender made in paper form by e-mail.

When submitting the tender, a tenderer must comply with all instructions and specifications contained in this Invitation to tender. Tenderer may not change or complement the text of this Invitation to tender. No costs incurred by the tenderer in preparing and submitting the tender are reimbursable. All such costs will be borne by the tenderer.

5.3. Language and letter of tender

Tender must be prepared in English and the Latin script. In the case of delivery of documents in another language, the translation in English must be enclosed.

5.4. Determining tender price

Tender price must be stated in HRK or EUR.

Tender price is fixed and may not be changed in the period of Contract duration. Tender price without value added tax (VAT) must include all costs and discounts.

If the tender price is expressed in HRK, tender price will be converted to EUR using the central rate of

Croatian National Bank valid on the day on which the Invitation to tender has been published.

The tenderer is obliged to provide i.e. insert in the Bill of Quantities (Annex 1 of Invitation to tender) the unit price for every single item and the total price VAT excluded (rounded to two decimal places).

The tenderer is obliged to insert into the Bid sheet (Annex 1 of Invitation to tender) the same total price VAT excluded previously inserted in the Bill of Quantities, then the amount of the value added tax (VAT) and finally the total price VAT included, rounded to two decimal places.

If the tender price, VAT excluded, from the Bill of Quantities (Annex 2.) is not equal to the tender price, VAT excluded, from the Bid sheet (Annex 1.), the tender price from the Bill of Quantities (Annex 2.) is valid.

If the tenderer is registered outside of the Republic of Croatia or is not subject to VAT, in the boxes intended for the insertion of the tender price with VAT included, the tenderer should insert the equivalent number as indicated in the boxes for the tender price without VAT, whilst the place intended for inserting VAT amount remains empty.

In the procedure of tenders evaluation, the Contracting Authority will compare price without value added tax (VAT excluded).

It is not allowed to offer versions and / or alternative offers.

5.5. Tender validity period

Validity period shall be at least 30 days from the deadline for submission of tenders. Contracting Authority will reject tender whose validity is shorter than required.

Tender validity period shall be entered in the Bid sheet (Annex I of Invitation to tender).

If the tender validity period expires during the procurement procedure, the Contracting Authority will request an extension of the tender validity period. The Tenderer is obliged to submit a confirmation of the extension of the validity of the bid within 5 (five) days, counting from the day of sending the request of the Contracting Authority. If the Tenderer agrees with the request for extension of the bid validity period, he may not change the bid. The Tenderer may reject the request for extension of the bid validity period. In that case, it will be considered that the Tenderer has withdrawn its tender.

6. SUBMISSION OF TENDERS

6.1. Submission of tenders (Tender submission address)

The tender must be delivered by e-mail, as a scan of the original bid, from the date of publication of the

Invitation to Tender until the deadline defined in item 6.2. of this Invitation to Tender.

E-mail address:

novamina@novamina.hr

6.2. Deadline for the submission of tenders (date and time for the submission of tenders)

Tender must be received by the Contracting Authority by June 20, 2022, 10:00 CET at the latest.

The tenders received after the deadline for submission of tenders will not be subject to tender evaluation.

7. EXAMINATION AND EVALUATION OF TENDERS

7.1. The Minutes of tenders opening and evaluation

The Contracting Authority (Evaluation Committee) after the deadline for tenders submission, opens and evaluates submitted tenders and draws up the Minutes.

In the tenders examination and evaluation process, the Contracting Authority will make:

- verification of the formal compliance;
- assessment of exclusion criteria existence;
- assessment of technical and material compliance;
- evaluation of tenders based on previously published award criteria.

b) The Contracting Authority shall exclude tenderer who did not comply with the conditions from the point 3. of this Invitation to tender.

c) to the results of tenders examination and evaluation process, The Contracting Authority shall reject:

- Tender that is not complete i.e. does not contain all prescribed mandatory elements set out in the point (article) 5.1. of this Invitation to tender;
- Tender that is not compliant with the Invitation to tender;
- Tender in which the price is not expressed (quoted) in absolute amount;
- Tender containing errors, defects or ambiguities if errors, defects or ambiguities are not removable;
- Tender in which by clarifying or supplementing in accordance with this Tender documentation, error, defect or ambiguity has not been removed;
- Tender which does not fulfill the mandatory technical specifications and according to this it does not fulfill requirements set out in the Invitation to tender;
- tender for which the tenderer has not accepted corrections of calculation errors in writing.

d) If the information or documentation that should have been provided by the economic operator have been incomplete or incorrect or appear to be such or if certain documents are missing, the Contracting

Authority may, respecting the principles of equal treatment and transparency, require from respective economic operators to supplement, clarify, complement or provide necessary information or documents in an appropriate period, not less than 5 days. This procedure must not lead to negotiations related to the tender award criteria and price.

8. MAKING A DECISION ON SELECTION OR ANNULMENT OF THE PROCUREMENT PROCEDURE

8.1. The adoption of the Award decision / Exclusion decision / Reject decision

Deadline for the adoption of the Award decision / Exclusion decision / Reject decision is 30 days from the date of deadline for submission of tenders.

The Contracting Authority publishes Award decision and total value of the selected tender on the website <https://www.novamina.hr>

Award decision contains at least:

- name and address of the selected tenderer;
- total value of the selected tender.

The contracting authority may cancel the procurement procedure if the price of the best tender is higher than the estimated value of the procurement, if during the procedure it is determined that the procurement documentation is defective and as such does not allow effective conclusion of the contract or if significant new circumstances arise.

9. OTHER PROVISIONS

9.1. Provisions concerning group of tenderers (Consortium)

Group of economic operators may submit joint tender, regardless of the legal nature of the links among them. The joint tenderers shall be jointly and severally liable.

In case of a group of tenderers, the Bid sheet shall contain the information for each member of the group of tenderers, as required in the Bid sheet, with obligatory reference to the member of the group of tenderers "Number 1" who will be called "Tenderer" and will be authorised to communicate with the Contracting Authority.

Exclusion criteria for members of Consortium shall be determined in accordance with article 3. of this Invitation to tender.

In the group tenderers offer, the part of Contract to be executed by the member of group (the subject, quantity, value and percentage) must be stated.

Contracting Authority shall make payments to each member of the group for the part of the Contract executed by the member, unless otherwise specified by the group of tenderers.

9.2. Provisions on subcontracting

Tenderers who intend to subcontract a part of the procurement Contract to one or more subcontractors shall specify in their tender the following data:

- a) name or company name, seat, Identification/Registration number (or national identification number according to the country of establishment of the economic operator, where applicable), IBAN (account number of the subcontractor),
- b) the subject - matter, quantity, subcontract value and percentage share of the Contract that will be subcontracted.

Subcontracting does not affect the responsibility of the tenderer for performance of the Contract.

Tenderer may during the performance of the procurement Contract require from the Contracting Authority; change of the subcontractor for that part of the procurement Contract that it had previously subcontracted; assuming the performance of the part of the procurement Contract that it had previously subcontracted and introducing one or more new subcontractors irrespective of whether it previously subcontracted a part of the procurement Contract or not.

Introduce new subcontractors, tenderer shall submit information about subcontractors from the point 10.2. a) and b) and the documents which prove that the new subcontractor fulfills all requirements from the point 3. of this Invitation to tender.

The written consent of the Contracting Authority is required for the change or introduction of a new subcontractor.

10. PROCUREMENT CONTRACT

After selection the best tender, the Contracting Authority awards the procurement Contract with selected tenderer. The Contract shall be in line with the conditions stipulated in the Invitation to tender and the chosen tender.

Modifications of the procurement Contract or the possibility of concluding an Annex to the Contract shall be possible in the event of unpredictable circumstances arising after the entry into force of the Contract and for which no Contracting Party is liable, if this modifications are necessary for proper performance of the Contract.

Delivery period can be extended only in force majeure cases, such as long term international or European supply chain interruptions, economic activities suspension in the country or similar circumstances.



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Contracted price and the nature of the Supply contract itself can not be a subject of modifications.

It is possible to arrange an advance payment.

The selected tenderer is obliged, within ten (10) days after signing the contract, to agree with the Contracting Authority the time and financial plan for the delivery of the subject of the procurement.

ANNEXES:

- Annex 1 – Bid sheet;
- Annex 2 – Bill of Quantities;
- Annex 3 – Statement of absence of exclusion criteria
- Annex 4 – Technical specifications.