SECTION - FORMS

*In this section, the Contracting Authority presents the forms it makes available for the submission of the Bid and the documents accompanying the Bid, in order to support the economic operators.*

[**FORM F1** - Offer Form 4](#_Toc189499712)

[**FORM F2**- PRICE CENTRALIZER 7](#_Toc189499713)

[**FORM F3** - EXECUTION SCHEDULE 9](#_Toc189499714)

[**FORM F4** - Technical Proposal Framework Form 10](#_Toc189499715)

[**FORM F5** - General power of attorney 111](#_Toc189499716)

[**FORM F6** - Declaration on compliance with national environmental regulations 112](#_Toc189499717)

[**FORM F7** - Declaration on compliance with regulations in the field of social and labour relations 113](#_Toc189499718)

[**FORM F8** - Statement containing information considered confidential 114](#_Toc189499719)

[**FORM F10** - Association Agreement Model 116](#_Toc189499720)

[**FORM F11** - Commitment regarding the technical and professional support of the bidder/group of economic operators 120](#_Toc189499721)

[**FORM F12** - Subcontracting agreement 122](#_Toc189499722)

[**FORM F14** - Model guarantee instrument/letter of bank guarantee of good performance/ letter of technical guarantee of good performance 124](#_Toc189499723)

[**FORM F15** - Service List Form 125](#_Toc189499724)

[**FORM F16** - FORM regarding the list of equipment, parts and materials offered 126](#_Toc189499725)

[**FORM F17** - FORM regarding the list of electricity consumers 127](#_Toc189499726)

[**FORM F18** - FORM on the list of process tools 128](#_Toc189499727)

[**FORM F19** - FORM for Valves and Drives 129](#_Toc189499728)

[**FORM F20** - TECHNICAL SHEET FORM (Model) 130](#_Toc189499729)

[**FORM F21** - GUARANTEED PARAMETERS 131](#_Toc189499730)

[**FORM F22** - GUARANTEED INDICATORS 132](#_Toc189499731)

[**FORM F23** - Manufacturer's Authorization Binding Declaration (model) 133](#_Toc189499732)

[**FORM F24** - Declaration regarding the technical warranty offered 135](#_Toc189499733)

[**FORM F25** - Agreement on the processing of personal data 136](#_Toc189499734)

[**FORM F26** - Declaration on the Thermal Efficiency of **Cogeneration plant with thermal engines** ηt [%] 137](#_Toc189499735)

[**FORM F27** - Global Return Statement Form **Cogeneration plant with thermal engines** ηg [%] 138](#_Toc189499736)

[**FORM F28** - Declaration on the Amount of GHG Emission of **Cogeneration plant with thermal engines** MC [tCO2eq/year] 139](#_Toc189499737)

[**FORM F29** - Oil Consumption Statement **Cogeneration plant with thermal engines** (U) litres/h 140](#_Toc189499738)

[**FORM F30** - Statement on the Cost of Maintenance 141](#_Toc189499739)

[FORM F31 - DECLARATION OF BENEFICIAL OWNERS 142](#_Toc189499740)

The financial proposal will include the following and must be presented in the following structure:

1.Se will submit - Bid Form – The price in the bid form represents the price offered for the performance of the contract according to the award documentation and will be expressed in lei without VAT. Only one price offer will be presented, no alternative offers are allowed.

2. The bidder will present the financial offer in the form of a price list for the main categories of products and services provided in the tender specifications, completing in this regard FORM 2 – PRICE CENTRALIZER.

3. The physical graph will also be presented in the format of FORM F3 - EXECUTION SCHEDULE.

4. When drawing up the financial proposal, the requirements required in the tender specifications and the annexes thereto shall be complied with.

5. Period of validity of the offer: **4 months** from the deadline set for the submission of the offer.

6. The prices must include all costs with materials, consumables, equipment, expenses, payroll plus tasks, general expenses, profit, income tax, etc. and any contributions for the supply of equipment and the performance of the services requested by the Award Documentation.

For the submission of the financial proposal, the legislation in force on the date of publication of the participation notice will be respected.

7. The price offered is an essential element of the financial proposal whose reality and legality will be verified by the evaluation committee. In this regard, the component prices offered in consideration of art. 137 paragraph 3 letter c of GD 395/2016 will be verified, which provides that an offer is non-compliant when "it contains prices that are not the result of free competition and that cannot be justified".

**FORM F1** - Offer Form

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

Date: *[insert day, month, year]*

Contract notice: *[insert contract notice number]*

Subject-matter of the contract: *[insert subject-matter of the contract in the contract notice]*

To: Contracting Authority *[insert name]*

After examining the Award Documentation, the undersigned, if our bid is established as a winner, we undertake to sign the Contract resulting from this procedure and to start, carry out and complete the activities specified in the Contract in accordance with the Award Documentation and our Technical and Financial Proposal.

In accordance with our Technical and Financial Proposal and based on the information provided by the Contracting Authority up to the time of submission of the Bid:

* We offer the total price of \_\_\_\_\_\_ lei *[insert the amount in numbers and letters],* without VAT, plus the VAT of \_\_\_\_\_\_ *[insert the amount in numbers and letters],*
* The price mentioned above is broken down in FORM 2 – PRICE CENTRALIZER which is Attached to the Offer Form.

We undertake that, in the event that our bid is determined to be a winner, we will commence supply upon receipt of the commencement order and terminate the supply in accordance with the execution schedule attached in FORM F3 - EXECUTION SCHEDULE, within ....................................................... (*period in letters and numbers*).

I, the undersigned, by signing this Offer, declare that:

* we have examined the content of the Award Documentation communicated up to the date of submission of the Bids for *[insert award procedure number]* and the responses to the requests for clarification published by the Contracting Authority representing the procurement documents communicated by the Contracting Authority in relation to the procedure to which we submit the Bid;
* we have carefully examined, understood and accepted through this Offer, the provisions of the public procurement legislation applicable to this procedure, as they were communicated through the procurement documents, in particular but not limited to art. 104 of Law no. 98/2016, Law no. 101/2016 and GD no. 395/2016;
* we have a complete understanding of the documents of the procurement communicated, we accept them in full, without any reservation or restriction, we understand and accept the requirements regarding the form, content, instructions, stipulations and conditions included in the contract notice and the procurement documents;
* After carefully examining the procurement documents and having a complete understanding of them, we declare ourselves satisfied with the quality, quantity and degree of detail of these documents;
* the procurement documents were sufficient and adequate for the preparation of an accurate Offer and our Offer was prepared taking all of this into account;
* I understand that I had the obligation to identify and signal to the Contracting Authority, during the preparation of the Offer, until the deadline for its submission, any omissions, inconsistencies in relation to and for the supply of equipment and services under the contract;
* we fully agree and accept the technical and commercial responsibility associated with the procurement documents and accept the same responsibility towards the Contracting Authority in respect of these documents as if we had prepared these documents;
* we have read, fully understood, accept and agree with the application of the performance indicators included in the Contract as a basis for issuing the ascertaining documents, completing the activities and obtaining the results.

We agree that our Offer will remain valid for a period of \_\_\_\_\_\_\_\_ *[insert number]* days from the date of submission of the Offers. We agree that it can be accepted at any time before the expiry of the mentioned period.

I, the undersigned, as the representative of the Bidder *[insert full name]* in this proceeding, declare that:

1. we have not made and will not make any attempt to mislead other economic operators in order to submit or not to submit an Offer with the aim of distorting competition;
2. we, together with the subcontractors and third party supporters, are not in any situation of conflict of interest, as described in Law no. 98/2016 and we undertake to immediately notify the Contracting Authority about the occurrence of such a situation both during the evaluation of the Bids and during the performance of the Contract;
3. we, together with the proposed subcontractors *[insert, if applicable, full name of subcontractors]* and whose resources have been used in the qualification process, understand that we must make available, if the Contracting Authority so requests, at the stage of evaluation of the submitted Bids, or at any time during the procedure, all supporting documents requested by the Contracting Authority;
4. we have read and fully understood the content of the contractual provisions of the Award Documentation, including but not limited to the content of the articles regarding the cases of unilateral termination in the contract and we expressly accept their content and their legal effects;
5. we understand that the Contracting Authority:

* is not obliged to continue this award procedure through direct negotiation and that it reserves the right to cancel the procedure at any time as a result of the fulfilment of the conditions set out in Articles 212 and 213 of Law no. 98/2016;
* is not obliged to accept the Offer with the lowest price or any other Offer it may receive;
* in no case will it be liable for any damages caused by the aforementioned situations and we guarantee that we will not hold the Contracting Authority liable in such a situation;

1. if our Offer is accepted, we undertake to ensure a performance guarantee of 10% of the price of the Contract;
2. Seeing the provisions of art. 57, para. (1), art. 217, para. (5) and para. (6) of Law no. 98/2016, art. 123, para. (1) of GD no. 395/2016 and art. 19, para. (1) and para. (3) of Law no. 101/2016 we specify that the parts/information in the Technical Proposal and the Financial Proposal presented below are confidential in order not to prejudice our legitimate interests in terms of trade secret and intellectual property right:

|  |  |
| --- | --- |
| Crt. No. | Reference in the Technical Proposal or Financial Proposal  *[insert page number, paragraph no. ... in paragraph no. ...]* |
| 1. | .... *[insert information]* |
| 2. | .... *[insert information]* |

Also, by virtue of art. 123 para. (1) of GD no. 395/2016, we specify that the reasons why the above-mentioned parts/information in the Technical Proposal and the Financial Proposal are confidential are the following:

|  |  |
| --- | --- |
| Crt. No. | The reasons why the above-mentioned parts/information in the Technical Proposal and the Financial Proposal are confidential |
| 1. | .... *[Give reason]* |
| 2. | .... *[Give reason]* |

We declare that we have become aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a person of those provided for in Article 175 or to a unit in which he carries out his activity in order to produce a legal consequence, for himself or for another, when, according to the law or circumstances, the statement made serves to produce that consequence, is punishable by imprisonment from 3 months to 2 years or a fine."

|  |  |
| --- | --- |
| Signature (extended electronic, based on a qualified certificate, issued by an accredited certification service provider under the law) of the Bidder's representative, | ...................................................................... |

**FORM F2** - PRICE CENTRALIZER

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

PRICE LIST

Related

**Cogeneration plant with thermal engines with a total electrical power of at least 27 MW and a total thermal power of at least 26.10 MW**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Crt. No. | Item description | Cannot. | U.M. | Unit price  Lei without VAT | Total Value  Lei without VAT |
| *0* | *1* | *2* | *3* | *4* | *5=4\*2* |
| **PRODUCTS** | | | | | |
| 1 | **Internal combustion engine powered by natural gas,** including**:**   * the related electric generator; * lubrication oil management system; * cooling water management system; * the automation panels related to the cogeneration plant with thermal engines; * systems for measuring heat, natural gas, water, steam and electricity; | 3 | Cpl |  |  |
| 2 | **Ancillary plants and systems:**   * the heat recovery system in the engine circuit, including the transfer heat exchanger and the flue gas heat recovery; * the emergency heat exhaust system from the motor circuit, including the emergency cooler; * the non-recoverable heat exhaust system in the engine, including the cooler; * compressed air system for starting; * air cooling ventilation system; * the exhaust gas system; * fire detection and signaling system; * Hazardous gas leak detection system; | 1 | Cpl |  |  |
| 3 | **Natural Gas Compressor** | 3 | Pcs |  |  |
| 4 | **Electrical installations and systems**, including electric motors and frequency converters, dedicated electrical panels for driving through or without frequency converters of electric motors, protection cabinets, excitation system and automatic voltage regulation, automatic synchronization to SEN, grid control code, generator protections, local electrical systems to ensure uninterruptible voltages of direct voltage and alternating voltage (UPS) | 1 | Cpl |  |  |
| 5 | **Automation installations**, including fully machined automation cabinets, central automation cabinets (marshaling, SCADA), servers, operating stations and engineering station, communication equipment, instrumentation, SCA automated driving system (DCS/PLC SCADA) with all software application programs and related licenses included | 1 | Cpl |  |  |
| **SERVICES** | | | | | |
| 6 | **Engineering services and elaboration of technical documentation** | - | - |  |  |
| 7 | **Design Services at FEED Level for Cogeneration Plant with Thermal Engines** |  |  |  |  |
| 8 | **Technical Support Services** | - | - |  |  |
| 9 | **Commissioning and commissioning services** | - | - |  |  |
| 10 | **Performance Test Services** | - | - |  |  |

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

*Note: The bidder will add in the PRODUCTS chapter the additional items offered, as identified in FORM F16 - FORM regarding the list of equipment, parts and materials offered.*

**FORM F3** - EXECUTION SCHEDULE

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

CONTRACT EXECUTION SCHEDULE

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Article No. Crt. | | Start date | Time  end | *Year:* | | *Year 1* | *Year 2* |  |
| *Moon:* | *1* | *... 12* | *1 ... 12* | *1* |
| Responsible |  |  |  |  |
| A DESIGN | |  |  |  | |  |  |  |
| B | SUPPLY | | | | | | | |
| C | INSTALLATION AND COMMISSIONING | | | | | | | |
| D | WARRANTY PERIOD | | | | | | | |

*Note:*

1. *The execution schedule is an indicative model. The bidder will add rows and columns corresponding to the plan proposed by the bidder.*
2. *The bidder must indicate in the chart the hierarchical presentation structure (phases, stages, activities, milestones, etc.) and the main implementation dates, in logical and chronological sequence, according to the requirements specified in the Tender Specifications and the Procurement Data Sheet.*
3. *The bidder will take into account all recognized public holidays in the planning of the provision of services.*
4. *The chart will be edited with the help of a specialized program for project management.*

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F4** - Technical Proposal Framework Form

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

**Technical Proposal Framework Form**

Date: *[DD/MM/YYYY]*

Contract notice: *[insert contract notice number]*

Subject-matter of the contract: *[insert subject-matter of the contract in the contract notice]*

The information submitted by the Bidders in this form is the basis for:

* evaluation of the Technical Proposal according to the methodology established by the Award Documentation in correlation with the requirements and specifications of the Specifications,

All the information requested below is a mandatory key element of the Technical Proposal.

The characteristics of the products offered, the activities undertaken by the bidder, the methodology for providing the requested services and achieving the associated deliverables as well as the contract fulfillment schedule are key components of the Technical Proposal. Bidders must submit the Technical Proposal as part of the Bid, together with the annexes requested by the Contracting Authority and any other annexes considered relevant by the Bidder for:

* demonstration of the fulfillment of all the requirements of the Award Documentation,
* highlighting the benefits it offers to the Contracting Authority.

All the information requested below is a key and mandatory component of the Technical Proposal and must be presented and described by the Bidder at an appropriate level of detail.

The submission of a Technical Proposal that does not include the information requested by the Contracting Authority in response to all requirements, may result in non-compliance of the Offer.

1. **General description of the technical solutions, equipment and systems offered**

In this section, the Bidder will present in summary the proposed technical solutions, equipment and systems offered in correspondence with the context and requirements of the Tender Specifications and will highlight the competitive advantages of its offer.

The bidder will present here the general concept of approaching the contract in the context of the interdependencies between the object of this procedure and the object of the other public procurement procedures that will contribute to the implementation of the project "*Flexible high-efficiency gas-fired cogeneration plant in the district heating sector of the Municipality of Râmnicu Vâlcea*".

The summary must not be used to additionally transmit information that is not found in the content of the Technical Proposal or to attribute to the information in the Technical Proposal a meaning other than that resulting from the inclusion of that information in the content of the Technical Proposal.

1. **Presentation of the compliance of the offer with the requirements of the Tender Specifications**

The bidder will fill in the CONFORMITY MATRIX table below the OFFER COMPLIANCE column with a detailed description of how the products and services offered meet each and every requirement in the REQUIREMENTS column.

The bidder will present in detail and conclusively how the offered products meet each related requirement and how the bidder undertakes to perform each requested activity. Simply copying the requirement is not considered proof of compliance and may be grounds for declaring the tender non-compliant.

In order to prove the conformity of the equipment offered with the technical, functional, quality, performance, efficiency and certification requirements, references will be made to relevant documents attached to the offer, issued by manufacturers or by competent laboratories and bodies. The mere declarative assumption by the bidder of these conformities without the presentation of the supporting documents will not be taken into account and may be a reason for declaring the bid as non-compliant.

COMPLIANCE MATRIX

|  |  |  |
| --- | --- | --- |
| No. | REQUIREMENTS | OFFER COMPLIANCE |
|  | The object of the procedure is **the provision of equipment and services for the construction of the cogeneration plant with thermal engines with a total electrical power of at least 27 MW and a total thermal power of at least 26.10 MW, with three identical units**  an integral part of the  The project *"High efficiency gas cogeneration plant, flexible, in the district heating sector of the Municipality of Râmnicu Vâlcea*" |  |
|  | Requested products:  **Cogeneration plant with thermal engines with a total electrical power of at least 27 MW and a total thermal power of at least 26.10 MW,** consisting of**:**   |  |  |  |  | | --- | --- | --- | --- | | Crt. No. | Item description | Cannot. | U.M. | | *0* | *1* | *2* | *3* | | 1 | **Internal combustion engine powered by natural gas,** including**:**   * the related electric generator; * lubrication oil management system; * cooling water management system; * the automation panels related to the cogeneration plant with thermal engines; * systems for measuring heat, natural gas, water, steam and electricity; | 3 | Cpl | | 2 | **Ancillary plants and systems:**   * the heat recovery system in the engine circuit, including the transfer heat exchanger and the flue gas heat recovery; * the emergency heat exhaust system from the motor circuit, including the emergency cooler; * the non-recoverable heat exhaust system in the engine, including the cooler; * compressed air system for starting; * air cooling ventilation system; * the exhaust gas system; * fire detection and signaling system; * Hazardous gas leak detection system; | 1 | Cpl | | 3 | **Natural Gas Compressor** | 3 | Pcs | | 4 | **Electrical installations and systems**, including electric motors and frequency converters, dedicated electrical panels for driving through or without frequency converters of electric motors, protection cabinets, excitation system and automatic voltage regulation, automatic synchronization to SEN, grid control code, generator protections, local electrical systems to ensure uninterruptible voltages of direct voltage and alternating voltage (UPS) | 1 | Cpl | | 5 | **Automation installations**, including fully machined automation cabinets, central automation cabinets (marshaling, SCADA), servers, operating stations and engineering station, communication equipment, instrumentation, SCA automated driving system (DCS/PLC SCADA) with all software application programs and related licenses included | 1 | Cpl | |  |
|  | **1. GENERAL CONSIDERATIONS**  The tender specifications are an integral part of the award documentation which has as object the provision of equipment and services for the construction ***of the cogeneration plant with thermal engines with a total electrical power of at least 27 MW and a total thermal power of at least 26.10 MW, with three identical units*,** and constitutes the set of requirements on the basis of which the technical proposal is developed by each bidder.  The specification shall contain, but is not limited to, requirements relating to the level of quality, technical and performance, operational safety, dimensions as well as quality assurance systems, terminology, symbols, tests and methods of testing, packaging, labelling, marking, conditions for certification of compliance with relevant standards or the like.  The technical and functional characteristics presented below for the products subject to purchase are mandatory and minimal, they can be offered at a higher level (with punctual highlighting of all these deviations). If all the minimum requirements are not met, the offer will be declared non-compliant. Alternative offers are not allowed.  The technical proposal will be drafted in the structure and according to the instructions in FORM **F4 - Technical Proposal Framework Form**.  The technical proposal must prove punctually and in detail, the fulfillment of each and all the requirements of the tender specifications. The declarative assumption of a requirement only by reference to it or by copying it in part or in whole shall not be considered as a demonstration of compliance.  The technical proposal will be numbered, in its entirety, on each page. The fulfillment of each requirement of the tender specifications will be demonstrated by the bidder by the detailed description of the way in which each requirement is or is to be met, and where applicable, the documents part of the technical offer will be indicated, by which compliance with the requirement is proven and the section, paragraph, page where the probative information is presented will be identified, as the case may be.  For the purposes of this section of the Award Documentation, any requirement described in a certain chapter of the Tender Specifications and not explicitly specified in another chapter, shall be interpreted as being mentioned in all chapters where it is considered by the Bidder that it should have been mentioned in order to ensure the fulfillment of the object of the Contract.  Any reference in this specification indicating a particular origin, source, production, a special process, a trade mark, a patent, a manufacturing licence, shall be mentioned only for the purpose of easily identifying the type of product and shall not be intended to favour or eliminate certain economic operators or certain products. These specifications will be considered as having the mention "or equivalent" within the meaning of the provisions of art.156, para. (3) of Law no. 98/2016.  In consideration of the provisions of Article 156 paragraphs (2) and (3) of Law 98/2016, in order to facilitate a better understanding of its needs, when establishing the technical specifications, the contracting authority indicated for reference some trade names, such as "*Windows operating system*". These references are only intended to facilitate the understanding of the needs and level of performance expected by the contracting authority and are not intended to favor any product or manufacturer.  The contracting authority fully assumes the provisions of Article 155 paragraph (6) of Law 98/2016 on public procurement. Thus, any element of the stated technical specifications will be read and understood by the bidding economic operators as including the phrase "*or equivalent*" a priori.  The bidder will present for each product offered the technical sheet of the product issued by the manufacturer. Technical data sheets made by the bidder are not accepted, unless it is also the manufacturer.  The products will be delivered accompanied by a warranty certificate and instructions for use, maintenance and storage in Romanian.  In accordance with the provisions of Article 51 of Law no. 98/2016, economic operators shall submit a declaration stating that, when preparing the offer, they have taken into account the relevant obligations in the fields of environmental, social and labour relations, established by the legislation adopted at the level of the European Union, national legislation, collective agreements or treaties, international conventions and agreements in these areas and to which Romania is a signatory state and that it will comply with these requirements during the execution of the public procurement contract. According to art.55, para. (2) of Law 98/2016, the proposed subcontractors must comply with the same obligations as the bidders, in the field of environmental, social and labor relations. In this regard, detailed information can be obtained from: MMJS (http://www.mmuncii.ro) and MM (http://www.mmediu.ro).  Without prejudice to the legal provisions or legal provisions regarding free access to information of public interest or to the legal provisions or legal provisions of the normative acts regulating the activity of the contracting authority, the contracting authority assumes the obligation not to disclose the information in the technical proposal, the elements of the financial proposal and/or price/cost justifications/justifications submitted by the economic operators, indicated and proven by them to be confidential because they are personal data, technical or commercial secrets or are protected by an intellectual property right.  The contracting authority informs potential bidders that in analyzing the confidentiality statements it will take into account the ANAP Guidance on the analysis of the confidentiality of bids, available at <https://anap.gov.ro/web/wp-content/uploads/2023/03/Indrumare-privind-analiza-confidentialitatii-ofertelor.pdf>, as well as the CJEU's recitals in Case C54/21, ANTEA POLSKA.  Bidders may indicate, using the specific form in the tender documentation, which information in the technical proposal, elements in the financial proposal and/or price/cost justifications/justifications are confidential as they are personal data, technical or trade secrets or are protected by an intellectual property right. The confidentiality of the information indicated by the bidders as confidential must be proven accompanied by the proof that gives it confidentiality, according to art. 57 paragraph (4) of Law 98/2016 and by the express specifications of GEO 114/2020, otherwise the provisions of art. 57 para. (1) of Law 98/2016 with subsequent additions and amendments. Personal data are subject to the legal provisions on GDRP and it is not necessary to expressly indicate and/or prove them. |  |
|  | **2. Context and objectives of the project "High efficiency gas cogeneration plant, flexible, in the district heating sector of the Municipality of Râmnicu Vâlcea"**  Chimcomplex S.A. Borzești - Râmnicu Vâlcea Branch signed, as Beneficiary, the financing contract no. 4/26.01.2023 within the National Recovery and Resilience Plan – Pillar I. Green transition – Component 6. Energy - Investment measure 3 - Development of flexible and high-efficiency gas-fired generation capacities for cogeneration of electricity and heat (CHP) in the district heating sector, with a view to achieving deep decarbonisation.  The general objective of the project is to achieve a flexible and high-efficiency gas production capacity of 108 MWe / 89.1 MWt, for the cogeneration of electricity and heat (CHP) for the supply of thermal energy to the inhabitants of Râmnicu Vâlcea municipality, with a commissioning deadline of 30.06.2026.  The objective of investment measure I.3 under the NRRP is to contribute to achieving deep decarbonization through investments in high-efficiency cogeneration electricity and heat production units/plants, in the district heating sector, flexible, using natural gas, ready for mixing with renewable/low-carbon gases, including green hydrogen, offering the plants the possibility to reach the threshold of maximum 250g CO2 eq/kWh during their economic life.  Through the implementation of this project, the security of energy supply will increase, especially at the level of the municipality of Râmnicu Vâlcea, reducing the risk of interruptions in the supply of thermal energy to the inhabitants of the municipality of Râmnicu Vâlcea.  Through this project, Chimcomplex S.A. Borzești contributes to the achievement of the EU objectives set as a result of the EU's accession to the Paris Agreement and with the publication of the Energy Union Strategy, in order to achieve the objective of improving energy efficiency by 32.5% in 2030.  This project will have a positive impact in terms of reducing carbon emissions into the atmosphere generated by the energy sector by replacing part of the amount of fossil fuels consumed each year.  The energy efficiency value of the cogeneration system is higher than the values achieved by the separate electricity and heat production systems. Due to the primary energy savings that are obtained from the production of the same quantities of heat and electricity in cogeneration compared to separate production, the overall pollution of the ecological system is reduced by reducing the extraction, transport and handling of fuel.  The main results of the implementation of the cogeneration solution are given by the realization of savings in primary energy consumption and the avoidance of carbon dioxide emissions related to the fossil fuel consumed by CET Govora for the thermal energy supply of the municipality of Râmnicu Vâlcea.  The final result of the implementation of the project will be, on the one hand, the continuous supply of heat to the inhabitants of Râmnicu Vâlcea municipality, and on the other hand, the decrease of the share of fossil fuel in the total fuels consumed by the installations at CET Govora.  **The specific objectives** of the project and the expected results of its implementation are:   * Greenhouse gas reduction – estimated annual decrease in greenhouse gases = minimum 84,468 to CO2/year; * Installed capacity in high-efficiency, gas-fired flexible cogeneration = minimum 108 MWe / 89.1 MWt; * Savings in annual primary energy consumption = minimum 418,105 MWh/year; * Gross overall return at reference conditions = minimum 85%; * Specific emissions = maximum 250 gCO2eq/kWh produced.   The main components of the Cogeneration Plant will be:   * *High-efficiency combined cycle cogeneration plant,* with a total electrical capacity of at least 81 MW and a minimum thermal power of 63 MW, together with the related auxiliary installations, in a flexible configuration that allows the use of green hydrogen mixed with natural gas; * *High-efficiency cogeneration plant with thermal engines,* with three identical units with internal combustion engine, operating on natural gas, of equal capacities, of approximately 10 MWe and 8.7 MWt, together with the related auxiliary installations, in a flexible configuration allowing the use of green hydrogen mixed with natural gas; * *Common auxiliary installations* that include: Thermal degassing station and pumping of the additional water in the district heating network; Thermal agent pumping station; Electrical station for connecting generators related to the new source; Command and control room Thermoelectric power plant; Connections and networks in the premises;   **Benefits anticipated by the contracting authority**  By achieving the project objectives, the contracting authority will achieve the creation of a flexible and high-efficiency gas production capacity of 108 MWe/89.1 MWt for the cogeneration of electricity and heat (CHP) for the supply of thermal energy to the inhabitants of Râmnicu Vâlcea. The energy source will be sized to ensure the annual thermal energy needs in all characteristic operating regimes (summer and winter). The proposed cogeneration solution will meet all the requirements imposed by the Energy Efficiency Directive 27/2012/EU regarding the overall efficiency and primary energy savings, as well as the classification below the specific greenhouse gas emission limit (CO2eq) in relation to the useful energy produced, of 250 gCO2/kWh. The thermal energy production facilities will operate with natural gas and will be able to operate at any time with a mixture of natural gas with hydrogen having a content of up to 20% vol., respectively it will be possible in the future to update the configuration in order to increase the hydrogen content.  Taking into account the classification in the category of actions that can be financed by the PNRR – investment measure I.3.Development of flexible and high-efficiency gas production capacities for the cogeneration of electricity and heat (CHP) in the district heating sector, in order to achieve a deep decarbonization, by contributing the project to its objectives, respectively obtaining:   * savings in primary energy consumption of more than 20%, as a result of the implementation of the project; * overall gross efficiency of the installation greater than 85%; * reduction of CO2 emissions, depending on the electricity produced over 1500 t/year; * not to exceed, during the economic life, the threshold of maximum 250g CO2 eq/KWh produced.   Considering that the project's indicators depend mainly on the actual thermal requirement, they will be able to be achieved only if the thermal energy needs of the municipality of Râmnicu Vâlcea are maintained at the values taken into account mentioned in *the Feasibility Study*, throughout the analyzed period.  Under these conditions, the values of the indicators will be adjusted during the monitoring of the operation of the plant in current production, in relation to the evolution of thermal energy consumption in urban heating at the level of the municipality of Râmnicu Vâlcea.  In order to streamline the operation of the equipment, the plant will be able to deliver thermal energy in the form of steam to the industrial platform Chimcomplex S.A. Borzești - Ramnicu Valcea Branch during periods when the urban thermal energy consumption is reduced. For very short periods, especially in the transition season, the thermal power produced by the cogeneration plant can exceed the thermal needs of Râmnicu Vâlcea Municipality. For this reason, the surplus energy produced can be delivered to the industrial platform in Râmnicu Vâlcea in order to maintain the efficiency of the installation and the technical-economic indicators of the project. The same principle will apply in the event of short-term damage to the district heating network of Râmnicu Vâlcea Municipality.  In order to ensure an efficient management of the project *"**Flexible high-efficiency gas cogeneration plant in the district heating sector of the Municipality of Râmnicu Vâlcea"* and to meet the time and budget constraints, the contracting authority will have the role of general contractor and the project is structured on three sub-projects that will be implemented through contracts awarded through public procurement procedures carried out in parallel, as follows:   1. *Supply of equipment and services for the high-efficiency combined cycle cogeneration plant***;** 2. *Supply of equipment and services for the cogeneration plant with thermal engines (subject to this public procurement procedure);* 3. *Design for the Integration of the Combined Cycle Cogeneration Plant and the Cogeneration Plant with Thermal Engines and Auxiliary Installations, Execution of Construction and Assembly Works for the Cogeneration Plant and Supply of Equipment and Services for the Auxiliary Plants (hereinafter referred to as the "Integration Project")* |  |
|  | **3. Subject-matter of the public procurement procedure**  The purpose of this procedure is to provide products and services for the construction ***of the Cogeneration Plant with thermal engines with a total electrical power of at least 27 MW and a total thermal power of at least 26.10 MW, with three identical units*,** a component *part of the high-efficiency gas Cogeneration Plant, flexible, in the district heating sector of the Municipality of Râmnicu Vâlcea*.  The Bidder will provide and provide the following products and services: |  |
|  | 3.1 Design and Engineering *Design at FEED level of the cogeneration plant with thermal engines*  The Supplier will draft and provide the FEED documentation, by specialties, in accordance with the provisions of the Contract or, where not specified, in accordance with good engineering practices.  The Supplier shall be responsible for any discrepancies, errors or omissions in the specifications, drawings and other technical documents which it has drawn up.  *Engineering*  The supplier of equipment and services will transmit to the Contracting Authority and to the General Designer designated by it, the input data for: the preparation of the documentation for obtaining approvals, agreements and authorizations, for the detailed design (DDE) of the installation subject to this procedure and for the integration project, data included or not in the FEED documentation and will collaborate with them throughout the preparation of the project and the execution for the implementation of the cogeneration plant with thermal engines within the parameters guaranteed by the Bidder. |  |
|  | The supplier will draft and deliver:   1. The technical book of the supplied installations, according to the requirements of the legislation in force; 2. Operation and maintenance manuals, both at equipment and installation level; 3. Environmental management plan. |  |
|  | 3.2 Manufacture and delivery of technological equipment and machinery The supplier is responsible for the manufacture (procurement) of technological equipment and machinery.  The Supplier is responsible for the transport, insurance, delivery, storage, protection and handling of all equipment and materials related to the contract.  The equipment will be transported to the project site.  The supplier is responsible for handling, storing, preserving and protecting the equipment throughout the construction of the plant. |  |
|  | 3.3 Technical support from the Provider The Provider is responsible for the following technical assistance activities:   1. technical assistance in the assembly of the equipment and systems supplied; 2. technical assistance for the elaboration of the project at the level of execution details (DDE) for the cogeneration plant with thermal engines and for the integration phase at the plant level; 3. technical assistance in the execution of tests for the certification of the conformity of synchronous generators with the network code; 4. technical assistance for the integration of the SCADA system of the thermal engine cogeneration plant with the SCADA system at the level of the cogeneration plant; |  |
|  | 3.4 Commissioning and commissioning The bidder will perform:   1. tests and samples on the equipment and systems delivered as well as at the plant level; 2. commissioning of the new installation; 3. training services for the operating staff of the new facility; 4. performance testing; |  |
|  | 3.5 Warranty Fixes During the warranty period, the Bidder who has become a Supplier is responsible for the repair work on the equipment and systems delivered, whenever necessary for the fulfillment of the obligations assumed regarding the warranty granted. |  |
|  | **4. Contract schedule** 4.1 General requirements The investment objective subject to this procedure involves design at FEED level, the purchase of equipment and the provision of services, detailed in the sections with the general and particular technical specifications of the tender specifications. |  |
|  | The bidder will present attached to the technical offer the schedule of the contract detailed on the following main phases:   1. delivery of primary data and documentation for the elaboration of the integration project for the DTAC phase; 2. delivery of primary data and documentation for the elaboration of the integration project at the plant level; 3. delivery of primary data and documentation for the elaboration of the detailed project (DDE) of the cogeneration plant with thermal engines; 4. elaboration of technical specifications for technological and electrical equipment with a long manufacturing time; 5. design at FEED level (including technical specifications for the rest of the equipment and systems to be supplied); 6. manufacturing equipment and conducting FAT tests; 7. on-site delivery of equipment; 8. technical assistance for assembly; 9. training of operating personnel; 10. commissioning and commissioning of the installation; 11. performance test; |  |
|  | The deadline for commissioning the cogeneration plant is **30.06.2026, the date** imposed by the **PNRR C6 I3 financing program**. In order to comply with this deadline, the Supplier is obliged to comply with the following intermediate deadlines:   * 1 month from the signing of the contract for the delivery of primary data and documentation for the elaboration of the integration project for the DTAC phase; * 2 months from the signing of the contract for the delivery of primary data and documentation for the elaboration of the integration project at the plant level; * 2 months from the signing of the contract for the delivery of primary data and documentation for the elaboration of the detailed project (DDE) of the cogeneration plant with thermal engines; * **30.12.2025** deadline for the delivery of the equipment to the site (*Note: The intermediate delivery schedule will be later correlated with the assembly schedule*); |  |
|  | The detailed execution schedule, proposed for the performance of the contract, will be presented in the bid, highlighting the terms and durations of the activities, respectively specifying the critical path, indicating the resources proposed to be used within the project and the dependency relationships between the activities. The execution schedule will be drawn up in Gantt format. For the elaboration of the execution schedule, it is recommended to use a specialized software program for project management. In order to facilitate obtaining an overview, the execution schedule will also be presented in synthetic format, comprising only the activities and sub-activities. In order to facilitate the planning of the contracting authority's resources, the detailed execution schedule will also be linked to the payment schedule. The execution schedule will be updated and delivered periodically, monthly, together with a descriptive report of the progress stage. |  |
|  | 4.2 Reception stages The reception of services and products will be carried out in compliance with the applicable regulations in force, as follows:   1. The acceptance of the design services will be carried out on the basis of a report signed by the parties: Supplier and Contracting Authority. Upon completion of the preparation of the deliverables related to the design services, the Supplier has the obligation to submit the technical documentation to the headquarters of the Contracting Authority, in paper format in the number of copies indicated in this tender specifications and in electronic format (by e-mail, transmission in editable format and pdf);   The deadline for issuance by the Contracting Authority of the approval response or for requesting additions / clarifications is maximum 15 days from the delivery of the documentation by the Supplier.  The supplier will make the necessary additions or, as the case may be, the necessary changes in the documentation within a maximum of 5 days, in order to obtain the positive opinion from the Contracting Authority. Based on it, the Contracting Authority will sign without objection the Minutes of Reception of the Design Documentation (the approval will be made during a CTE meeting of the Contracting Authority, which will be attended by the Supplier who will present the design documentation subject to approval).  *Note: This acceptance does not imply the assumption by the Contracting Authority of the quantities of works / materials / equipment included in the documentation, but only an agreement in principle regarding the designed technical solution, the responsibility regarding the design and execution of a fully functional solution being the full and exclusive responsibility of the Supplier*.   1. The reception of equipment deliveries and their commissioning will be carried out based on the reception procedures established by GD no. 273/1994 regarding the construction works and related installations, at the completion of the execution, respectively by GD no. 51/1996 regarding the assembly works and the commissioning of the investment objective.   The date of commissioning of the investment objective will be interpreted as the deadline on which the commissioning is received according to GD no. 51/1996.   1. The performance test for demonstrating the guaranteed parameters of the new installation will be carried out for a period of 72 hours after the commissioning and stable operation of the new installation. 2. The final acceptance will be carried out at the end of the warranty period of the equipment and works, according to the provisions mentioned in item 4.3 of this specification. |  |
|  | 4.3 Technical and performance guarantees *Technical warranty*  The bidder undertakes to provide the technical guarantee for the installation that is the subject of the contract for a period of at least 24 months starting from the date of commissioning.  During the technical warranty period, the Supplier will provide the necessary spare parts for the repair of manufacturing defects belonging to the manufacturer, respectively will act to remedy these defects through the respective manufacturer. The costs of such spare parts as well as repair services shall be borne by the Supplier.  If any of the delivered equipment is found to be defective, unsatisfactory or any defect in workmanship or material is subsequently discovered, does not function properly during commissioning tests, etc., it will be replaced by the Supplier with appropriate equipment at no additional cost. |  |
|  | *Performance guarantees*  The bidder will guarantee that the offered cogeneration plant with thermal engines will ensure in operation the values offered for the performance parameters "***Pe***", "***Qt***", "***ηg***", "***Pem***", "***Qtm***", "***ηgm***", "***Nox***", "***CO***" and "***DA",*** offered by filling in *FORM F21 - GUARANTEED PARAMETERS*, as well as the values offered for the indicators "***Installed capacity in high-efficiency, gas-fired, flexible cogeneration***" and "***Specific emissions***" offered by filling in *FORM F22 - GUARANTEED INDICATORS.*  The measurement of the listed parameters and indicators shall be made by performance tests in accordance with the requirements of section 4.9.5 and the values of the indicators "***Δem***", "***B***", "***η***" shall be verified by calculations in accordance with the methodology presented in *Annex 3 - Summary of calculation of proiect\_cf Ghid\_rev01\_nov indicators. 2022*.  In the event that following the execution of the performance tests it results that one or more of the guaranteed parameters and indicators have values below the minimum required limit, in accordance with the contractual provisions, the Bidder undertakes to pay penalties for non-performance performance, as follows:   1. for each failure of 1% less than the guaranteed value "***PE***", the contractor will be charged a penalty of one percent (1%) of the value of the equipment; 2. for each failure of 1% less than the guaranteed value "***Qt***", the contractor will be charged a penalty of one percent (1%) of the value of the equipment; 3. for each failure of 1% less than the guaranteed value "***ηg***", a penalty of one percent (1%) of the value of the equipment will be withheld from the contractor; 4. for each failure of 1% less than the guaranteed value "***ΔEm***", the contractor will be charged a penalty of one percent (1%) of the value of the equipment; 5. for each failure of 1% less than the guaranteed value "***B***", the contractor will be charged a penalty of one percent (1%) of the value of the equipment;   The total penalties applied by the Contracting Authority and paid by the Contractor may not exceed the value of 10% of the price of the equipment. |  |
|  | 4.4 Technical documentation and the schedule for their submission to the Contracting Authority**4.4.1 List of documentation provided by the Provider** The following documentation will be prepared by the Supplier and submitted for approval to the Contracting Authority:   1. Equipment location plan (layout); 2. Block diagram of the installation; 3. Design criteria for all disciplines (process, construction, mechanical, electrical, instrumentation, etc.); 4. the composition of the installation; 5. Preliminary list of battery limits; 6. PFD (Process Flow Diagram) of the installation; 7. BOP (Balance of Plant) of the installation; 8. Heat and Mass Balances of the installation; 9. P&IDs schemes of the installation; 10. List of fluids; 11. List of operating parameters; 12. List of technological parameters for instrumentation; 13. Description of the technological process according to P&ID; 14. Technological calculations; 15. Technological calculation of machinery and pipeline protection equipment; 16. Technological considerations regarding the assembly of machinery and pipes; 17. Foundation drawings (basic information for detailed design); 18. List of equipment; 19. Description of the main machinery; 20. List of conduits; 21. Technological calculation of equipment; 22. Technical specifications of the equipment; 23. Technical specifications of machinery and pipeline protection equipment; 24. Single-wire low and medium voltage scheme; 25. List of electricity consumers; 26. Machining documentation for all local and central automation cabinets; 27. Technical Specifications of the field equipment; 28. Technical specifications for PLC/DCS; 29. List of automation loops; 30. Wiring diagrams; 31. Automated driving system architecture (SCADA); 32. Hook-up drawings; 33. Description of the Automation Instrumentation; 34. Wastewater and Emissions; 35. Factors that impose OSH measures, the environment, SU; 36. Measures provided for the prevention of hazards; 37. Occupational Health and Safety Measures, SU; 38. Environmental protection measures;   The list is not exhaustive, the Supplier being obliged to prepare all the necessary documentation in accordance with the provisions of the applicable technical and legislative regulations in force, in order to implement the project within the deadlines set in the Execution Schedule and to successfully complete the design and supply contract within the requested term. |  |
|  | The program for submitting the documentation listed above will be proposed in the bid, as part of the proposed Execution Schedule, specifying the time limits considered, the relationships with the proposed activities and the logical conditions that are imposed. The language of writing all documentation is Romanian. The documents will be submitted in electronic format, and the approved final documents will also be submitted in printed format in 3 copies. |  |
|  | In addition to the technical documentation listed above, the Bidder has the obligation to draft and provide the following documents related to the stages of the Contract: |  |
|  | *General documents*   |  |  | | --- | --- | | Codification | Document name | | G1 | Quality Assurance Plan (PAC) | | G2 | Quality Control Plan (PCC) | |  |
|  | *Documents specific to the design stage*   |  |  | | --- | --- | | Codification | Document name | | P1 | Technical project (PT) on specialties and objects at FEED level | | P2 | Primary data and documents for detailed design (DDE): Execution details (DE) of constructions and installations related to constructions on objects | | P3 | Primary Data and Documents for Detailed Design (DDE): Execution Details (DE) Thermomechanical Installations on Objects | | P4 | Primary Data and Documents for Detailed Design (DDE): Execution Details (DE) Electrical Installations on Objects | | P5 | Primary Data and Documents for Detailed Design (DDE): Execution Details (DE) Object Automation Installations | | P6 | Primary data and documents for detailed design (DDE): Execution details (DE) networks and connections in the enclosure on objects | |  |
|  | *Documents specific to the delivery and testing stage of the installation*   |  |  | | --- | --- | | Codification | Document name | | ET1 | Detailed Delivery Schedule (GT) | | ET2 | Inspections and Testing Program (PIT) | |  |
|  | *Documents specific to the reception stage*   |  |  | | --- | --- | | Codification | Document name | | R1 | Operation and maintenance manuals for component equipment | | R2 | Operation and maintenance manual for the cogeneration plant with thermal engines | | R3 | Training plan | | R4 | Execution Compliant Documentation (DCE) on objects at the FEED level | | R5 | Technical book of the cogeneration plant with thermal engines | |  |
|  | **4.4.2 Document management requirements** At the deadline for handing over the requested documents, the Supplier will deliver the following categories of documents in the number of copies requested, taking into account the process of generating the documents, from the stage of creation, approval, approval, printing, scanning, delivery:   * The document in printed format, with the signatures of the drafting party (printed original), accompanied by the scanned electronic copy in PDF format; * The document in electronic format (electronic original), in editable source format and in PDF format.   The documentation submitted by the Supplier for the purpose of obtaining approval will receive a written response from the Contracting Authority within the contractual term. The response will include either the Certificate of Approval without Comments or the List of Observations Required to Be Implemented in Advance for Approval.  In the case of approval without observations, the design documentation itself may be used by the Supplier in order to prepare the deliverables.  In the event of receiving a list of observations without a certificate of approval of a submitted documentation, the Supplier will implement the observations received in relation to the design purpose established in the Contract within the contractually agreed revision term and will resubmit the respective documentation for approval.  The deadline for solving the lists of observations by the Supplier is 5 working days. For situations that exceed the contractual framework, the parties will collaborate and establish solutions so that the deadline for completion and commissioning is not affected.  Both the Supplier and the Contracting Authority will refer to the revision number of the documents in the design correspondence.  The supplier will propose in the initial phase of the design activity a system of numbering / identification of the component documents of the technical design documentation, which will allow their traceability from the date of the first edition / revisions submitted and until the date of the last edition / revisions. The proposed system will allow the management of the approval phases and the knowledge of the status for any component document and any package/documentation submitted by the Supplier.  The date of the last edition / revision is the date of delivery of the documentation to the as-built phase (according to the execution) after the implementation of any observations of the Contracting Authority. This edition / revision will be included in the Technical Book of the Installation and will bear the label FINAL.  The offer submitted by the Provider shall include the relevant information in this regard. |  |
|  | **4.4.3 Applicable standards for products and documentation****4.4.3.1 General requirements for standards** All projects, materials and works will be based on the applicable national and European standards, in force on the date of signing the contract. Standard means any technical, administrative and legislative regulation (standard, norm, regulation, guide, directive, law, decision, ordinance, etc.) adopted in the areas related to the design and execution of the objective.  The equipment or parts thereof and the associated services will be made according to the standards adopted in Romania (STAS / SR / SR EN / SR EN ISO). If Romanian standards are not available for a certain field, the standards of the International Organization for Standardization (ISO) will be used, as well as other international standards and technical norms that can be applied if they are consistent or complementary to the Romanian and ISO standards. |  |
|  | **4.4.3.2 Form requirements for documentation** All information provided in drawings, calculations or in connection with the contract shall be expressed in units of measurement belonging to the International System (SI).  The supplier will ensure that the plans submitted for approval are printed on paper with international dimensions. The following sizes are supported: A0 (841 mm x 1189 mm), A1 (594 mm x 841 mm), A2 (420 mm x 594 mm), A3 (297 mm x 420 mm), A4 (210 mm x 297 mm).  Each drawing will have to include a "cartouche" in the format approved by the Contracting Authority which will include the name of the project, the name of the specialist designer, the name of the Supplier, the Contracting Authority, together with the name of the drawing, its number and date and other relevant data, such as the number and date of the revision of the document in the lower right corner.  All documentation will also be delivered in electronic format.  The supplier will be responsible for verifying all documentation of suppliers and manufacturers of mechanical, electrical and control equipment, as well as the necessary coordination between them (including the development of master plans, as appropriate, that are required). After verifying the correctness of the plans, he will submit them for approval to the Contracting Authority. Such approval shall not be deemed to represent the Contracting Authority's view of the efficiency or availability of the facility and shall not relieve the Supplier of its responsibilities and obligations under the Contract.  If the plans are not approved by the Contracting Authority, a copy will be returned to the Supplier, together with the list of objections and having the necessary changes marked. At the time of approval in final format, a copy will be marked with the inscription "APPROVED" and returned to the Supplier.  The Supplier shall be responsible for any discrepancies, errors or omissions in the procurement of equipment, materials, design drawings and in other details provided. |  |
|  | **4.4.4 Site Documentation** In order to prepare the offers, the bidders can request the planning of a site visit, in order to collect the site data and conditions through their own measurements and evaluations. |  |
|  | **4.4.5 Documentation submitted with the tender** The offer will include written proposals on the bases and principles of plant design with special attention paid to the calculations necessary to justify the choice of equipment, the fulfillment of the technical and performance criteria and the technical knowledge set out in standards, guides and regulations.  The proposal will include the drawn parts required by the requirements of the specification: framing plans, site plans, diagrams and construction drawings.  The proposal will include all the technical data sheets required in the tender specifications, as well as the description of the organization and methodology applied for the design activities, supply of equipment and services, testing and commissioning of the installation.  The proposed delivery schedule will include the programme of activities for design and engineering, clearly identifying the duration of the design phases. |  |
|  | **4.4.6 Mandatory documentation to be included in the offer****4.4.6.1 Description of Technical Solutions and Data Sheets** The bidder will include in the technical proposal the detailed description of the technical solutions proposed to ensure compliance with the requirements of the tender specifications and will include the Technical Data Sheets of the equipment offered, duly completed in the format of the dedicated form in the Forms Section. After the award of the procedure and the acceptance of the offer by the Contracting Authority, they will become part of the Contract. |  |
|  | **4.4.6.2 Delivery schedule**  The delivery schedule will be presented based on the template in the dedicated form in the Forms Section. The delivery schedule will include the deadlines, reported to the presumed date for the start of the contract, highlighting the critical path, at least for:   1. Contracting and on-site delivery of special equipment or equipment that has a long manufacturing and delivery period; 2. Finalization and transmission of the technical documentation developed by the Supplier, operation and maintenance manuals, for verification, approval and, possibly, for review by the Contracting Authority; 3. Finalization and transmission of the other documents requested for verification, approval and, possibly, for review by the Contracting Authority; 4. Launching orders for equipment, materials, receiving materials, manufacturing and execution, factory tests and on-site transport to sub-suppliers; 5. Planning on-site tests for commissioning and demonstrating the parameters guaranteed by the performance test.; |  |
|  | **4.4.6.3 List**   1. List of services and tests; 2. List of technological equipment; 3. List of electricity consumers; 4. Automated driving system architecture (SCADA); 5. List of guaranteed parameters;   The requested information will be filled in by the Bidder in the dedicated forms in the Forms Section. |  |
|  | **4.4.6.4 Construction schemes**   1. Detailed thermomechanical diagram (P&ID diagram); 2. Energy balance schemes for the cogeneration plant with thermal engines; 3. Single-wire wiring diagram; 4. Automation, control, management and supervision system architecture; |  |
|  | **4.4.6.5 Drawings** Proposed **site plan**  ;  1. Preliminary plans of the proposed installation (plan, side and front views, equipment placement); 2. Drawings with the construction details of the equipment; |  |
|  | **4.4.7 Control documentation during the execution period** During the course of the Contract, the Supplier will document that the works correspond to the quality assurance requirements.  All control activities specified in the Quality Control Plans must be documented. The Quality Control Plans and all other aspects related to the Quality Assurance System will be kept and maintained by the Supplier in the file system of the SAC, at the project location, throughout the duration of the Project.  All documentation will be provided with identification data, calendar date and signature of the persons responsible for drafting the documentation. The identification will include at least: the name of the project, the number of the activity/phase as defined in the Quality Control Plans, the time and place of the control activity.  The supplier will draw up the "*Technical Book of the Installation*" at its own expense in accordance with national regulations.  The supplier will keep all copies of the documents that are part of the "*Technical Book of the Installation*" for at least 5 years after the end of the warranty years.  At the time of delivery of the materials and equipment, the Supplier shall submit to the Contracting Authority the following documentation, in original and two certified copies "*ACCORDING TO ORIGINAL*":   * 1. all documents certifying that the inspection, control and tests carried out are in accordance with the established clauses;   2. identification lists with corroboration between documents, materials and equipment;   The supplier will deliver the documentation and certificates necessary for the authorization of the equipment and the installation (ISCIR, INSEMEX etc). |  |
|  | **4.4.8 Textbook requirements**  The supplier will hand over to the Contracting Authority the Operation and Maintenance Manuals, in two copies in Romanian, as well as two complete sets of drawings from the manufacturers, together with a Maintenance Plan. In the event that the Contracting Authority rejects, in whole or in part, the manual or set of drawings submitted, the Supplier will take the measure to modify them accordingly to the requirements justifiably requested.  The manuals will include both the installation and assembly part, as well as the commissioning, testing, operation, control, maintenance and repair part.  It is not accepted to present in the manuals only a collection of extracts from the standards, accompanied by drawings and general descriptions of the installations. In particular, the information coming from the Supplier's subcontractors will be included in the instruction manuals. The references to the descriptive part, the drawings and the list of spare parts will have to be complete.  The manuals will include the sections regarding the operation, operation, maintenance, repairs related to the equipment and will include clear and complete instructions and recommendations of the Supplier and its Subcontractors (manufacturers of equipment and systems, designer, etc.), necessary for a proper operation, maintenance and repair of the equipment and installations.  The accompanying text or diagrams shall additionally contain wiring diagrams as well as assembly and handling instructions. The manuals will be carefully checked by the Supplier, during the testing and commissioning, being modified and updated in order to reflect the final version.  The manuals may include the manufacturer's standard specialist literature, but the Supplier must also include its own text and drawings, corresponding to the equipment as it was installed/mounted.  Two paper copies of the Manuals will be sent in Romanian. They will be filed in A4 format binders, bearing clear titles, numbered pages and references to other documents.  In addition, a copy of the Manuals will be included in electronic format, on CD/DVD/USB support, in PDF format. The final version of the Manuals will include instructions, recommendations and comments on the operation of all equipment and installations.  If, during the warranty period, the Contracting Authority finds that a manual requires changes or additions as a result of the accumulated operation or maintenance experience, the Supplier will make the changes approved in that manual.  The maintenance and operation manuals will include a multi-year, annual maintenance plan for operation and maintenance personnel covering the life of the facility.  After the final approval, two paper copies of the Manuals will be sent in Romanian. They will be filed in A4 format binders, bearing clear titles, numbered pages and references to other documents.  Also, two versions in electronic format, on CD/DVD/USB in PDF format will be made available. The operation and maintenance manuals will also specify the number of personnel and the necessary training for the operation and maintenance of the installations. |  |
|  | 4.5 Quality Assurance System All the activities in the contract will be carried out in accordance with the Romanian and European legislation in the field of quality assurance.  The provisions applicable by the Provider are indicated in chap. *5.2 Codes, standards, norms, prescriptions and reference regulations*. |  |
|  | **4.5.1 General** The Quality Assurance System (QA) shall show the overall Supplier-specific quality assurance organization and lines of responsibility, monitoring, and action. Moreover, the general principles and procedures for establishing Quality Assurance Plans (CAPs), Quality Control Plans (QCPs), the organization of quality assurance at the level of the Supplier, etc., for specific projects and contracts, subcontractors of the Supplier (equipment manufacturers and service providers) must be provided.  The Quality Assurance System will include, customized for this contract, the *Inspection Plan and the Procedures for Inspections, the Quality Plan, the Execution Technologies*, as well as the *Labor Protection procedures*  on site, specifying the procedures for decisive phases proposed to be targeted by the State Inspectorate in Constructions, the verification of compliance with the execution technologies, their correct application in order to ensure the level of qualitative.  The Supplier must submit, as part of its offer, at least the initial SAC, CAP and CCP for the activities included in this Contract, stipulating all important and critical activities for controls, inspections and tests to meet the specifications and parameters guaranteed by the technical proposal. |  |
|  | **4.5.2 Quality Assurance Plan** The plan must cover at least the following aspects:   1. Organization of the Supplier's personnel and management for the project, the management plan and the organization of quality assurance. The person responsible for the Supplier's SAC must be authorised and qualified to make decisions regarding quality assurance matters and his or her references and lines of communication with the quality assurance body within the Company and the management and management representative must be clearly described. The persons who carry out the quality control and tests must be independent of those who supervise the works; 2. Document management; 3. Procurement management; 4. Management of sub-contractors (manufacturers of equipment and systems and service providers), and the requirements of its own SAC; 5. Control of materials and execution, correction of defects and materials, corrective action procedures, etc.; 6. Addressing additions or variants to the Contract Documents; 7. The Supplier's initially proposed Quality Control Plans, which describe important and critical verification activities based on the Offer Documents and the Supplier's own Considerations regarding the implementation of the installation. They will be reviewed whenever necessary during the performance of the contract with the approval of the Contracting Authority; |  |
|  | **4.5.3 Quality control plans** The Quality Assurance Plan will include controls, as stipulated in the Contract, as well as such controls as the Supplier deems necessary to ensure the quality of the work. For each control activity, the Quality Assurance Plan will describe the type, method, approval and documentation criteria and who is responsible for executing the activity.  If the Contracting Authority does not approve the Quality Assurance Plan, then it will be amended for approval. Subsequent quality assurance changes will not lead to changes in the deadline set for completion or changes in the contract price. |  |
|  | 4.6 General requirements for the activities carried out under the contract**4.6.1 Equipment packaging** All components will be packed to be insured against shocks and weather conditions during transport and storage. |  |
|  | **4.6.2 Transport and delivery**  The supplier will be responsible for the transport and delivery of the equipment and materials related to the contract to the location indicated by the Contracting Authority.  The Supplier will transmit to the Contracting Authority the conditions that it must meet for the storage and handling of the delivered equipment and materials, at least 2 months before delivery. |  |
|  | **4.6.3 Materials used** The materials must be appropriate for the purpose and service life proposed by the project, in full accordance with the material codes and specifications. All materials must be new and meet the performance criteria required in the technical data sheets, for the area and climatic conditions in the area. |  |
|  | 4.7 Spare parts and tools**4.7.1 Spare Parts** All components, equipment and installations shall be delivered together with a quantity of spare parts and consumables, deemed by the Supplier to be necessary and sufficient for: tests, commissioning of the equipment and installation, in accordance with the manufacturers' recommendations.  For each object of the investment and each piece of equipment, the Supplier will provide the complete parts and catalogs with all specific spare parts. During the commissioning period, all spare parts proposed by the Supplier within the Offer will be checked on the basis of the catalogue and on the basis of the recommended maintenance schedule. Any inconsistency in the fulfillment of this condition will be corrected by the Provider.  All spare parts delivered will be new and strictly interchangeable with the parts they are supposed to replace and will be treated and packaged properly for long storage, in the climatic conditions specific to the site location. Each spare part will be properly marked or labeled on the outside of the packaging, bearing the name and purpose, and when several spare parts are packed in a single box or container, a general list of contents will be attached to the outside of the box together with a detailed list.  All boxes, containers or other packaging will be packed and numbered in an appropriate way for easy identification. All boxes, containers or other packaging will be open for inspection upon request. The packaging will be easy to open and allow repackaging.  The bidder will submit the maintenance plan in the bid according to the requirements of the tender specifications.  The bidder will present in the technical proposal the necessary information for the post-warranty period, namely: list of existing spare parts suppliers, quantities, costs, estimated delivery times for establishing an annual requirement of spare parts and consumables (implicitly the related budget for their purchase), calculated on the basis of the established operational profile and the failure rate specific to the main and accessory installations (the systems in its composition) and other relevant information. |  |
|  | **4.7.2 Tools** The supplier will provide metal boxes with locks containing two sets of tools and special devices necessary for maintenance, assembly, disassembly or testing.  The tools must be new, have not been previously used in construction-assembly activities, except in cases where the Contracting Authority will require the Supplier to demonstrate the effectiveness of a special tool.  Tools intended for each type of equipment will be stored in suitable, properly marked or labelled boxes. Each tool will be identified and a list of tools will be attached to the inside of the cover. Each tool set will be delivered with the equipment or spare part for which it is intended. |  |
|  | 4.8 Staff training Training of the Contracting Authority's staff (the Operator's designated personnel) for the management, operation and maintenance of the equipment will be included in the Offer.  The objective of the training is to provide the personnel designated by the Operator with the necessary technological knowledge of operation and maintenance of all equipment, installations and systems included in the project, in order to ensure proper and stable operation and maintenance of the project components, carried out under contract.  The training provided by the Provider will cover:   1. Correct operation and understanding of the system as a whole, control systems and applied technology; 2. Operation of systems, equipment and machinery for operation within the designed parameters and safely; 3. Quality control; 4. Equipment maintenance; 5. Applicable safety procedures;   It is the Provider's obligation to present an appropriate training program. The trainings will be done in Romanian.  The trainings will refer to the implementation of the operation and maintenance plan described in the operation and maintenance manuals delivered by the Supplier.  The Provider will provide all necessary training materials, including notes, sketches, films, and other assistive materials, as required, to enable staff to undertake both individual, follow-up review and replacement staff training courses.  Before the start of the training, the following shall be submitted to the Contracting Authority for approval:   * + the proposed training program;   + summary of training material;   + models of training material;   + CVs of the proposed instructors; |  |
|  | 4.9 Plant Testing**4.9.1 General** The supplier is responsible for all costs of operations necessary for the adjustment and testing of the delivered equipment.  For the entire duration of the tests, the Supplier shall be fully responsible for: the safe operation of the equipment and systems of the plant and the remedy of any defects in the equipment. The supplier will have to provide all the specialized workforce, supervision, equipment, materials, tools, etc., necessary for these operations.  The supplier will have to provide all the necessary instruments, measuring devices and suitable qualified personnel to carry out the tests and their cost will have to be included in the prices offered.  If any part of the machine or process does not correspond to the guaranteed performance or does not function properly, the Supplier shall modify or replace them, at its own expense, so that the machine reaches the guaranteed performance, in order to be accepted by the Contracting Authority.  Two copies of all checks, test certificates and registered documents shall be provided to the Contracting Authority after each check or test. |  |
|  | **4.9.2 Factory Acceptance Tests (FAT) on Equipment**  After their manufacture, the equipment will be tested in the manufacturing factories in accordance with the applicable standards, as required by the General and Particular Technical Specifications. The bidder will attach to the offer, by type of equipment, the lists of FAT tests indicated in the standards as mandatory.  The supplier must notify the Contracting Authority in writing, at least 30 days in advance, about the date, place and duration of the FAT tests, and the Contracting Authority will decide whether to participate in the tests.  All costs of performing the mandatory FAT tests will be borne by the Provider. The costs of the participation of the representatives of the Contracting Authority will not be included in the offer.  The supplier will have to submit to the Contracting Authority two copies of the FAT test results reports and equipment certificates certifying that the equipment supplied corresponds to the applicable standards.  If, after verification or testing, the Contracting Authority decides that the machinery/equipment is not suitable or that certain parts of it are defective or that it is not in accordance with the contract, it will be able to reject it, notifying the Supplier, in reasonable time in writing, of its decision and the reasons on which it is based. |  |
|  | **4.9.3 Commissioning tests**  The supplier will carry out the SAT tests for the commissioning of the equipment and the installation as a whole based on the programs drawn up by it and approved by the Contracting Authority.  All costs of performing the tests with: the specialized personnel involved in performing the tests (per diem, accommodation, transportation, etc.), the equipment necessary to perform the tests, the necessary software programs, consumables, etc., will be borne by the Supplier.  The pre-commissioning tests will be carried out when all the components and construction, mechanical, electrical and control functions are completed, according to the provisions of the relevant applicable national regulations and standards, in force, or, in their absence, according to the relevant international regulations.  The request for testing the first synchronization of the generating units to the national energy system will be sent by the supplier to the contracting authority at least 30 days before the proposed date.  The repair of the defects will be done in accordance with the decision of the Contracting Authority before or during the commissioning tests. |  |
|  | **4.9.4 Requirements for commissioning** Commissioning is the stage that follows after the completion of the construction + assembly works. The purpose of commissioning is to demonstrate the qualitative reception of the installation and to certify the following:   * + that the equipment works in accordance with the requirements of the Contracting Authority;   + that the installation operates as a unitary whole;   + that the installation operates safely in all operating modes;   + that the installation operates within the parameters designed and proposed by the winning bid.   The Supplier will collaborate with the Contracting Authority and the Contractor designated by it to obtain all the approvals, agreements and certificates established by the regulations in force for carrying out the commissioning. The supplier will carry out the commissioning and demonstrate the achievement of the parameters through performance tests and functional guarantees. The specific documentation for obtaining the integrated environmental permit and the commercial exploitation license will be developed by the Contracting Authority with the support of the Supplier according to the legislation, norms and specific codes in force. The fees for obtaining these authorizations are borne by the Contracting Authority. |  |
|  | **4.9.5 Performance Testing** The bidder will carry out performance tests after the installation has been put into operation and its normal and stable operation for at least two weeks. The performance test will be carried out for a minimum of 72 hours, but not more than 144 hours, and at its completion, a Protocol will be concluded that will record its results.  During the performance test, the following will be checked and confirmed:   1. Parameters offered in FORM F21 - GUARANTEED PARAMETERS, except for the "***YES***" parameter; 2. The indicators "***Installed capacity in high-efficiency, gas-fired, flexible cogeneration***" and "***Specific emissions***", offered in FORM F22 - GUARANTEED INDICATORS;   The values of the indicators "***Δem***", "***B***", "***η***" shall be verified by calculations in accordance with the methodology presented in *Annex 3 - Summary of calculation of proiect\_cf Ghid\_rev01\_nov indicators. 2022*.  If, following the first performance test session, it results that at least one of the verified parameters or indicators has the value below the minimum required limit, then the supplier may make the corrections and adjustments it deems necessary and may repeat the performance test once or more times in order to prove compliance with the minimum requirements simultaneously for all parameters and indicators subject to testing.  The repetition of the performance test at the request of the supplier is allowed for a maximum period of 90 days from the completion of the first test, and only the values of the last test performed will be taken into account. |  |
|  | **4.10 Preventive maintenance** Preventive maintenance activity means the totality of the works indicated by the bidder in the Installation revision plan, depending on the duration of operation, in order to operate at the performance and availability parameters guaranteed by the offer;  The bidder will present the preventive maintenance process for the entire life of the installation, which will show the periodicity, the operation performed, the parts to be replaced preventively, the consumables, the times allocated for labor.  The preventive maintenance activity will be carried out mainly in the location where the installation operates, on the costs of labor, parts and materials borne by the Contracting Authority. Simple preventive maintenance operations may be provided by the Contracting Authority's staff who have been trained for this purpose by the Bidder. Complex activities that require specialized diagnostic, adjustment and configuration equipment or operations to change critical subassemblies are recommended to be provided by qualified personnel provided by the bidder or by the manufacturers of the equipment in the installation.  The bidder will provide all the parts and consumables necessary to ensure preventive maintenance for a period of at least 5 years, the costs for which will be borne by the Contracting Authority.  For the delivered equipment that involves specialized predictive / planned maintenance activities that the Contracting Authority cannot perform as part of its routine maintenance (for which it is to be trained), the bidder will present in the technical proposal the list of suppliers, respectively the equipment manufacturer or its authorized representative, quantities, costs, estimated times for delivery and/or supply, for the purpose of establishing by the contracting authority the an annual requirement (implicitly of the related budget for their acquisition).  The bidder shall explicitly present the specialized planned maintenance operations that the manufacturer provides, the time interval required after commissioning and the number of hours of continuous operation, respectively which are the planned maintenance operations that the Contracting Authority must include in its routine procedures regarding operation, the time interval required after commissioning and the number of hours of continuous operation.  The Contracting Authority will ensure the maintenance and operation of the installation in accordance with the training program provided by the Supplier and with the instructions and specifications presented in the Operation and Maintenance Manuals made available by the Supplier. Following the training of the personnel, the Supplier will deliver the final/final version of the Installation Operating Manual. The maintenance manuals of each equipment must be handed over together with the declarations and certificates of warranty and conformity, the declarations of ATEX, PED, ISCIR, etc. as the case may be, when the equipment is delivered.  As part of the offer, the bidder will submit a financial offer by which it will undertake to provide for a fee the preventive maintenance of the supplied installation for a period of 5 years and in which it will offer the firm price for all spare parts, consumables and labor and will propose the payment terms.  The financial proposal broken down, detailed by type of services, will be presented in the technical tender documents, not in the financial tender documents. The price in this financial proposal will not be part of the price offered for the object of the contract and will not be taken into account when calculating the evaluation factor – the Offer Price.  The aspects related to the cost of maintenance for the maintenance period offered, the payment terms and the duration of the services will be included in a separate contract for the provision of maintenance services that will be concluded by the contracting authority with the winning bidder.  The bidder will submit in the bid a summary table regarding all the activities to be carried out to ensure preventive maintenance throughout the bid period:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Planned tasks | Periodicity  (e.g. daily, monthly, yearly, others) | Duration  Activity | Labor in man-hours | Price of labor provided by the bidder (lei without VAT) | |  |  |  |  |  |   The bidder will present in the bid the lists with quantities and prices, for all spare parts and consumables necessary to carry out the preventive maintenance activity for the entire duration offered, in the following format:   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | No. | Name | Category  (P – pieces,  C – consumables) | U.M. | Quantity | Unit price (lei, excluding VAT) | Total price (lei, excluding VAT) | |  |  |  |  |  |  |  |   The bidder will submit in the bid *the specific cost of maintenance of the Thermal Engine Cogeneration Plant (CSM)* complexes expressed in RON/MWh(e) according to the formula:  **CSM** = ((**TM** + **TPC**) / **5**) / (**8200** x **PE)**,  where  **TM** = total bidding labor price for the maintenance period offered  **TPC** = total price of parts and consumables during the maintenance period offered  **5** = maintenance period offered in years  **8200** = operating hours in a year  **PE** = guaranteed electrical power of the offered installation  The bidder will attach to the bid the form *F30 - Declaration regarding the specific cost of maintenance* filled in with the **CSM value**  calculated according to the above formula. |  |
|  | 4.11 Corrective maintenance during the warranty/post-warranty period Corrective maintenance represents the totality of intervention operations at the offered installation that are carried out as a result of malfunctions or operation outside the optimal parameters in order to restore its optimal operating capacity.  Corrective maintenance includes the location, diagnosis of defects, including intervention to restore proper functioning and must be carried out for all component parts of the installation when the contracting authority reports an incident.  After each corrective intervention, the Supplier shall carry out function tests demonstrating that the installation is operating in the optimal parameters and submit a report including the activities performed, the spare parts used, as well as the results of the function tests.  The Bidder will present the manner of fulfilling the requirements related to corrective maintenance, in the context of the responsibilities and requirements for repairing warranty defects included in the Tender Specifications, by presenting the activities and the actual way of achieving them in order to demonstrate the achievement of the objectives associated with the Contract.  The bidder has the obligation to provide spare parts and any other consumable materials necessary for carrying out corrective maintenance during the post-warranty period during the life of the installation.  The bidder shall submit in the bid the following information regarding the spare parts and consumables required for corrective maintenance activities that are not covered by the warranty obligations:   * recommendations on the spare parts that must be in place on a regular basis in order to facilitate the performance of corrective maintenance operations as soon as possible; * estimated delivery time for recommended spare parts; * the method of insuring spare parts during the post-warranty period; * other relevant information.   For the main equipment offered, the technical data sheets and technical facilities that the equipment supplier can make available to the contracting authority after the expiry of the warranty period granted will be presented, as well as the conditions under which the bidder undertakes to do so.  For each equipment offered, the Bidder will present in the offer the technical data sheets as well as the following information:     |  |  |  |  |  | | --- | --- | --- | --- | --- | | Equipment | Identification Completed associated data sheet and manufacturer's name | Requirements for periodic maintenance | Equipment lifespan | How the Contracting Authority has access to the spare parts required for maintenance after the expiry of the warranty period | |  |  |  |  |  | |  |
|  | 4.12 Evolutionary maintenance during the warranty / post-warranty period The bidder will present the way to meet the requirements related to evolutionary maintenance, in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of achieving them in order to demonstrate the achievement of the objectives associated with the Contract. Particular consideration will be given to software and hardware components for which updates and upgrades are possible and have been requested during the warranty and/or post-warranty period. |  |
|  | 4.13 Environmental Management All activities will be carried out in accordance with Romanian and European legislation.  The Supplier and its subcontractors will perform the activities of the Contract taking into account the environmental management standard (SR) EN ISO 14001 for the main execution activity that is the subject of the Contract. The supplier will have its management system certified in accordance with the standard (SR) EN ISO 14001, the latest applicable edition.  The provisions applicable by the Provider are indicated in chap. *5.2 Codes, standards, norms, prescriptions and reference regulations*.  To address the potential environmental impact, the Supplier shall submit the Environmental Management Plan (PMM) of the facility.  The provider will comply with the provisions of EU Regulation 2020/852 on the establishment of a framework to facilitate sustainable investments.  See the full document *"EU TAXONOMY Compass - High-efficiency co-generation of heat/cool and power from fossil gaseous fuels"* available on <https://ec.europa.eu/sustainable-finance-taxonomy/activities/activity/316/view>.  Thus, the GHG emissions generated during the life cycle must be less than 100 g CO2e per 1 kWh of energy produced by cogeneration for the purpose of alignment with the taxonomy according to Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment. |  |
|  | 4.14 Occupational safety and risk management All activities in the contract will be carried out in accordance with Romanian and European legislation in the field of occupational safety and health (OSH) and emergency situations (SU). The Supplier and its subcontractors will carry out the activities of the Contract taking into account the occupational safety and health (SR) MANAGEMENT STANDARD EN ISO 45001.  For the approach in the field of OSH and SU during the execution of the activities under the contract, the Supplier shall submit the HSE-SU Management Plan (PSSM-Su) which shall include the identification of the risks, measures and actions provided for during the performance of the Contract. |  |
|  | 4.15 Fire prevention and extinguishing The thermomechanical, hydromechanical and electrical installations that are the subject of this installation will be located both in closed and open spaces.  Fire risk identification is the process of establishing and determining the factors that can generate, contribute and/or favor the production, development and/or propagation of a fire.  The supplier, as a designer at FEED level and a supplier of equipment and services, will comply with the legislative provisions in the field of PSI.  During the performance of the Contract, the Supplier will ensure the implementation of fire protection measures, according to the legislative provisions in force, respectively it will correlate with the Contracting Authority's own plans of PSI measures, providing technical assistance in this regard. |  |
|  | **5. General technical specifications** 5.1 General This chapter presents the main conditions and mandatory rules that must be complied with by the Supplier and its subcontractors, the equipment manufacturers, within the design and/or manufacturing activities of the equipment manufactured by them.  In order to achieve the maximum level of uniformity and compliance, the Supplier and the equipment manufacturers must take into account the latest editions in force of the codes, standards, norms and technical regulations, local/national, or European in their absence, respectively to know and consider the legislative regulations in force at the time of submission of the offer, regarding the equipment, installations, systems and materials that it intends to propose and use, as well as in all execution works and tests related to completion, commissioning and performance certification.  Where the national standards in Romania do not exist or cannot be applied, the relevant European standards will be respected.  The specified measures, standards, norms and reference regulations presented below are not exhaustive and may be supplemented by the Bidder. In order to prevent possible human or technical accidents, all necessary measures must be taken depending on the development of technological activities and processes.  For all drawings, calculations, manuals, correspondence and nameplates transmitted, only the SI unit system shall be used. The entire text will be written in Romanian.  *Note: Technical specifications indicating a particular origin, source, production or process, a trademark or trademark, are mentioned for easy identification of the type of product and do not have the effect of favouring or eliminating other economic operators or certain products. These specifications will be taken as "or equivalent".* |  |
|  | 5.2 Codes, standards, norms, prescriptions and reference regulations Both the products and the services will be based on, but will not be limited to, the Romanian or international standards and regulations in force listed in Annex 12 – Urban Heating Regulations and Legislation.  The applicable national legislative regulations in force are those published in the Official Gazette of Romania. The list of national technical regulations in the field of constructions and related installations is published by the Ministry of Development and Public Administration. The technical regulations in the field of energy installations as well as the legislative regulations related to the field are published on the website of the National Energy Regulatory Authority (ANRE). The technical and legislative regulations in the field of pressure installations are published on the website of the State Inspection for the Control of Boilers, Pressure Vessels and Lifting Installations (ISCIR).  The standards that apply must be in force at least 30 days before the submission of bids. The offer will include the list of applicable regulations specified in Annex 12 – Urban Heating Regulations and Legislation, with the necessary updates.  If the supplier manufactures the product according to certain specific standards, other than those mentioned, the Bidder will add to the list these national or international standards governing its products, with a related justification.  ALL NORMATIVE ACTS, ALL STANDARDS, REGULATIONS, NORMS, MANUALS, ETC. INCLUDED IN THIS SECTION WILL BE TAKEN INTO ACCOUNT WITH ALL UP-TO-DATE AMENDMENTS AND ADDITIONS. In the event that an act, standard, regulation, normative, manual, etc. has been repealed or replaced by another act, standard, regulation, normative, manual, etc., THEN IT WILL BE TAKEN INTO ACCOUNT IN THE FORM IN FORCE ON THE DATE OF COMMISSIONING OF THE INSTALLATION, ESTIMATED TO BE JUNE 2026. |  |
|  | 5.3 Management systems implemented by the Bidder The bidder will prove that it has implemented and certified at least the following management systems:   * (SR) EN ISO 14001:2015 - Environmental Management System. Requirements with User Guide; * (SR) EN ISO 45001 - Occupational Health and Safety Management Systems. Requirements and guidelines for use; |  |
|  | 5.4 Particular/Detail Technical Specifications**5.4.1 Location** The land on which the new high-efficiency cogeneration plant is to be built is owned by Chimcomplex S.A. Borzești – Râmnicu Vâlcea Branch, located within the city's built-up area, within the CET GOVORA, with a total area of 21,758 sqm (according to CF extract no. 51216). The land area to be occupied by the cogeneration plant, which includes the combined cycle cogeneration plant, the cogeneration plant with heat engines, the common installations, the control body, etc., will be approx. 18000 sqm.  A map of a large brown and yellow area with a blue arrow  Description automatically generated **5.4.2 Climatic parameters**  * Air temperature, multiannual monthly average: +11.1°C; * Maximum calculation ambient temperature of CHP: +40°C; * Minimum calculation ambient temperature of CHP: -20°C; * Minimum Freezing Depth: 0.7-0.8 m; * Absolute minimum temperature: - 31° C; * Relative humidity, multiannual monthly average: 73.2%; * Altitude: 220m.  **5.4.3.Geophysical characteristics of the site land**  * Data on seismic zoning:   + - * seismic zone VII       * IMR=225 years       * ag=0.25g;       * corner period Tc=0.7 sec * preliminary data on the nature of the foundation soil, including conventional pressure and minimum groundwater level >6,0 m deep; * minimum frost depth: 0.7-0.8 m; * geotechnical category 2, with moderate geotechnical risk; * In the immediate vicinity of the land intended for investment is a coal-fired thermoelectric power plant. The sources of pollution will be identified at the time of developing the documentation for the building permit. |  |
|  | **5.4.4.Connection to utilities**  The new cogeneration thermoelectric plant will be built on the premises of CET Govora, on land belonging to Chimcomplex and will be connected to the existing technological installations within CET Govora, which belong to Chimcomplex, for the supply of natural gas and water respectively for the delivery of thermal energy and electricity, as well as to the utility networks (drinking water, wastewater) present in the premises.  The supplier will be responsible for the correct configuration of the Facilities within the battery limit of the cogeneration plant with thermal engines. The integration with the existing connection points will be done by the General Designer of the cogeneration plant designated by the Contracting Authority.  The supplier of the cogeneration plant with thermal engines will provide the Contracting Authority and the General Designer with the parameters required at the battery limit for each utility or product.  All flows of energy consumed and produced (natural gas, electricity, district heating water, make-up water) will be metered with metering groups, both at the level of the consumer and generator set and of the installation, in compliance with the requirements and principles of the ANRE Energy Measurement Codes. The energy meters will have to have approval from BRML and be metrologically verified according to the metrological legislation in force.  The general metering, at the level of the cogeneration plant, is not the responsibility of the Supplier. |  |
|  | *Natural gas*  Maximum pressure: 6 bar;  Gas type: odorized natural gas. The composition and calorific value of the non-odorized natural gas can be found in the analysis bulletin attached in Annex 9.  The stable natural gas supply pressure from SRMP Transgaz will be considered to be 6 bar(g). |  |
|  | *Electricity*  The connection of the cogeneration thermoelectric plant to the national electricity system (SEN) will be made in the 110 kV CET Govora power station, belonging to Chimcomplex Borzești, Râmnicu Vâlcea Branch.  The single-wire diagram of the 110kV Govora substation is attached to this specification.  For connection to the national energy system (SEN), 2 110kV cells are available in the 110kV Govora substation, one on each semi-station A and B.  Regarding electrical installations and equipment, the purpose of the contract also includes the design activities at FEED level of the electrical installations and equipment related to the cogeneration plant with thermal engines. |  |
|  | *Demineralized water*  Demineralized water is produced in Chimcomplex plants with the following parameters:   |  |  |  |  | | --- | --- | --- | --- | | **Crt. No.** | **Features** | **UM** | **Values** | | 1 | Pressure | bar | 5 | | 2 | Temperature | ° C | 16-18 | | 3 | Conductivity | μS/cm | < 0.2 | | 4 | SiO2 | mg/m3 - ppb | < 20 | | 5 | Organic ( KMnO4 ) | mg/l | < 3 | | 6 | Total Iron | mg/l | ≤ 0.050 | | 7 | Ph |  | 6.5-7.5 | |  |
|  | *Raw water*  Raw water is settled water with the characteristics presented below and will be supplied from Chimcomplex's internal distribution system, with the following characteristics:   |  |  |  |  | | --- | --- | --- | --- | | No.  Crt. | Test name | U.M. | Result | | 1. | PH | - | 8.5 | | 2. | Conductivity | μS/cm | 396 | | 3. | Solid suspensions | mg/l | 5 | | 4. | Chlorides | mg/l | 45.5 | | 5. | Organic substances | Mg/l | 11.7 | |  |
|  | *Channeling*  Wastewater and rainwater will be discharged into the internal network belonging to Chimcomplex. |  |
|  | *Nitrogen*  It is produced in Chimcomplex plants, pressure 4 bar, dew point -70°C, purity 99.9% (vol.). |  |
|  | *Instrumental air*  It is produced in Chimcomplex plants, pressure 4.5 bar. |  |
|  | **6. Technical, functional and performance requirements for the cogeneration plant with thermal engines** 6.1 Main Components The cogeneration plant with thermal engines will consist of:   1. 3 (three) CHP cogeneration units with internal combustion engine, operating on natural gas, including the generators related to each engine (GENERATOR SET PACKAGE), of equal capacities, of approximately 10 MWe (minimum 9 MW, maximum 12 MWt) and 8.7 MWt, together with the necessary auxiliary installations, in flexible configuration. The CHP units that will form the cogeneration plant will be identical; 2. Each engine is equipped with a flue gas exhaust system consisting of flue gas channels, heat recovery by-pass, compensators, noise dampers and chimney; 3. high-pressure compressed air pneumatic starting systems; 4. heat recovery units from the combustion air, lubrication oil, cooling water and flue gas cooling circuits, so that the heat produced by the engines is transferred as efficiently as possible to the district heating network; 5. the natural gas compressor, corresponding to each heat engine (if applicable); 6. efficient ventilation and air filtration system for each CHP unit, which will provide both the combustion air necessary for the engine and its cooling and, if necessary, the system will be provided with noise dampers; 7. command and control system of the cogeneration plant with thermal engines; 8. water/water heat exchangers for district heating; |  |
|  | 6.2 Functional parameters The cogeneration plant with thermal engines will operate according to the following parameters:   * Total electrical power: minimum 27 MW; * Total thermal power: minimum 26.1 MW; * The water temperature in the district heating circuit of the transfer exchanger will be 95°C per turn and 65°C on the return, for the reference case; * The CHP installation must ensure the production of thermal energy in variable regime (thermal load between 0% and 100%), depending on the thermal consumption needs of the heating system. The thermal energy production of the installation will follow the thermal energy consumption of the district heating system; * The flue gases will be cooled and discharged to the chimney with a maximum temperature of 120 °C; * The efficiency of the installation at the nominal load, under reference conditions, must be at least 88.5%. |  |
|  | 6.3 Performance ensured by the construction of the high-efficiency cogeneration plant with thermal engines In order to establish the annual performance of the high-efficiency cogeneration plant with thermal engines, the Bidder will submit a calculation, based on the following monthly average load curve of the thermal energy delivered to the battery limit of the installation, which will result in the fulfillment of the indicators related to the installation subject to this procedure:  1) Greenhouse gas reduction – estimated annual decrease in greenhouse gases = minimum 39,696 to CO2/year;  2) Installed capacity in high-efficiency, gas-fired flexible cogeneration = minimum 27 MWe/ 26.1 MWt;  3) Savings in annual primary energy consumption = minimum 196,462 MWh/year;  4) Gross overall yield at ISO reference conditions = minimum 88.5%;  5) Emissions = maximum 250 gCO2eq/kWh produced.  The methodology for calculating the indicators is presented in the Annex 3\_Breviar calculation of proiect\_cf Ghid\_rev01\_nov indicators. 2022.    *Note: Cells marked "****\*****" will be filled in by the bidder* |  |
|  | 6.4 Technical and reliability characteristics The cogeneration plant with thermal engines will have the following technical and reliability characteristics:   * The technical solution must ensure flexibility in operation and be within the limits set out in the BAT-BREF documents; * Designed operating regime: minimum 8200 hours / year; * Installation of gas engines (GENSET): interior, in a building specially designed for the optimal and safe operation of the engines, called the engine room. The engine room (not part of the scope of this procedure), will include all the equipment, installations and support systems necessary for operation and ensuring safety in operation: heating, ventilation and air conditioning systems, sanitary systems, gas leak detection systems, PSI extinguishing equipment, structure and platforms for maintenance, overhead cranes in each engine room, any other installations not nominated but mandatory for the proper operation and safety of the technological installation; * The electric generator in the configuration of the CHP units will be a synchronous electric alternator with the voltage of 11 kV and the grid frequency of 50 Hz; * Height of the flue gas chimney: minimum 20 m (according to the Decision of the framing stage no. 544 of 06.07.2023); * The operation of the plant will be done in compliance with the BAT requirements regarding NOx and CO emissions. NOx emissions < 75 mg/Nm3 and CO < 100mg/Nm3, at 15% O2; * Specific CO2eq emission of maximum 250 gCO2/kWh in relation to the useful energy produced; * The installation must be capable of operating with hydrogen mixed with natural gas, in a proportion of at least 20% vol.; * Guaranteed minimum availability of the high-efficiency cogeneration plant with thermal engines – 95% of the time; * The lifespan of the offered installation must be at least 25 years; * The bidder must be able to provide spare parts and any other consumable materials during the warranty period as well as during the post-warranty period, for the entire life cycle of the delivered installation. * In accordance with the RfG code established at European level and with the national regulations established by ANRE, the Bidder will present in the bid the equipment certificates, per synchronous generator unit/group, which certify compliance by performing type tests that highlight the fulfillment of the technical connection requirements specific to category D; * Each CHP unit will be equipped with a command, control and protection system, with data communication interfaces and I/O signals necessary for integration into the DCS/SCADA system of the new cogeneration thermal power plant;   *Note: All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa, after correction for the water vapour content of the waste gases, and at a standard O2 content of 15% in the case of gas turbines* |  |
|  | 6.5 Operating requirements The cogeneration plant with thermal engines will have the following operating characteristics:   * Thermal energy production: variable, tracking the profile of the thermal consumption curve for district heating; The installation must ensure the production of thermal energy in variable regime (thermal load between 0% and 100%), depending on the thermal consumption needs of the heating system. The thermal energy production of the installation will follow the thermal energy consumption of the district heating system; * Motorized CHP units will ensure continuous and stable operation in the widest possible electrical load range, with an operating load between 50 and 100%, without affecting the guaranteed performance; * Electricity production: in the band; * Electricity production will be discharged to the SEN through the 110kV CET Govora power station, belonging to Chimcomplex, according to a solution that will be established based on the correlation/optimization of the connection solution   For the supervision, monitoring and control of the technological and electrical processes at the level of the new thermoelectric plant, a local monitoring and control system will be created that will integrate all local automation, measurement and control systems related to the thermoelectric equipment:   * the automation panels related to the cogeneration plant with thermal engines – 3 units; * systems for measuring heat, natural gas, water, steam and electricity |  |
|  | 6.6 Thermomechanical equipment and installations**6.6.1 Cogeneration units with heat engines** 3 cogeneration units with thermal engines with an electrical power of approximately 10 MW will be installed (minimum 9MW, maximum 12MW each and respectively thermal of at least 8.7 MWt each).  The thermal energy in the case of cogeneration engines is obtained from the recovery of the heat produced during the operation of the piston engine, by means of modules that ensure the collection of the heat exhausted through the cooling circuit of the air/fuel mixture, the lubrication circuit, the engine block itself, as well as from the circuit of the combustion gases exhausted from the engine.  If the thermal load is not fully taken over by the heating agent, in order to avoid increasing the temperature of the coolant and consequently stopping the engine, the cooling of the engine must be provided separately by a cooling system.  The engine and generator are connected by a rigid coupling and together with the heat exchangers are mounted on a base frame. |  |
|  | The main components of the cogeneration module:  *Heat Engine*  It is a 4-stroke machine, with cylinders arranged in a V, with spark ignition and operation on natural gas, supercharged, delivered together with the generator. The engine is equipped with two-stage intermediate combustion air cooling. |  |
|  | *Medium Voltage Electric Generator Assembly*  It consists of the main generator, excitation and voltage regulator. |  |
|  | *Heat recovery unit assembly*   * Intermediate cooler (intercooler) stage I, type with finned pipes; * Intermediate cooler (intercooler) stage II, type with finned pipes; * Oil cooler, plate heat exchanger; * Engine block cooling water cooler, plate heat exchanger; * Flue gas heat exchanger, heat exchanger with pipes and jacket.   These exchangers are mounted in the vicinity of the engine, on the base frame, except for the exchanger on the flue gas circuit which is mounted next to it.  These heat exchangers are found within two main circuits necessary for the recovery of the heat produced by the engine:  *Intermediate cooling circuit stage II*  This circuit will discharge heat into the atmosphere produced by compressing the combustion air in the second stage of supercharging.  The circuit is equipped with a circulation pump, shut-off, regulation, protection, ventilation and emptying fittings. Since this circuit presents a danger of freezing being located outside the building, the heating agent is a water/glycol mixture (antifreeze).  *Primary water cooling circuit motor assembly*  This circuit is made up of all the heat exchangers listed above, except for the intermediate cooler stage II.  The intermediate cooler stage I and the engine oil cooler are located within the limit of the engine, being an integral part of it. For reasons of optimizing the thermal regime of engine operation, the temperature of the water in the primary circuit, at the entrance to the engine, will have to be a maximum of 70°C and will exit the engine with a temperature of about 85 °C. The water coming out of the engine is further conveyed to the flue gas heat recovery unit. This is a gas/water exchanger, of the type with jacket and pipes, located in the immediate vicinity of the engine and equipped with manholes (for cleaning pipes), nozzles for condensate exhaust, emptying, water inlet/outlet, flue gas inlet/outlet, etc. The water temperature at the outlet of this recuperator is 95°C.  The heat recovered from each engine will be transferred by means of a single heat exchanger. The heat recovery system in the motor circuit will include a group of 2 x 100% circulation pumps and the necessary set of control valves and automation sensors. The automation of the motor will ensure the coordination and control of all the coolers from which the heat is recovered.  The flue gases will be cooled and discharged to the chimney at a maximum temperature of 120 °C. The location and thermal insulation of the flue gas/water heat exchangers will be done so that the heat released by them does not affect the performance of the engine during the summer period. The circulation of water through the heat exchangers transferred to SACET will be ensured through the thermal agent pumping station. The water temperature in the heating circuit of the transfer exchanger will be 95°C per turn and 65°C on the return, for the reference case. The CHP unit will be able to ensure a maximum lap temperature of up to 110°C in the cold season.  For the purpose of an adequate individual control, return control valves shall be used. A thermal energy meter will be installed in the district heating circuit of each CHP unit. The heat recovered from the engine circuits, transferred to the 95/65 °C district heating circuit, represents the useful heat, quantified within the performance.  For operation at partial or no thermal load, a fault heat exchanger with cooling radiators is integrated into the primary circuit of the engine, which allows the heat to be exhausted into the ambient environment without reducing the electrical load. The secondary circuit of this fault changer is provided with a battery of cooling radiators, circulation pump, shut-off, protection, ventilation and emptying fittings. Since this circuit presents a danger of freezing being located outside the building, the heating agent is a water/glycol mixture (antifreeze). The sizing of this circuit will be carried out for the rated load for summer regime with an air temperature of 35 °C. |  |
|  | **6.6.2 Natural Gas Compressor**  For the cogeneration plant with thermal engines, if deemed necessary, gas compressors will be delivered so that each engine is assigned a compressor with the role of ensuring the working pressure of the engine. The natural gas supply pressure is 6 bar.  The main equipment of the natural gas compression system:   * Sound housing; * Metal frame support; * Compressor body consisting of 2 dynamically balanced rotors; * Electric drive motor; * Starter system; * Oil tank; * Filters on the oil and gas side; * Oil pumps; * Emergency valves and gas flow regulation; * Oil / gas separator; * Discharge gas cooler; * Adjustment and control system (with touch screen); * Gas leak detection system (with visual and audible alarms); * Fire extinguishing system; |  |
|  | **6.6.3 Pressure installations according to PED** The equipment, containers, pipes, fittings, safety accessories and accessories through which a pressurized fluid that falls under the scope of PED 2014/68/EU circulates, will bear the European CE conformity marking applied to the product and will be accompanied by the declaration of conformity and the certificate of conformity, together with all the documents that are necessary for the authorization and commissioning of the equipment according to the Romanian legislation (technical book, instructions for use of the equipment, etc.). The design, manufacture and manufacturing control for these installations will be carried out according to harmonised standards. |  |
|  | 6.7. Electrical installations and systems**6.7.1 Equipment and services at the expense of the supplier** The supplier will ensure:   1. design at FEED level of the electrical installations and systems related to the cogeneration plant with thermal engines; 2. delivery of the following equipment related to the cogeneration plant with thermal engines:  * synchronous generators as an integral part of the cogeneration container; * electric motors and frequency converters; * dedicated electrical panels for driving electric motors through or without frequency converters; * Cabinets for protection, control, control, automatic synchronization * arousal systems;  1. testing and commissioning of the electrical equipment and installations necessary for the continuous and safe operation of the cogeneration plant with thermal engines; |  |
|  | **6.7.2 Design requirements**  The electrical installations will be designed and executed in such a way that the decommissioning of any generator set or its network elements (11kV cables, step-up transformer and/or transformer of own services) does not cause the disconnection of other generating groups or of the entire cogeneration plant with thermal engines.  Electrical systems and installations shall be designed to operate properly under all load variations and climatic conditions, in both normal and emergency operation regimes of the installation, for a minimum life cycle of 25 years.  The complete installation, including auxiliary equipment driven by electric motors, shall be capable of operating without physical damage in emergency situations, under cumulative conditions of frequency in the field (47.5 .. 51.5) Hz and voltage up to 80 % of the rated voltage.  All electrical systems will be designed redundantly and in parallel, for the purpose of continuous and safe operation of the installation.  In no case can the failure of a single component of any auxiliary equipment of the installation, except for the failure of the main equipment itself, cause the disconnection of a unit or even of the entire plant. Redundancy for all plant equipment and components will be subject to approval by the Contracting Authority.  In the normal operation of the plant, the auxiliary power of 0.4kV and 6kV (as the case may be) will be provided by the generators of the plant. For the normal start-up of the generator sets and the installation, the electricity supply of its own services will be made from the 110 kV network through the power transformers provided at the thermoelectric plant.  In the event of any breakdown situation, in order to bring the plant to a safe shutdown state and to prevent damage to the plant's equipment during cooling, the plant will be equipped with a generator set (Diesel) with automatic start, if necessary.  In accordance with the proposed technical and technological solution, the Bidder will propose the concept of design and location of the necessary electrical systems and installations, explicitly mentioned or not in this document, which it considers necessary for the safe operation of the installation. The configuration of the electrical systems will be integrated with the concepts of instrumentation and control (I&C) systems.  The single single-wire scheme (all voltage levels) drawn up by the bidder for the entire cogeneration thermoelectric power plant will be part of the technical offer.  Deviations/deviations from the basic concept and in general from the specifications must be mentioned in the list of deviations and motivated.  Electrical systems and installations must include all equipment and appliances necessary for generators, heat engines and associated equipment. |  |
|  | *Electrical equipment and systems in the cogeneration plant with thermal engines*   * Synchronous generators of heat engines, with all related equipment (excitation system and automatic voltage regulation, automatic synchronization to SEN, control, generator protections, current transformers for differential protection of the generator and the cables connecting to the MV station, neutral treatment, etc.); * Electrical connections/cables from generators to the generator cells of MV substations/distributions and from MV cells of step-up power transformers to their MV terminals (not subject to this procedure); * MV station/distributions related to each generator set and at plant level (not subject to this procedure); * Dry power transformers for own services (not subject to this procedure); |  |
|  | *Auxiliary power supply systems of the cogeneration plant with thermal engines*   * Dedicated low voltage (LV) electrical panels; * Low-voltage emergency power supply systems (diesel group and emergency electrical distribution panels, inverter UPS systems and UPS voltage distribution panels (0.4kV or 230Vac) (not subject to this procedure as systems, but will be presented in the single single-wire scheme and in the FEED project); * 220Vdc DC power supply systems (stationary batteries, battery charging rectifiers, distribution boards) (not subject to this procedure as systems, but will be presented in the single single-wire scheme and in the FEED project); * Protection and command systems – automatic control and synchronization at the level of the generator set; * Motors and frequency converters (MV and LV);   Electrical cables between synchronous generators and its excitation, local control, and protection systems; |  |
|  | *General provisions, regulations, directives, guidelines*  The installations will be optimally designed and sized taking into account: a lifespan of at least 25 years, ease of installation and maintenance, safety and availability of the plant. Only tried and tested equipment and devices (no prototypes, no types with discontinued production or phasing out of production) should be provided.  The bidder will ensure that compatible spare parts can be supplied for all equipment and devices used, for at least 10 years after commissioning.  The equipment, installations and devices used must require low maintenance.  All equipment and materials will be new and of high quality. They must comply with the latest European and Romanian standards and IEC regulations, have CE marking.  All installations and their component parts must be designed in such a way that their operation does not cause excessive vibration. Electromagnetic compatibility must be ensured and electrical interference between electrical equipment and installations must be minimized.  The equipment used should be limited to the fewest possible types.  The electrical equipment and installations related to the thermoelectric power plant will comply with all the latest editions of European and Romanian laws and standards, technical regulations and norms, European directives, national codes and regulations of the transmission and distribution networks.  Electrical and control equipment located in potentially explosive areas shall be designed in accordance with applicable international or local standards defined for the appropriate area. The delimitation of all hazardous areas must be clearly documented by the Bidder and submitted for approval to the Contracting Authority. |  |
|  | **6.7.2.1 Electrical substation – MV distributions** (*not subject to this procedure – it is presented for information purposes*)  Within the integration project, medium voltage electrical stations/distributions will be delivered and installed to ensure the following basic functionalities:   * + the supply of electricity from the NES to the own services of the generating groups and of the plant, at the normal start-up of the groups/installations;   + synchronization of the generators with the SEN, evacuation of the electrical power generated by the generating groups of the thermoelectric power plant and isolation of the generating groups with their own services in case of major disturbances in the SEN (small island);   + the supply of electricity to the electricity consumers common to the entire plant through electrical schemes with two supplies and couplings between them, both medium and low voltage. In the normal operating scheme, both power supplies are in operation and coupling open. The MV and LV distribution panels will be equipped with AAR automation installations made with SIMATIC S7-1500 (Siemens) PLCs, for resupplying electricity consumers in the event of a lack of voltage on one of the power supplies. The schemes must be designed in such a way as to ensure the conditions for switching from one supply to another without passing through zero (paralleling the two supplies with the prior verification of the parallelism conditions). |  |
|  | **6.7.2.2. Low-voltage electrical panels** The general distribution boards will be designed and machined in a tested assembly type (TTA) system, with the 0.4kV switches that can be unplugged on the supply and coupling circuits and departures in the drawer system - unpluggable (fully unpluggable drawer).  The TTA system must be one intended for use in heavy industrial environments, chemicals and petrochemicals.  Reference standards: IEC 60439; IEC 60664.  Internal separation (according to IEC 60439-1 – Internal forms and separations): 4b.  The panels will be provided with AAR on the coupling, without automatic return, made with SIMATIC S7-1500 PLCs (Siemens). The return will be done manually, without going through zero by paralleling the two supplies. Through the designed electrical diagram and through the technical characteristics imposed on the power transformers, the design conditions for paralleling the two supplies will be ensured.  The single line diagram, the single-wire diagrams at each voltage level (HV, MV and LV) as well as the single-wire diagrams for ensuring the 220V direct current control voltage and the 230V alternating current uninterruptible voltage (UPS) will be included in the technical offer. |  |
|  | 6.7.2.3 Electrical systems for providing uninterruptible direct voltage and alternating voltage (UPS) voltages (*not subject to this procedure – it is presented for information purposes*)  The command, control and protection voltage of electrical equipment and installations is 220 V direct current.  The 220V direct current services related to: MV electrical substation/distributions, MV and LV AAR installations (low voltage electrical panels), synchronous generator protection cabinets, step-up transformer protection cabinets, internal service power transformer protection relays and SCADA RTU cabinets will be provided from a single system at the power plant level consisting of two 400 Vac/220 Vdc rectifiers (with battery discharge), a set of battery packs of adequate capacity and a 220Vdc distribution cabinet, a system designed in accordance with the regulations. An electrical cable connection will be made between the 220Vdc distribution cabinet of the power plant and the DC service cabinet of the 110kV Govora substation, sized to take over the maximum consumption of the powered cabinet in situations of failure.  The power supply of the automation installations and the PLC/DCS type distributed management and control system from the thermoelectric power plant will be provided by a single 230V uninterruptible power supply system consisting of two UPS of adequate capacity, with an autonomy of at least 30 minutes each at maximum consumption. UPSs do not run in parallel. Disconnecting a UPS must not cause the boiler or parts of it to shut down.  At the level of the thermoelectric power plant, a management system for the electrical power produced will be implemented on the integration project that can receive active power from the EMS SCADA system belonging to Transelectrica, with a direct effect on the active powers set at the level of each generator. |  |
|  | **6.7.3 Compliance of the generating units and the thermoelectric power plant with the network code and the ANRE orders regarding the connection of the generating units to the electricity networks of public interest** The cogeneration units with generator-turbine/engine group (genset) within the plant will comply with the provisions of ANRE Orders no. 72/2017 and 214/2018 regarding the Norm with the technical requirements for connecting synchronous generator sets (GGS) to the electricity networks of public interest, as well as the provisions of ANRE Order no. 51/2019 regarding the Procedure for notifying the connection of generating units and verifying their compliance with the technical requirements for connecting GGS to the electricity networks of public interest. Based on ANRE Order no. 79/2016 on the classification of power generating units, the motor-generator groups connected to the 110kV electricity grid fall into category D.  The following activities are also included for the purposes of the Bidder:   * + - 1. to submit to the Contracting Authority Annex 4 of ANRE Order no. 72/2017 completed and the required documents;       2. assessment of the conformity of the generating units in the cogeneration plant with thermal engines, part of the thermoelectric power plant, with the network code and ANRE order no. 51/2019. The report with the results of the tests specified in ANRE Order no. 51/2019 for category D, carried out on the simulated mathematical model, at the connection point to the SEN (including the capability of the fault passage generator sets (LVRT)), the certificates of conformity with the network code issued by a certification body authorized at the level of the European Union and the declarations of conformity issued by the producers will be subject to the approval of Transelectrica (OTS). Approval of test results and certification documents is a prerequisite for the test energization of the generating sets and the thermoelectric power plant. The Contracting Authority will transmit to the Bidder the data provided by Transelectrica regarding the SEN simulation at the connection point (minimum short-circuit power, R/X ratio). The complete mathematical model, mentioned above, is transmitted to the TSO, using software such as Eurostag and PSSE.       3. technical assistance in carrying out the A3 tests in accordance with ANRE Order no. 51/2019 on the verification of the compliance of the generating groups and the thermoelectric power plant with the technical requirements. These will be carried out by an ANRE authorized company certified A3, after a test program proposed by this company and approved by Transelectrica. The test report will be submitted to Transelectrica for approval. If necessary, the tests will be repeated or completed, depending on Transelectrica's requirements, until the final approval of the report and the issuance by Transelectrica of the certificates of conformity of the generating groups and the thermoelectric plant and the final operation notification. Mandatory, the control system of the generator sets must include the simulation module for carrying out the tests of compliance with the grid code, both at the level of the generator set and at the level of the cogeneration plant. The activation of the operating module in the "grid code" test regime is the responsibility of the specialist who provides the technical assistance on site on behalf of the Supplier. All costs of the specialist's presence on site during the testing period will be borne by the Provider.   Points a) and b) condition the obtaining of the technical approval for connection. |  |
|  | **6.7.4 Supply of electrical equipment; General requirements** The bidder will attach to the technical offer the technical specifications for all the main electrical equipment: synchronous generators.  In the manufacturing plants, the routine tests indicated by the applicable standards as mandatory will be carried out on all main electrical equipment: synchronous generators, LV distribution boards, protection cabinets, control, synchronization and/or excitation). The factory test bulletins will be attached to the technical book of the cogeneration plant with thermal engines.  The bidder will provide for the delivered electrical equipment and associated technical assistance services for assembly/installation, configuration, parameterization, on-site testing and commissioning services, all costs being included in the commercial offer.  All the documents necessary for the commissioning of the electrical equipment and systems, as well as for ensuring the warranty given by the manufacturer are the responsibility of the Supplier.  The bidder shall attach to the technical book of the installation the installation, operation and maintenance manuals and the multi-annual maintenance plans for all equipment, systems, electrical distributions, transformers, motors and electric generators supplied. |  |
|  | **6.7.5 Requested Software Package** The bidder will provide all the necessary software package for:   * parameterization of the protection relays and visualization of the events recorded by the relays through the oscilloperturbograph function; * Parameterization of frequency converters * configuration/parameterization of any equipment or component parts of an equipment or system that requires configuration/parameterization.   The software package will be standard, with valid licenses for all available functions. |  |
|  | **6.7.6 General requirements for the installation of electrical equipment** All the equipment and electrical systems related to the cogeneration plant with thermal engines are mounted indoors in spaces specially designed and built for the purpose of electrical rooms, in compliance with the norms for the design of the objectives in the energy field.  MV equipment, LV switchboards, direct current and alternating current services and protection cabinets, control control will be mounted in separate electrical rooms.  The power transformers for own and auxiliary services, in dry construction, will be installed in separate rooms/boxes.  In the electrical rooms, the conditions for indoor installation of the equipment will be ensured through the design and execution of HVAC and fire detection and signaling installations. The air conditioning and/or ventilation needs will be calculated for each room/electrical box depending on the heat released by the electrical equipment in operation in the respective electrical room.  HVAC equipment will ensure optimal operating conditions for the equipment installed inside. The failure of HVAC equipment, signaled in the SCADA system of the installation, must not cause the temperature inside the electrical room to increase above the maximum operating temperature of the electrical equipment mounted in that room, regardless of the outside temperature and the load/load of the equipment. |  |
|  | 6.8 Automation installations**6.8.1 General** The Supplier also has the following responsibilities in mind;   * Design at FEED level of the automation, command and control (SCADA) installation of the cogeneration plant with thermal engines; * Delivery of field equipment for the cogeneration plant with thermal engines within the battery limit; * Delivery of junction boxes for field equipment; * Delivery of the SCA Automatic Driving System (DCS / PLC SCADA) for the cogeneration plant with thermal engines, at the level of the generator set, in the architecture defined in chap. 6.8.3; * Delivery of fully machined automation cabinets (including internal communication cables) at equipment level (heat engines, compressors, etc.); * Delivery of fully machined central automation cabinets (marshaling, SCADA) (including internal communication cables), at the level of cogeneration plant with thermal engines; * Delivery of servers, operating stations and engineering station with all software application programs and related licenses included; * Delivery of all communication equipment included in local and central automation cabinets or mounted in dedicated communication cabinets for internal communication architecture and for carrying out the remote maintenance function; * Redundant PLC/DCS for the integration of the cogeneration plant with thermal engines in the SCADA of the Cogeneration Plant;   *Note: SCADA at the level of the Cogeneration Plant (not subject to this procurement), will integrate the component and common installations (utilities, heating agent, etc.).* |  |
|  | **6.8.2 Instrumentation****6.8.2.1. Common requirements** All metering systems that enter into commercial transactions will have mandatory MID/BRML certification.  For the safe operation of the installation, the measured parameters of vital importance (temperature, flow, pressure, level, etc.) will be provided with a minimum of two measurements.  Where required, field instrumentation shall be protected in protective boxes. If necessary, the heating will be done through a thermostatic electric system.  *General technical characteristics for field equipment*  Explosion hazard area: according to the zoning of the plant  Ambient temperature: -25...+50°C;  The CE marking, declaration of conformity and certificates must comply with:   * Machinery Directive 2006/42/EC; * ATEX Declaration of Conformity and Examination Certificate: 2014/34/EU; * EMC Declaration of Conformity: 2004/108/EC - EN 61326 Industrial; * LV Declaration of Conformity: 2014/35/EU; * Directive 2014/68/EU Council Directive on the approximation of the laws of the Member States relating to pressure equipment - PED * Material certificate: type EN 10204 according to project specifications; * Hydrostatic and leakage test certificates: 3.1; * Calibration certificates and documents; * Overpressure protection; * SST Label Plate.   All field devices will be electronic, powered and grounded by the system to which they are connected. Analog measurements are preferred and must use 4 - 20 mA signals with a nominal power supply of 24 V DC.  *Power supply*  Instrument Power Supply: 230V 50 Hz  Solenoid valves: 24 V dc.  *Electrical connections*  All electrical cable entries must be 1/2"-NPT (female), and connections must be made through screw terminals.  *Units of measurement:*   * Density kg/: m3 * Mass flow: kg/h * Volumetric flow rate for liquids: m3/h * Volumetric flow rate for gas: Sm3/h at 15°C and 1.013 bar * Volumetric flow rate for air: N2 Nm3/h at 0°C and 1.013 bar * Molecular Weight: kg/kg mol * Pressure gauge: barg, mbarg, mm wg * Absolute: bar, mbara, mm wg * Differential: bar, mbar, mm wg * Vid: Mbar * Temperature: °C * Level: %, m, mm * Viscosity dynamics: cP = mPa.s * Kinematics: Cst   *Ambient conditions*  The instruments must be able to withstand the shock accelerations generated during transport and the accelerations and forces generated by a seismic event.  The processing surfaces will be partially closed and heated to reduce the worst effects of the weather. However, situations will arise, for example at start-up, when outdoor ambient conditions will apply.  Instruments located in the areas of the processing plant shall be suitable for installation in the environment under the conditions specified in the Environmental Data Sheet.  All instruments must be designed to survive a cold resistance test at minus 40 oC. The central control rooms and equipment rooms will be equipped with air conditioning.  *Hazardous Area Certification*  All field-mounted instruments must be certified, suitable for use, according to European standards (ATEX: 2014/34/EU, depending on the zoning of the installation.  Instrumentation equipment installed in areas classified as hazardous must be selected and installed in accordance with IEC 60079.  *Protection from environmental factors*  All instruments located in the installation, including junction boxes and local control panels, must be weatherproof, the degree of protection according to the technical characteristics specific to each appliance must be IP 66 and IP65, in accordance with the international standard EN 60529.  Tools, actuators, instrument housings, junction boxes, cable tray, etc., shall be 316 stainless steel or aluminum coated with epoxy paint. Full traceability and certification of materials are required for "in-line" and "on-line" instruments to the same standard as that specified for the line or equipment to which they are connected. Material certification will be provided for all pressure retaining parts according to EN 10204 3.1B.  *Labels and tool nameplates*  All instrument equipment items will be identified with a label number. This number will be displayed on the PEFS (Process Engineering Flow Diagram) and listed in the index of the instrument and in the respective instrument application. The label number of the instrument will be indicated on all relevant documents and drawings.  All instruments, system cabinets, junction boxes, etc. shall be provided with nameplates showing either the full label number and service description, or only the label number.  Each individual field tool shall have a stainless steel label engraved with the full number of the tool label permanently attached either by stainless steel rivets or with 0.7 mm stainless steel wire.  *Electromagnetic compatibility (EMC)*  All equipment or systems containing electrical or electronic appliances must meet the following electromagnetic compatibility requirements:   * The emission performance shall be in accordance with IEC 61000-6-2 - Electromagnetic Compatibility (EMC) - Part 6: Generic Standards - Section 2: Immunity for Industrial Environments. * The immunity performance shall be in accordance with IEC 61000-6-4 - Electromagnetic Compatibility (EMC) - Part 6: Generic Standards - Section 4: Emission Standard for Industrial Environments. |  |
|  | **6.8.2.2. Measurement and metering of the thermal energy produced** In order to measure the flow, volume and thermal energy of the thermal agent produced by the cogeneration plant with thermal engines, as well as the internal consumption of thermal agent for internal services (demineralized water, demineralized water preheating, etc.), meters will be provided for:   * each heat recovery unit for the production of hot water (WHTR), corresponding to each recovery boiler; * each steam/water heat exchanger for district heating (district heating boiler).   Electronic meters with the following specifications will be used:   * Technology: Combination meter * Certification: MID, BRML * Accuracy class: 2, according to EN 1434 * Power supply: from battery, min. 10 years * Communication: M-Bus * Integration interval: 2 seconds * Configuration: Ultrasonic Flow Meter, Temperature Sensors, Electronic Integrator * degree of protection: minimum IP54 * Thermal agent temperature: 2 ... 130 °C   The meters will be sized by the bidder accordingly with the installed energy capacities, in compliance with the regulations on the means of measurement. The flow meters will be without moving parts, ultrasonic type, mounted on the tour pipe. The meters will include diagnostic and monitoring functions of flow, volume, temperature, power, thermal energy, operating hours, errors, with the memorization of events together with the time stamp. The meters will be compatible with the data reading and exchange system with the DCS/SCADA system proposed for the management and supervision of the plant.  The meters will have the CE conformity marking, will have MID/BRML approval and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. The meters will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | **6.8.2.3. Measurement and metering of consumed natural gas**  For the measurement of the flow, temperature, pressure and volume of natural gas consumed by the heat engines in the composition of the cogeneration plant with heat engines, electronic meters with the following specifications will be used:   * Technology: Turbine/Piston * Certification: MID, BRML * Accuracy class: maximum 1% * Rangeability: 1:20 * Power supply: from battery, min 10 years * Communication: RS485- Modbus RTU or TCP * configuration: flow meter, temperature + pressure sensors, * electronic volume corrector * degree of protection: IP54 * Fluid temperature: 0 ... 50 °C   The meters will be sized by the bidder accordingly with the installed energy capacities.  The meters will have the CE conformity marking, will have MID/BRML approval and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. The meters will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | **6.8.2.4. Measurement and metering of the thermal energy of the make-up water** To measure the flow, volume and thermal energy of the make-up water, a thermal energy meter with the following specifications will be used:   * Technology: Combination meter * Certification: MID, BRML * Accuracy class: 2, according to EN 1434 * Power supply: from battery, min. 10 years * Communication: M-Bus * Integration interval: 2 seconds * Configuration: Ultrasonic Flow Meter, Temperature Sensors, Electronic Integrator * degree of protection: minimum IP54 * Thermal agent temperature: 2 ... 130 °C   The meters will be sized by the bidder accordingly with the installed energy capacities, in compliance with the regulations on the means of measurement. The flow meters will be without moving parts, ultrasonic type, mounted on the tour pipe. The meters will include diagnostic and monitoring functions of flow, volume, temperature, power, thermal energy, operating hours, errors, with the memorization of events together with the time stamp. The meters will be compatible with the data reading and exchange system with the DCS/SCADA system proposed for the management and supervision of the plant. The meters will have the CE conformity marking, will have MID/BRML approval and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. The meters will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | **6.8.2.5 Measurement and metering of treated water** For measuring the flow rate and volume of treated water (softened water, demineralized water), water meters with the following specifications will be used:   * Turbine / Ultrasonic / Electromagnetic Technology * Certification: MID, BRML * Accuracy class: 2 * Standard: ISO 4064-1:2014 * Power supply: from battery, min. 10 years * Communication: M-Bus * Configuration: Flow meter, communication interface * degree of protection: minimum IP54 * Water temperature: 2 ... 30 °C   The meters will be sized by the bidder in accordance with the installed flow capacities, in compliance with the regulations on the means of measurement. The flow meters will be equipped with a hermetic totalizer pre-equipped with a system for detecting and transmitting flow information. The communication interface will be interchangeable. The meters will be compatible with the data reading and exchange system with the DCS/SCADA system proposed for the management and supervision of the plant.  The meters will have the CE conformity marking, will have MID/BRML approval and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. The meters will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | **6.8.2.6. Continuous emission measurement system (CEMS)** The system must be certified for the permanent measurement of gas emissions (NOx, CO and SOx) and exhaust gas parameters (temperature, oxygen content, exhaust gas flow volume) at the chimney discharge according to the Romanian legislation (Rules on initial measurements and operational monitoring of emissions of substances into the atmosphere from stationary sources of pollution and on the conditions for their implementation, Official Journal of the EU No. 105/2008 or Romanian Legislation) is installed. The installation and operation of the equipment must comply with SIST BS/EN 14181 - ISO/IEC 17025 standards  Within the framework of the system of permanent measurements and the automation system, the evaluation of the measured values and the conversion to the prescribed ones, the concentration of O2, for the calculation of half-hour values and for archiving will be applied.  The CEMS system will have QAL 1, 2 and 3 certifications. |  |
|  | **6.8.2.7 Technical specifications for sensors and transducers** *Vortex flow meter:*   * Explosion protection type: according to the zoning of the installation; * Mechanical protection type: IP66; * Sensor material: 316SST; * Maximum permissible pressure drop per sensor: 0.2bar; * Measurement accuracy: ±1 % of the flow range; * Repeatability: ±0.1 % of the flow range; * For gases, the compensation version with built-in pressure and temperature will be chosen; * Cable entry glands: 1/2" – 14 NPT; * Output signal: 4...20 mA HART; * Loop Power: 10 - 42 Vdc; * LCD display: Yes; * Transmitter variant: built-in (integer); * Electrical housing material: polyurethane – painted aluminum; * Vibration limits: according to IEC 60068-2-6. * They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. They will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | *Pressure transducers***:**   * Explosion protection type: according to the zoning of the installation; * Mechanical protection type: IP66; * Process connection: according to the manufacturer's sizing results. * Material of components in contact with the environment: 316SST or ceramic; * Cable entry glands: 1/2" – 14 NPT; * Measurement accuracy: ±0.1% of the range; * Turndown: 100:1; * Stability: ±0.2%; * Output signal: 4...20mA HART; * Loop Power: 10 - 42 Vdc; * Electrical housing material: polyurethane – painted aluminum; * Zero stability: ±0.25% from URL; * LCD display: Yes; * For transducers where the connection to the process is made with 1/2" NPT, batteries with two AISI 316SS valves will be taken:   a 1/2" - NPT-F to process;  a 1/2" - NPT to Vent & Drain;   * They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. They will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | *Level indicators:*   * Vibrating fork type; * Material of components in contact with the environment: 316SST; * Connections to machinery: according to the project; * cable: 1/2" – 14 NPT; * Electrical housing material: polyurethane – painted aluminum; * Output signal: 2 x SPDT relay type contact(1NC+1NO), 230Vac, 50Hz, 10A, silver-plated contacts. * Mechanical protection: IP65. * They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. |  |
|  | *Local pressure indicators:*   * Measuring element type: Bourdon; * Materials in contact with the environment: AISI 316SS; * Dial material/ glass material: AISI 316SS/ tempered glass; * Dial diameter: 160mm; * Mechanical protection: IP65; * Accuracy: ±0.5%; * Vibration resistant version: according to the project; * For pressure gauges where the connection to the process is made with a G1/2" thread, a tap with plug and purge – AISI 316SS will be used; G1/2" for the process and G1/2" for Vent&Drain. * They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. They will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | *Temperature transducers:*   * Explosion protection type: according to the zoning of the installation; * Mechanical protection type: IP65; * Connection to the process: according to the project; * Protective sheath: 316 SST material; * Immersion length: according to the project; * Thermoelement type: Pt 100 or type K thermocouple; * Electrical housing material: polyurethane – painted aluminum; * Measurement accuracy: ±0.3°C; * Electrical connection: with 2, 3 or 4 wires; * Cable entry glands: 1/2" – 14 NPT; * Loop power: 10 – 42 Vdc; * Output signal: 4...20mA HART; * Mounting variant: remote mounting; * Temperate climate protection.   They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. They will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | *Local temperature indicators with bimetal:*   * Materials in contact with the environment: AISI 316SS; * Dial material/ glass material: AISI 316SS/ tempered glass; * Dial diameter: 160mm; * Protective sheath: 316 SST material; * Process connection: according to centralizers "Temperature transducer list"; * Measuring range: according to the centralizer "Temperature transducer list"; * Mechanical protection: IP65; * Accuracy: ±1% * Dial type: foldable. * They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. They will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | *Level transducers based on differential pressure:*   * Explosion protection type: according to the zoning of the installation; * Mechanical protection type: IP66; * Material of components in contact with the environment: 316SST; * Cable entry glands: 1/2" – 14 NPT; * Measurement accuracy: ±0.1% of the range; * Turndown: 100:1; * Stability: ±0.2%; * Output signal: 4...20mA HART; * Loop Power: 10 - 42 Vdc; * Electrical housing material: polyurethane – painted aluminum; * Zero stability: ±0.25% from URL; * LCD display: Yes; * Pipe Fittings: Yes; * They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. They will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | *Level transducers with immersion or radar with waveguide:*   * Explosion protection type: according to the zoning of the installation; * Material of components in contact with the environment: 316SST; * Data required for sizing: according to "Table with technological parameters for * Connection type: side; * Wind: 1/2" – NPT – F; * Drain: 3/4" – NPT – F; * Process connection valve type/ size: according to the project; * Mechanical protection: IP65. * Output signal: 4...20mA HART; * Electrical housing material: polyurethane – painted aluminum; * Loop Power: 10 - 42 Vdc; * Cable entry glands: 1/2" – 14 NPT; * LCD display: Yes; * It will be delivered with immersion + immersion camera + transmitter.   They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. They will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | *Multivariable transducers:*   * Explosion protection type: according to the zoning of the installation; * Mechanical protection type: IP66; * Material of components in contact with the environment: 316SST; * Cable entry glands: 1/2" – 14 NPT; * Measurement accuracy: ±0.1% of the range; * Turndown: 100:1; * Stability: ±0.2%; * Output signal: 4...20mA HART; * Loop Power: 10 - 42 Vdc; * Electrical housing material: polyurethane – painted aluminum; * Zero stability: ±0.25% from URL; * LCD display: Yes; * Connection to the process: battery with three AISI 316SS valves each: * 1/2" - NPT-F on "+"; * 1/2" - NPT-F on "-"; * 1/2" - NPT to Vent & Drain.   They will have the CE conformity marking and will be manufactured in accordance with the regulations and standards specified in the CE declaration of conformity. They will be accompanied upon delivery by an initial metrological verification bulletin. |  |
|  | *Fan ON/OFF:*   * The ON/OFF valves will be fully equipped from the factory with: * connecting tubing between components; * solenoid valve; * limit switches; * metal air filter with particle retention ≤ 5 microns with the possibility of pressure setting and equipped with a pressure gauge; * Explosion protection type: according to the zoning of the installation; * Mechanical protection type: IP66; * Body material: according to the design (for stainless steel: type 1.4408, A 351 CF 8M or other equivalent materials, for STEEL: type ASTM/A216-WCC); * Material of internal parts and rod: INOX type 1.4409, CF 3M, 316L or other equivalent materials (springs must be made of Stainless Steel); * Packing: PTFE with carbon; * Escape Class: VI * Pneumatically operated tap supply pressure: maximum 5.5 bar; * Pneumatic servo motor position: top, with return spring; * Adjustment feature: ON/OFF(maximum closing/opening time 5s); * Fail position: according to the project; * Solenoid valve supply: 24 Vdc, (low power); * Solenoid valve type: 3/2-way universal; * Solenoid valve body material: Stainless Steel; * Solenoid valve working fluid: instrumental air; * Limit switch mounting: mounting on the tap servo motor with local position indication; * Limit switch contacts: SPDT NO/NC silver-plated; * Contact limit switch type: mechanical; * Local position indication : Yes ; * Electrical housing material: aluminium. |  |
|  | *Control valves:*   * The ON/OFF valves will be fully equipped from the factory with: * connecting tubing between components; * positioner; * metal air filter with particle retention ≤ 5 microns with the possibility of pressure setting and equipped with a pressure gauge; * if applicable, a solenoid valve that complies with the characteristics described in the ON/OFF valves; * Explosion protection type: according to the zoning of the installation; * Mechanical protection type: IP66; * Body material: according to the design (for stainless steel: type 1.4408, A 351 CF 8M or other equivalent materials, for STEEL: type ASTM/A216-WCC); * Material of internal parts and rod: INOX type 1.4409, CF 3M, 316L or other equivalent materials (springs must be made of Stainless Steel); * Packing: PTFE with carbon; * Escape Class: VI * Pneumatically operated tap supply pressure: maximum 5.5 bar; * Pneumatic servo motor position: top, with return spring; * Adjustment feature: ON/OFF(maximum closing/opening time 5s); * Fail position: according to the project; * Regulating feature: recommended by the manufacturer so that the valve works between 60-80%; * Positioner output signal: 4...20 mA HART, 2 wire device, reverse, polarity protection; * Positioner input impedance: ≤8.2V; * Positioner feature: adjustable; * Hysteresis: ≤0.3%; * Sensitivity: ≤0.1%; * Air consumption: ≤100l/h; * Electromagnetic compatibility: * According to EN – 61000-6-2; * According to EN – 61000-6-3; * According to EN – 61326-1; * Vibration immunity: ≤10g in the range of 10 to 2000 Hz. |  |
|  | *Direct pressure regulators:*  The technical requirements of the project centralizers will be respected. |  |
|  | **6.8.3 SCA Automated Driving System (DCS/PLC SCADA)****6.8.3.1 System architecture** The architecture of the automated driving system is largely made up of local automated driving systems (PLC / DCS) of various installation equipment (e.g. thermal engines, compressors, etc.), connected to the input/output signals from the field instrumentation. They will communicate via fiber optics and communication protocols with the higher hierarchical system: operating station, servers. Each will be equipped with HMI; They will be able to be ordered from HMI and local operating stations.  The upper hierarchical level consists of operating stations and servers.   * The process server will be in redundant configuration; * The operating station will communicate directly with the existing control units so that the eventual non-functionality of the redundant server does not jeopardize the safe operation of the installation * Ensuring the training of the personnel operating and administering the control system; * Mandatory software packages must allow: * Operation and configuration of applications (control algorithms, graphical interface, alarms, trends, reports, events, etc.); * Preventive maintenance of the instrumentation; * Calibration of instrumentation; * Diagnosis and improvement of the performance of control loops; * Testing the process configuration by simulating the process values; * Diagnosis of the operation of the control system.   The solution proposed by the bidder will be accompanied by all the necessary software licenses for the configuration, testing, modification, data archiving and use of the system described in this specification, including operating systems, I/O user licenses, redundancy licenses and any other type of license required.  The version of the software offered will be the last available from the manufacturer and in addition, if during the project, the bidder launches a newer version, compatible with the delivered equipment or hot-fix updates appear, they will be made available to the beneficiary with the appropriate licenses and the respective updates will be made on the software that is installed at the beneficiary, so that on the boot date, the system is running the latest available version.  All existing licenses installed on the current system will be migrated to the latest version available.  All licenses, for any software package, will be for an indefinite period of operation.  The bidder or its specialized subcontractor has experience in implementing at least one DCS system for thermoelectric power plants of comparable capacities and configurations that include hardware and software elements.  The automation installations/systems shall be designed in such a way as to achieve availability and performance parameters in the respective operating mode and to meet the specified performance criteria regarding the operating mode and service life. The systems will be built and installed in a systematic and logical manner, with the possibility of further addition and expansion.  Cabinets and junction boxes will contain a volume of approx. 20% reserve of available capacity. A random defect in equipment, hardware or software should never cause a danger to personnel, the environment or the plant. Consequently, the system must have the necessary redundancy. |  |
|  | **6.8.3.2 Operating Interfaces** These components have as their main purpose to allow the operation of the technological process, by ensuring the possibility of monitoring and controlling all technological parameters as well as the visualization of process and system alarms, trends, histories, events, reporting, etc.  The operating interface will fully preserve the mode of representation and operation of the operating screens so as to ensure the transfer with the minimum possible impact on the human factor.  All operating screens will be upgraded/migrated so that their functionality is not affected by the hardware changes made. Substantial changes to the process interface automatically involve ensuring the training of process operators and engineers. In this respect, the bidder must consider allocating an appropriate time for a thorough explanation of how it operates. |  |
|  | **6.8.3.3 Control System Administration Interface** The main purpose of this component is to allow changes to be made in the logic of operation of the technological process as well as on all components of the control system, by ensuring the possibility of accessing all the parameters of the hardware equipment that make up the DCS system. Thus, this control system administration interface will allow non-exhaustively the configuration or modification: of the operating logics, of the parameters related to the controllers, of the communication interfaces, of the redundancy modules, of the input/output processors, etc.  The control system administration interface will fully preserve the representation mode (Functional Block Diagram – FBD Language) and operation of the process logic so as to ensure the transfer with the minimum possible impact on the human factor. Substantial modification of the control system administration interface automatically involves ensuring the training of system engineers. In this respect, the bidder must consider allocating an appropriate time for a thorough explanation of how it operates. |  |
|  | **6.8.3.4 Hardware assembly and software installation work / PIF** The works will be executed by the bidder and will consist of:   * Installation of hardware equipment, computers, monitors and interconnections between them and the process switches * Installation of basic software packages * Installation of configuration software * Modification of configuration software upon notification of inconsistencies with the initial project * Off-line testing of automated driving system * Commissioning / start-up of a new automated driving system   All hardware assembly and software installation works will be carried out as quickly as possible so as to minimize the interruption of the operation of the technological installations.  Before the start-up, the following phases must be undertaken:  *Factory Acceptance Test (FAT)*  Acceptance test of the system for which 5 days are allocated.  *Site Acceptance Test (SAT)*  The shutdown phase involves the installation of the new operating stations, the redundant server, the process switches in the new thermostatic cabinet, as well as the laying of all communication and power supply cables as well as all other additional elements such as mice and keyboards, Hirschmann media converters.  Connecting new communication cables to process switches and verifying that the new configuration results from the upgrade are working properly.  The shutdown phase will have a maximum interval of 10 days.  *Commissioning and System Startup*  Commissioning support for the actual start-up for which 3 days are allocated. The bidder will provide all the documentation necessary for the operation of the delivered equipment and installed software packages. |  |
|  | **6.8.3.5 Training of beneficiary personnel** The bidder undertakes to provide services for the training of the operating staff within the sections in the conditions of operation with the new process software as well as of the system engineers involved in its management. It will also cooperate with system engineers and provide all information requested by them. |  |
|  | **6.8.3.6 Purpose of the system** The purpose of the process control system is to control the plant safely and efficiently, protect personnel and protect plants and equipment, help prevent environmental pollution, and minimize process downtime.  The process control system achieves its objective by:   * automatic detection of process conditions and equipment operation to keep the process in normal operating conditions; * provision of local and remote manual facilities for the control and operation of the plant and equipment; * providing audible and visual alarm information to alert the operator to events that may require action and to enable the operator to assess the condition of the equipment; * provide HMI interfaces to the instrumented fire and gas and safety system and other third-party systems; * recording alarms and events; * Generate and store essential process data to enable histories. |  |
|  | **6.8.4 Process Control Design Philosophy****6.8.4.1 Architecture** *General*  The process control system will be designed to integrate all control actions and provide the operator with an integrated display and control interface. The DCS will also allow for boot changes, input inhibitions, and system reset to other systems through the DCS operator workstations.  The DCS continuously monitors and controls the plant-specific processes.  The DCS modules (logic program and system components) must be installed in the room of the local equipment.  The DCS shall perform automatic control actions by means of the control algorithms configured in the DCS. The control of complex equipment, such as turbines and compressors, will be carried out by the control systems of the respective unit. The focus will be on limiting the number of third-party PLCs and developing an open, centralised control infrastructure. The instrument signals on the packaged equipment must be fully integrated with the DCS. Third-party PLCs/controllers will transmit diagnostic and processing information to the DCS via a serial communication interface (for small systems wired links can be used instead of a serial link).  The DCS together with the operator's workstations will be the single window to the plant, integrating all the information from the field tools and will present it to the operators in a coherent and user-friendly way. The goal is to achieve uniform and equal peer-to-peer control and information flow between systems to optimize efficiency, control, and costs, without overwhelming or confusing the operator.  Process control can be implemented through a number of different technologies, for example:   * Local controllers; * Programmable logic controllers (PLCs); * Distributed Control Systems (DCS); * or a combination of the above.   The selection of the system architecture will depend on a number of considerations, such as:   * All DCS components must be microprocessor-based systems, the DCS must be implemented in a common hardware and software platform that can be proven. * Process sequences, non-safety related process locks, and logic functions will be executed in DCS. |  |
|  | *Soft configuration*  The logic program must collect process parameters through the I/O modules, generate control outputs in response to deviations from the set points according to the preconfigured control algorithms, and then send the derived correction signals through the output modules.  The logic program shall also temporally mark the events at the analogue and digital inputs for recording in the operator's workstations and the sequence of the event recorders. The logic server must be able to scan and process the parameters of the installation at a normal rate of once per second, as well as at a fast rate of once per 0.1 seconds for processes that require faster responses. A total of 2% of all control loops should be considered fast loops. Scan times will be reviewed and optimized in the detailed design stage. |  |
|  | *I/O parameters*  The following considerations must be taken into account when planning and designing the system:   * if the process equipment is redundant or not (e.g. pump A, pump B), the I/O of each equipment must be installed on an individual board and, if possible, on individual racks; * signals from a process unit or process type to be connected to the same controller; * the stroke limiters of each valve must be connected to the same card; * signals from a unit of equipment are connected to the same card; * Spare I/Os will be distributed among the I/O cards; * Redundant channels don't have to be on the same card. Rack-to-rack redundancy is preferred; * The backup signals for each unit and each type of signal must be taken into account.   All inputs and outputs must be short-circuit resistant and individually insulated to ensure the insulation of the electrical inputs.  I/O modules shall be provided with the indication of the technical condition of the module and the I/O points on it by LEDs or other means of indication.  Alarms from galvanic isolators can be common for each back panel and for each cabinet. |  |
|  | *Redundancy*  Redundancy shall be ensured in the event that the complete failure of the DCS would have a major impact on the safety and economy of the installation. The redundancy will be at the level of processors, communication, power supplies.  If CPU redundancy is required, the CPU will be double-fully redundant, with one unit running and the other on standby. In the event of a malfunction of the unit in operation, the standby mode automatically takes control of the plant's processes without interrupting the process control. No manual operator intervention is required to put the CPU online into standby. It must be possible to manually change the selection of CPUs.  Redundancy will be provided to support online maintenance and minimise annoying triggers. |  |
|  | *Time synchronization*  Time synchronization between the DCS and the systems interfaced with the DCS is provided by the DCS, which shall be the primary time director. |  |
|  | *System performance*  The performance of the DCS shall be designed to meet the operational requirements of the processing facility. The DCS for each site (technological process) must be able to meet the following minimum performance criteria:   * System network speed: as fast as possible, minimum 100 Mb/s for the control network operator, minimum 10 Mb/s for the control installation level * Graphic display: 1 sec. dial time for display backgrounds and an additional 1 sec. for inserting dynamic values. * Alarm presentation: visible at the operator's workstation within 1 sec. of detection at the field interface. * Operator-initiated action response: 2 seconds after pressing the key to return to the change in the state of the device controlled from the screen. * Response times for manual operator commands must not exceed one second, e.g. for setpoint changes. * Closed loop and logic control: maximum 1 second in response to a change in the state of the installation. * Alarm timestamp resolution: 100 milliseconds * Analog Scan Rate: Maximum 1 second in response to a change in plant status. * Digital Scan Rate: 100 milliseconds * Call Trend Display: 1 sec. for display backgrounds and an additional 1 sec. for displaying information with inserting dynamic values. * External communications: minimum 19200 bits per second for systems over serial interfaces * Operator control: 2 seconds from workstation to DCS output   All performance requirements must be met under normal operating conditions and under conditions of maximum load.  If existing process control systems need to be modified, the impact of the changes on the performance of the system must be assessed. |  |
|  | *System Capacity*  The design of the process control system should allow for a minimum of 30% backup I/O capacity at the time of shipment.  The design of the DCS should also allow for future additions. The DCS shall be designed for 20% physical and CPU expansion capacity in the following areas:   * rack space (additional I/O can only be added with the addition of I/O cards and cabling); * HMI (additional graphics, function blocks, data points without additional hardware); * I/O expansion (adding new I/O without stopping communication networks); * power supplies (they must be sized with spare capacity or allow modular expansion). |  |
|  | *Power supplies*  Block power supply provides a centralized power supply and distributes power to the system's power modules.  The process control system will receive two power supplies from at least one UPS. The inputs in the process control system must have an isolation switch. UPSs must have a minimum of 15 minutes of battery backup. The requirements of the project will determine whether one or more UPSs are sufficient (a simple application, such as a collection park, would need only one UPS).  Power supplies should be distributed in separate streams containing protection in different parts of the DCS and field I/O to minimize the possibility of common module failure. |  |
|  | *Interconnections*  All DCS inputs to other systems (e.g. motor control systems) shall supply the coil of a hermetically sealed interposition relay (installed on the IRP) from which a potential-free contact will be opened to ensure the resulting tripping.  All inputs to the DCS from other systems must be through a potential-free contact that will open upon a trigger.  This ensures segregation between systems and eliminates potential grounding circuit issues. |  |
|  | *Cabinets*  Enclosures used to house DCS parts must be mounted in a controlled environment and must have a minimum ingress protection (IP) of IP42 in accordance with SR EN 60529.  Cabinets used for adjusting and terminating field cables shall be arranged in such a way as to ensure separation between analogue, digital and intrinsically safe signals (Ex ia or ib). Separation between signals operating at different voltage levels must also be ensured, voltage signals greater than 50 V DC, 60 V AC must be provided with mechanical protection to prevent accidental physical contact.  If it is found that the I/O voltage of the DCS is low enough, the separation cabinet can be combined with the system cabinet. |  |
|  | *Software*  The logic programs will be provided in accordance with SR EN 61131.  Software lifecycle activities (e.g. design, development, provision and maintenance) will be carried out in accordance with SR ISO/IEC 90003. |  |
|  | *Electromagnetic compatibility (EMC)*  The safety system must not be affected by radio frequency signals from portable radio units and comply with SR EN 61000-6-3. |  |
|  | *Control System Distribution*  If parts of the process are set aside and scattered over large areas, if the DCS is located in a central location it may be impractical. In this situation, remote I/O and control modules should be used.  Communication between different parts of the DCS should be via fibre optics, using open communication standards, e.g. MODBUS and Ethernet OPC.  DCS communication networks that include processor-to-processor and processor-to-I/O will be redundant. |  |
|  | **6.8.4.2 Main functions** The new Plant Automation System will have the equipment and equipment associated with the Plant:   * Industrial SCA automated driving system, with third-party connection possibilities; * Control system for connection to the Local Control System of Heat Engines (black boxes); * Gas skid control system; * Control system for the general management of the new Thermoelectric Power Plant (*not subject to this procedure, it will be purchased in the integration project*); * Industrial Ethernet data bus "process bus" and "terminal bus" as part of SCA and communication with local control; * OPC server for Ethernet network communication with the Information Management System; * Communication with the electrical installation via IEC 61850;   SCA will be used by unit operators allowing them an instant overview of the entire facility. SCA is also used by the operator responsible for switching manipulations that supervise the setting values and real-time data on electricity and heat production, production schedule and electricity, operating status of generator sets driven by heat engines.  The control and supervision of the NPP will be carried out by the dedicated staff in the central control room for the entire NPP. The control and supervision of GTs, HRSGs, steam turbines, Generators, Power Plants, Auxiliaries, Common Power Plants and the existing CO boiler and other parts of the NPP will be carried out by SCA.  The control system equipment (SCA) must be located in the dedicated equipment in the control room.  The local system will ensure the safe operation of the main equipment, including automatic start and stop, as well as the following minimum functions, but will not be limited to these:   * starting and stopping, supervision, setting references for the main technological equipment; * control and regulation for water supply circuits for degassing; * making protections, alarms and interlocks; * surveillance with indication of the condition of the main equipment; * indication and recording of the main parameters; * preparation and listing of reports on the operation of the installation; * generating logs; * long-term data storage; * supervision of basic performance; * managing and displaying alarms; * display trends for selected process data; * recording and reporting of the list of events. |  |
|  | **6.8.4.3. General requirements for the control system (SCA)** The main tasks of the SCA are the automatic starting, operation and shutdown of the heat engines/GenSets and other equipment in the cogeneration plant with heat engines, execution of all starts/stops due to the operation of the protection.  For the complete system, a digital structural control system with hierarchical structure, modular process-technical division, open and uniform bus signaling systems, and operating philosophy, should be provided. This system will include all the functions of a modern control system, such as engineering, operation and control, safe management of the system without continuous observation and archiving, as well as data acquisition for external areas and diagnostic system.  All software must have a currently valid license. In case of system provisioning, the software is to be provided in the LATEST VERSION RELEASED AND TESTED TO BE STABLE, including the appropriate hardware implementation.  All licenses for system software (operating systems) and application software will be included. This includes any third-party licenses. For all programmable devices that require dedicated equipment and software, then documentation and licenses as well as the set of hardware connections must be provided. |  |
|  | *Testing*  All components, both hardware and DCS software, must be tested to prove the functionality and integrity of communication with other components and interfaces of the system. |  |
|  | *Field equipment*  Control instruments and equipment for field equipment should be connected directly to the DCS hardware via partition cabinets or third-party control equipment.  Third-party DCSs should only be used if they are part of the control requirements of a complex package, such as the turbine compressor or generator package.  Where third-party DCS, PLC hardware and software are used, they shall comply with SR EN 61131. |  |
|  | *Human-Machine Interface (HMI)*  The focal point of the operator's interaction with the DCS is in the control room, via the HMI consoles. HMI consoles must be able to monitor and control all aspects of the installation.  The design of the command and control room must provide both the ergonomic requirements of the operators and the work processes of the installation. Ergonomic requirements must include; lighting, console layout, furniture, display configuration, traffic flow, noise levels, communications, and work environment.  The number and location of the operator's consoles shall be sufficient for the size of the installation and the number of operators required to operate the plant. In general, two screens (monitors) should be provided for each workstation.  The design and layout of the HMI will refer to the requirements:   * ISA S5.3 graphic symbols for distributed control/shared display tool, logic and computer systems; * ISA S5.5 graphic symbols for process displays. |  |
|  | *Workstations - HMI*  The HMI will be designed to allow users to monitor and control the installation in the following operating modes:   * release; * balanced state; * transitional conditions; * the installation closed.   The HMI will be designed to assist operators during the different modes of operation of the installation. This may involve providing the Operator with specific displays and alarm management strategies for different operating conditions.  The design methodology shall ensure that field devices and associated controllers appear to operations and maintenance personnel directly and simply.  The HMI shall be designed to provide the operator with a clear and unambiguous flow of information.  The HMI will be designed for the following types of users:   * Operators; * Supervisors; * maintenance staff; * operations management; * engineering staff.   Each type of HMI user shall have specific types of display and access to information applicable to its responsibilities. The list below details the generic display types/facilities that are commonly encountered. Specific processes and installations may require additional display types in addition to the list below:   * Overview (at different levels) * DCS displays (subsystem / third-party PLC displays); * logical displays of the safety system; * Overwrite displays, events, and alarms; * overwrite summaries, events, and alarms; * overwrite settings, events, and alarms; * production summaries; * generating reports; * action/event log; * tendency; * configuration / adjustment parameters; * analysis of history;   Access to the HMI should also be provided in the following areas outside the control room.   * room for local equipment; * plant-specific processes and locations; * supervisory and management offices; * off-site locations (i.e., technical support personnel). |  |
|  | *HMI hierarchy and navigation*  HMI graphics should adopt a hierarchical structure.  The number of display levels in the HMI must be limited to no more than five. This is to minimize the complexity and layout of the display system. An example of an HMI display structure is detailed in the figure below.   * Overview: An overview of the process plant with links to the process system * Primary Level: Process Systems Overview * Secondary Level: This level is normally used for normal process operation. * Tertiary level: provides details of process equipment * Group Detail Displays: Provides details about tag numbers, tuning parameters, trends, reports, etc.   The structure of the HMI will consist of an overall graphic type that can be used to visualize specific areas of the process and process equipment. Other levels of detail, such as process trains and equipment-specific data, can be accessed from the overview chart via the lower-level displays.  Dedicated displays shall be provided for monitoring the logic of the safety system and the fire and gas system. The fire and gas system shall use the process area schemes with the detectors/dampers and field devices represented in their installed positions, showing the area.  HMI displays must be representative: schematics, live process variables, operator colors to visualize and control the process.  Equipment and animations should be used to support the HMI display which will be arranged so that the operator can easily switch from one display to another.  The HMI will allow navigation between display levels and access between displays on the same level. Alarm displays and other critical displays must be accessible from each display level. User configurable function keys will be provided to allow the operator to quickly evaluate commonly used displays.  If the function keys are used for system operation, such as boot overwriting, secondary sequence initiation conformation, Yes/No confirmation is required to prevent accidental keystrokes.  Facilities for backing up software and database and DCS settings will be provided daily.   * DCS Alarms, System * Overview Zone Over Logic Alarm Process * Show Overview - Summary * Primary process area - System-specific level * Sub-Process - Display Levels * Tertiary Equipment Logic - Status Status Level Details * Group/Label Detailing System System -Details Trend Status |  |
|  | A screenshot of a computer screen  Description automatically generated  Figure 1 - Example of HMI display structure |  |
|  | *HMI Displays*  Graphic displays must be designed in such a way that they are as clear and unambiguous as possible. To avoid overloading the operator with information and to keep display refresh times to a minimum, displays should have a maximum of 50 live data points. |  |
|  | *Security*  The HMI must have security facilities designed to minimize the occurrence of operational mistakes and unauthorized modifications. Access levels will be provided for each type of user and controlled by passwords or key locks. Access levels may differ between types of users, depending on the nature of the process and HMI functions.  HMI changes should only be allowed by system engineer users.  For HMI interfaces that are not located directly in the LCR, additional security facilities should be provided, such as firewalls, read-only access and other security features. |  |
|  | *Alarm Handling Requirements*  Printers will only be used to record alarm data and events for installations with fewer than 100 I/O variables.  All alarm and event data must be collected and stored electronically for a minimum period of 6 months.  Alarm and event data must be archived electronically at periodic intervals. All data will be done daily to protect it from accidental loss. |  |
|  | *Alarm design*  The design of the alarm parts of the DCS will refer to the requirements detailed in EEMUA Publication no. 191 - Alarm Systems - Guide to Design, Management and Procurement.  The purpose of an alarm system is to direct the Operator to plant conditions that require timely assessment or action. Every alarm should:   * alert and guidance; * be useful and relevant; * have a definite answer.   An alarm philosophy must be developed for each phase of the installation. |  |
|  | *Alarm and event settings*  Alarm settings must be set to a level that allows the Operator sufficient time to react and take appropriate action.  Care should be taken not to confuse alarms with event data. Events may require monitoring and influence operator action in response to specific alarms. The event data must be provided with a list of events that must be separate from the alarm listing.  The operator will not be able to confirm individual alarms without first viewing the alarm that is confirmed. |  |
|  | *Suppressing alarms*  Alarms for individual instruments can be "masked", but this feature should only be activated with technical support security access.  A complete list of "masked" alarms will remain visible to the Operator, but they will not be recorded on the alarm printer or announced in the HMI. |  |
|  | *Active Alarm Suppression / Group Alarms*  Automated alarm processing techniques can be adopted as part of the alarm management strategy.  Under avalanche alarm conditions, normally caused by factory operating conditions, alarm groups can be automatically deactivated or grouped under a common alarm on a set of predefined conditions.  The operator must have the facility to activate and deactivate the active alarm suppression and alarm grouping functions. |  |
|  | *Audible alarm*  The HMI must have the facility to be configured to emit different sound tones corresponding to alarm priorities and alarm types.  The alarm announcement volume must be adjustable by the Operator. The alarm volume must have a minimum setting above the minimum ambient noise of the room.  Security facilities shall be provided to prevent unauthorised changes to alarm tones and volume settings.  Different sound tones will be used to distinguish security system alarms, fire and gas alarms, and alarm processing.  The HMI should not be mounted in noisy areas, however, when this is not possible, local to the HMI should be provided for each alarm level. These alarm indicators will have a different color for each alarm level and will flash until the alarm has been accepted and the indicator will change to a stable state. |  |
|  | *SCA Automated Driving System Guidelines*  The process control system should only be used if it can be demonstrated that its use in an application offers sufficient advantages over conventional process control technologies.  The process control system must be implemented in accordance with SR EN 61158.  The Fieldbus should be implemented under a common platform, it should be noted that not all Fieldbus systems are compatible or that Fieldbus devices do not always offer full interoperability. Therefore, care should be taken when a Fieldbus platform and devices are selected for use in processing applications.  The process management system must be evaluated according to the following criteria:   * the geography of the site; * the arrangement of the equipment; * life cycle costs; * the total cost of implementation (compared to conventional methods).   The process driving system should not be used in critical advanced control or safety applications, such as:   * safety systems; * fire and gas systems; * compressor control / anti-surge systems; * Third-party proprietary control systems |  |
|  | *Design of the number of inputs/outputs*  Each input/output parameter must be sized with a 30% reserve capacity. The size of the parameters must take into account:   * the number of instruments on each segment; * The physical location of each device. * voltage drops on the cable and its resistance; * the minimum operating voltage of each device; * the current consumption of each device; * the execution time of each parameter.   Redundant process measurements will be implemented in separate segments.  The failure of a single segment does not affect more than one I/O group.  Each segment will be validated to ensure that the requirements for spare capacity, lead times, and process performance requirements are met.  Redundancy should be provided where appropriate to ensure the availability and reliability of the controlled process. |  |
|  | *Network Topology*  The Fieldbus segment (the physical layer) should be implemented in a tree topology, spur topology, or a combination of the two.  Fieldbus devices should not be chained together when individual devices cannot be maintained without losing the entire segment.  The wiring of the process control system must be supplied in accordance with SR EN 61158, part 2, type A. |  |
|  | *Transducers in the field*  Transducers in the field must be configured to switch to the appropriate safe state upon loss of power/communications.  Transducers in the field must be metrologically tested or verified to ensure interoperability between the Fieldbus platform and other components. |  |
|  | **6.8.4.4 Maintenance**  The process control system must be designed with serviceability in mind.  This should take into account the use of a modular-based system for the programmable system.  A separate HMI should be provided as part of the process control system to provide a dedicated engineering interface for system maintenance and modifications (Engineering Station).  The DCS must have internal diagnostic facilities to continuously monitor the status of the system. Any faults or predicted fault conditions will be notified to the operator via the workstations. Examples of defects include, but are not limited to:   * failures of the data network (Network); * CPU failures; * serial data link errors (serial interface); * hard drive failures; * malfunctions of internal memory; * process interface unit failures; * input/output module failures; * power supply failures; * printer defect; * fan failure; * common cabinet alarms; * broken cables; * each change (set points, rules, passing, unloading, uploading, confirming, date, time).   It will be possible to view all components configured on the system (including those for future connection) and their current status (e.g. active, inactive, defective, etc.).  Defective components will be highlighted on a system diagram and the fault recorded through the alarm/event lists. Alarms will only be cleared after the error has been fixed. Transient failures must also be recorded and recorded. Once the number of transient failures has exceeded a preset limit, the device will be marked as defective.  It is necessary for systems to be equipped with remote diagnostic facilities to enable fault diagnosis from a remote assistance location. The remote diagnostic facilities provided shall comprise hardware (modems, etc.) and software (access control, communications, etc.). The remote diagnostic facilities will allow the Provider's support personnel to connect to the system to perform performance monitoring, tuning and fault diagnosis, without physically visiting the site.  Full diagnostics of other systems, such as SIS/F&G, will be available on the operator's workstation. |  |
|  | **6.8.4.5 Documentation requirements** The following design documents must be produced at least to cover the different design phases of the process control system:   * the philosophy of control; * control specifications; * instrumentation philosophies; * block diagrams; * I/O program; * P&IDs; * system architecture drawing.   The use of database design tools should be considered when it is considered to provide a clear advantage in the design, construction and operation and maintenance of the facility.  All complex controls (controls that are more than just a waterfall type) require written control narratives that describe the control functions. All logic commands require written cause-and-effect diagrams and/or functional block logic diagrams that describe and illustrate logical functions. The functions of the sequence must be provided with a sequence diagram. |  |
|  | **6.8.4.6 Certification** If requested by the certifying authority, the following documents shall be submitted for at least review:   * certificates/opinions; * the basis of the design document; * philosophical documentaries; * functional design specifications; * P&IDs.   They should be issued in a timely manner to obtain approval before construction begins.  The equipment will bear the CE marking and will be accompanied by a declaration of conformity in accordance with the relevant directive (Machinery, PED, EMC, LVD, ATEX, MID).  However, directives that do not apply will be stated in the Declaration of Conformity as "Not applicable". |  |
|  | **6.8.5 Spare Parts** Spare parts must be considered for commissioning.  All spare parts must comply with the same specifications and tests as the original parts and must be fully interchangeable with the original parts without any on-site modifications.  They must be correctly marked with the manufacturer's reference number and part number and must be properly protected to prevent damage during transport and storage.  Metal plates will be attached to all spare parts that provide complete information for quick identification, including the manufacturer's name, serial number, and purpose. All spare parts will be inspected before delivery. The protection must allow corrosion and damage to be avoided for at least 3 years after delivery. |  |
|  | **6.8.6 Responsibilities** The bidder shall ensure that all equipment, software and hardware related to the tendered automation installations will comply with all the technical, functional and architectural requirements set out in Chapter 6.8.  The bidder has the obligation to supply and install new software versions for the offered automation installations, throughout the technical warranty period, at no cost from the contracting authority. |  |
|  | **7. How to present the offer**  The technical proposal developed by the bidder will fully comply with the requirements set out in the award documentation and in the Tender Specifications.  The technical proposal must meet the standard conditions of quality assurance, environmental protection, established by European Union regulations.  The technical proposal will be drawn up in such a way as to show that the requirements of the award documentation are fully met and assumed. The technical proposal will be drafted in the structure and according to the instructions in FORM **F4 - Technical Proposal Framework Form**.  The tenderer understands and undertakes that failure to comply with the formal requirements may be the subject of a request for clarification and that failure to comply exactly with the requirements of the contracting authority will lead to the rejection of the tender.  *In accordance with the principle of transparency and the principle of legal certainty, the contracting authority hereby specifies that, in accordance with the provisions of art. 210 para. (3) of Law 98/2016, if an economic operator, following the request for clarifications drawn up according to art. 210 para. (1) of Law 98/2016, cannot prove that the offered price can ensure the fulfillment of the contract at the quantitative and qualitative parameters required by the tender specifications, its offer will be declared as non-compliant, and therefore will be rejected, according to the provisions of art. 137 para. (3) letter g) of GD 395/201.* |  |
|  | **8. Risks. Risk management plan**  As part of the technical proposal, the tenderer shall submit a risk management plan specific to the design services activities required by this tender specifications.  The risk management plan must set out the main risks that may arise at the level of the tenderer's organisation during the execution of the contract, classified by risk categories, together with the measures it intends to apply in this regard.  In preparing the Risk Management Plan, bidders must take into account at least the assumptions and risks described by example below and estimate their possible effects.  In this regard, when preparing the offer, the Offeror must take into account the necessary resources (time, financial and of any other nature) for the implementation of the proposed risk management strategies.  The hypotheses to be evaluated at the time of drawing up the risk management plan can be, but are not limited to:   * The object of the contract is explicitly described in the Tender Specifications and the technical regulations and applicable legislation are exhaustively identified in the Tender Specifications and are accessible to all interested factors; * no changes in the institutional and legal framework are foreseen that would significantly affect the implementation and proper conduct of the Contract; * all information, data and documentation relevant to the provision of services in relation to the investment objective will be made available to the Contractor, to the extent that they are available to the Contracting Authority; * good cooperation between all parties involved: Contracting Authority, Contractor, competent authorities and any other relevant factors involved.   In preparing the Risk Management Plan, the Bidders must take into account, by way of example, at least the risks described below.  The risks with the highest probability of occurrence during the performance of the Contract, which could be identified by the Contracting Authority during the preparation of the award documentation, may consist at least of:   * delays in the issuance of agreements/approvals, etc. that are necessary to be obtained, according to the Urban Planning Certificate related to the investment * difficulties of collaboration and communication between the Contractor, the competent authorities, the Contracting Authority, other contractors of the Contracting Authority * the existence of errors/omissions in the documents made available by the Contracting Authority or by other entities involved in the investment process during the performance of the activities of the contract awarded through this procedure; * failure to meet the deadline set for achieving the objective of the Contract resulting from this procedure; * additional requests from the competent authorities regarding the approval documentation and/or the location of the investment objective, including the situation in which the parameters for certain characteristics/activities established by the competent authorities are stricter than the parameters proposed by the Contractor; * the need for additional activities to be carried out by the Contractor or the Contracting Authority, depending on the progress of the activities; * the data and information communicated by the Contracting Authority are not sufficient or incomplete to meet the requirements required by this Tender Specifications; * exceeding the duration of the activities assumed by the Technical Proposal.   By the way in which the Risk Management Plan will be designed, it must refer to at least the following elements:   * General aspects * Identification and quantification of risks * Mitigation measures and their application   If the offer is submitted by a group of economic operators (including subcontractors), the risk management plan will take this into account, specifying separately the risks and measures associated with each member of the group as well as the involvement and contribution to the implementation of the risk management plan by the designated staff of the economic operators participating in the offer. If the bidder relies in the implementation of the contract on the support (technical and/or financial) of a third party, within the implementation of the risk management plan, the mechanisms indicated by the third party will also be correlated in the Effective Method of Support submitted in application of Article 182 paragraph (4) of Law 98/2016. |  |

1. **Delivery**

The bidder will present the manner of fulfilling the requirements related to delivery in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of achieving them in order to demonstrate the achievement of the objectives associated with the Contract and the compliance with the specified delivery deadline.

1. **Packaging & Labeling**

The Bidder will present the manner of fulfilling the requirements related to packaging and labelling, including the taking and disposal of packaging, in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of carrying them out in order to demonstrate the achievement of the objectives associated with the Contract.

1. **Transportation**

The Bidder will present the manner of fulfilling the requirements related to the transport of the products, including insurance during transport in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of carrying them out in order to demonstrate the achievement of the objectives associated with the Contract.

1. **Methodology for the provision of services**

In this section, the Bidder shall present the manner in which it will perform the services included in the object of the contract, in particular by:

* + - * the presentation of the way in which the Bidder will describe the approach in terms of the execution methodology for their realization by referring both to the way of organizing and providing the design services;
      * the presentation of the way in which the Bidder will ensure the quality of the design process and the compliance of the design documentation with the legislation in force;
      * to this section will be presented in a dedicated annex " Project Sketch" which will be the basis for the provision of the design services related to the contract and based on which the price of the design services in the financial proposal was offered.
      * presenting the manner of fulfilling the requirements related to installation, testing and commissioning, in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual manner of their implementation in order to demonstrate the achievement of the objectives associated with the Contract

1. **Personnel training for operation and preventive maintenance**

The Bidder will present the manner of fulfilling the requirements regarding the training of the Contracting Authority's staff in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of achieving them in order to demonstrate the achievement of the objectives associated with the Contract.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Proposed activities | Fulfillment Method | Resources used; e.g. human resources, equipment, etc.) | Duration  Activity | Additional information relevant to the activity, where applicable |
| *[Describe the activity performed]* | *[Describe how the activity was actually carried out]* | *[Specify the resources used to carry out the activity]* | *[Enter the duration of the task from the start date to the task end date]* | *[Please insert additional information, if applicable – e.g. activities carried out with the participation of subcontractors, activities carried out by a specific member of the association]* |
|  |  |  |  |  |

1. **Technical warranty**

The bidder will indicate in this section the following:

* the duration for which it undertakes to ensure the technical warranty of the products offered, expressed in calendar months, starting with the date of acceptance of the installation;
* the lifetime of the installation;

Through the technical guarantee, the bidder undertakes that the offered installation will operate at the parameters of capacity, performance and availability guaranteed by the bidder by filling in the form *F21 - GUARANTEED PARAMETERS* and the form *F22 - GUARANTEED INDICATORS.*

The bidder will present the manner of fulfilling the obligations regarding the technical warranty and the remedy of the defects that occurred during the warranty period in the context of the requirements included in the Tender Specifications, by presenting the activities and the actual way of carrying them out in order to demonstrate the achievement of the objectives associated with the Contract.

The bidder will describe and motivate the situations in which the remedy of defects or degradation of the capacity, performance and reliability parameters does not fall under the contractual obligations regarding the technical warranty.

The bidder will fill in and submit attached to the bid the forms *F24 - Declaration regarding the technical warranty offered*, *F21 - GUARANTEED PARAMETERS,* *F22 - GUARANTEED INDICATORS.*

1. **Preventive maintenance**

The bidder will present in this section the concrete way of fulfilling the requirements related to preventive maintenance, in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of carrying them out in order to demonstrate the achievement of the objectives associated with the Contract.

1. **Corrective maintenance during the warranty / post-warranty period**

The Bidder will present the manner of fulfilling the requirements related to corrective maintenance, in the context of the responsibilities and requirements for repairing warranty defects included in the Tender Specifications, by presenting the activities and the actual way of achieving them in order to demonstrate the achievement of the objectives associated with the Contract.

1. **Spare parts and consumables in the post-warranty period**

The Bidder will present the manner of fulfilling the requirements related to the supply of spare parts and consumables during the post-warranty period, in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of achieving them in order to demonstrate the achievement of the objectives associated with the Contract.

1. **Evolutionary maintenance during the warranty / post-warranty period**

The bidder will present the way to meet the requirements related to evolutionary maintenance, in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of carrying them out in order to demonstrate the achievement of the objectives associated with the Contract. Particular consideration will be given to software and hardware components for which updates and upgrades are possible and have been requested during the warranty and/or post-warranty period.

1. **Technical Support**

The bidder will present the way to meet the requirements related to technical support, in the context of the responsibilities and requirements included in the Tender Specifications, by presenting the activities and the actual way of carrying them out in order to demonstrate the achievement of the objectives associated with the Contract.

1. **Suitability for the constraints imposed by the location where the products will be installed**

The bidder will demonstrate that its bid is adequate to the constraints imposed by the location where the products will be installed. The bidder shall demonstrate that the equipment to be maintained in operation will remain in operation while the supplied products are installed and put into operation. The plan for all the necessary activities to be carried out to keep the existing equipment in operation will be presented.

1. **Quality Management Plan under the Contract**

In this section, the Bidder must submit:

* + - * information on the way in which it ensures the level of quality corresponding to the fundamental requirements of the offered installation by presenting the quality management system designed for the performance of the design and execution services as well as for the supply of products under this contract. The quality management plan designed at general level by the economic operator will not be presented, in which case the offer will be rejected as non-compliant, but will be adapted to the presentation requirements;
      * how they intend to control quality at all stages of contract implementation;
      * how to ensure the monitoring and traceability of quality records;

1. **General contract execution schedule**

The bidder will present in this section the drafting principles as well as explanatory details regarding the meaning of the content of the FORM F3 - EXECUTION SCHEDULE completed and assumed by the bidder.

The contract execution schedule must :

* + - * demonstrate the understanding of the requirements of the Tender Specifications and the dependencies on the other contracts that will contribute to the implementation of the combined cycle thermoelectric power plant project, in such a way as to ensure the completion of the activities within the deadline assumed by the offer;
      * use a schedule of activities (monthly calendar);
      * allows the correlation of the information included in the graph with the information in the Financial Proposal and with the provisions of receipt and payment in the contract form.

At least the following requirements will be taken into account when drafting the execution schedule:

* + - * Planning of design activities in accordance with the requirements of the tender specifications and the availability of input information;
      * Highlighting the deadlines for the delivery of documentation, written parts and drawn pieces requested by the specifications;
      * Planning the supply, installation and commissioning of the contracted products in correlation with the dependence on the completion of the construction-assembly activities under the responsibility of the contracting authority;
      * Planning of reception and testing activities with highlighting the dependencies on the activities in charge of the contracting authority;
      * Highlighting the duration and sequence of activities and their inter-relation;
      * Identification and highlighting of milestones under the responsibility of the supplier as well as those under the responsibility of the contracting authority;
      * Highlighting the resources allocated at the level of activities (personnel, machinery), during the period of time mentioned as the duration for each of the activities of the contract.
      * Highlighting contract management, monitoring and status reporting activities;
      * Highlighting the activities related to the quality assurance plan in accordance with the requirements of the specifications;

1. **Approach to the organisation and management of activities under the Contract in the event of a joint venture (if the Bidder is a joint venture)**
2. **The approach to the management of the subcontractors' activity (to the extent that they are known at the time of submission of the tender) within the activities of the Contract and the following information (if the Bidder will use subcontractors for certain activities of the Contract):**
   * + - identification of the activities carried out by subcontractors;
       - the manner in which the coordination of subcontractors' activities will be ensured;
       - the method of making payments to subcontractors under the Contract;
       - information regarding the direct payment option in relation to the provisions of art. 218 et seq. of Law 98/2016;
       - identification data of subcontractors;
3. **Presentation of the communication between the Bidder and third party/third party supporters in relation to the performance of the Contract (if applicable)**

Where applicable, please include here information on how to communicate with the supporting third party(s) regarding the performance monitoring of the contract and in particular in the event that the risk of difficulties in the implementation of the contract materializes (even if this risk is considered hypothetical by the Bidder).

1. **Measures applicable by the Bidder/Subcontractor/Third Party supporter during the period of the Contract to ensure the fulfillment of the environmental obligations deriving from the fulfillment of the object of the Contract**

In this section, the bidder will describe in the tabular structure below the measures that will be applied to ensure the fulfillment of the obligations in the environmental field, as established by the Award Documentation based on the provisions of art. 51 of Law 98/2016, taking into account the requirements provided in the Tender Specifications:

|  |  |
| --- | --- |
| Legislative provision included in national legislation or in European legislation through EU-wide Environmental Regulations | How to fulfill it |
| *[Insert]* | *[Insert]* |

The introduction of information on environmental assessment and examination according to the requirements of the Tender Specifications will be considered, in particular, but not limited to:

* prevention and combating accidental pollution on the environment, protection of the atmosphere, management of environmental noise;
* protection of the soil, subsoil, management of waste resulting from the supply of products, identification of environmental impact and mitigation measures, surveillance, control, monitoring and monitoring plan.

Generic procedures from the environmental management manual existing at the level of the economic operator will not be included here, but it will be specifically specified how compliance with the legal provisions regulating the activity required by the Specifications is ensured in the context described in the Specifications.

The measures applied and described must also include the activity of subcontractors, where applicable.

The bidder will fill in and submit attached to the bid the form *F6 - Declaration on compliance with national environmental regulations*.

1. **Measures applicable by the Offeror/Subcontractor/Third Party supporter during the period of the Contract to ensure the fulfillment of the obligations in the social field and labor relations deriving from the fulfillment of the object of the Contract**

The measures that will be applied to ensure the fulfillment of the obligations in the social field and labor relations, as established by the Award Documentation based on the provisions of art. 51 of Law 98/2016, will be described in the tabular format below, taking into account the requirements provided in the Specifications:

|  |  |
| --- | --- |
| Legislative provision included in national or European legislation through EU-wide Social and Labour Relations Regulations | How to fulfill it |
| *[Insert]* | *[Insert]* |

Do not include generic aspects here, but specify concretely how compliance with the legal provisions is ensured during the duration of the contract.

The measures applied and described must also include the activity of subcontractors, where applicable.

The bidder will fill in and submit attached to the offer the form *F7 - Declaration Regarding the Compliance with the Regulations in the Social Field and Labor Relations*.

Detailed information on the regulations in force at national level and references to working conditions and labour protection, safety and health at work can be obtained from the Labour Inspectorate or from the website: https://www.inspectiamuncii.ro/ro/86.

1. **Duties and responsibilities of the parties**

In this section, the bidder will detail the way in which it intends to fulfill its duties as a contractor, considering that in relation to the requested products and the requirements stipulated in this Tender Specifications, the responsibilities and duties of the parties are:

*The bidder has the following main obligations:*

* + - * mobilization of sufficient resources and with adequate expertise to ensure the management of the contract, as requested at the level of the Tender Specifications,
      * fulfilling the contractual obligations, in compliance with the good practices in the field, the relevant legal and contractual provisions, so as to ensure that the obligations are fulfilled at the required parameters,
      * ensuring a degree of flexibility in planning the way of managing the contract, throughout the duration of the contract,
      * transmission of the identification and contact data of the personnel assigned for the execution of the contract
      * collaboration with the staff of the contracting authority/entity assigned for the verification of the delivered products and the realization of receptions,
      * reducing, as far as possible, to a minimum, the situations of delays in making deliveries, thus minimizing the negative impact on the activity of the contracting authority/entity,
      * ensuring that any documents, documentation and/or instructions provided to the staff of the contracting authority/entity are accurate and developed in accordance with specific good practice in the field,
      * submission of the reports requested by the staff of the contracting authority/entity, according to the reporting requirements established by the Contract,
      * collaboration with the staff of the contracting authority/entity assigned for the supply of the products covered by the contract and for the provision of ancillary services.

The main obligations of the Bidder who became a Contractor are completed by the obligations provided for in the contractual conditions.

*The contracting authority/entity has the following main obligations:*

* + - * designation of a person or team to monitor the contract,
      * providing the Contractor with all available and necessary information for the performance of the contract within the established time and at the level of quality and performance provided in the Tender Specifications,
      * ensuring access to the spaces where the delivery is to be made, as the case may be, the installation of the products;
      * mobilization of all resources that are in its charge, for the proper performance of the contract,
      * working with the Contractor to identify in a timely manner any possible problems that may arise during the course of the contract,
      * ensuring the accuracy of any information made available to the Contractor during the performance of the contract,
      * monitoring the fulfillment of all the requirements of the Tender Specifications and any elements of the Technical and Financial Proposal during the performance of the contract, making and keeping an archive with records to document the level of performance of the Contractor,
      * notifying the Contractor through the communication channels made available by it regarding any incidents or malfunctions that occur during the period of the contract,
      * verification of all documents associated with the receipt of the products and support services that are the subject of the contract, respectively confirming the supply of the products according to the quality conditions established in the Tender Specifications.

1. **The Form - Declaration regarding the acceptance of the contractual clauses will be submitted.**
2. **The technical proposal will include the reasoned indication of the information in the technical proposal that is confidential, classified or protected by an intellectual property right, based on the applicable legislation. The Declaration Form containing the information considered confidential will be completed, signed and submitted.**

If these conditions are not applicable, the Form - Declaration containing the information considered confidential will not be submitted, the technical proposal being thus considered as a public document within the meaning of Law 544/2001 on free access to information of public interest. Bidders will attach evidence that confers the confidential nature of the information declared as confidential.

1. **The bidders will fill in, sign and submit the Agreement Form regarding the processing of personal data, under penalty of rejection of the bid as non-compliant based on art. 215 para. 5 of Law 98/2016.**
2. **The technical proposal will be paginated and copied** (the opium will be presented at the beginning of the proposal).
3. **Annexes to the Technical Proposal**

The bidder will attach to the Technical Offer at least the following:

* + - * All documents required in sections 4.4.5 and 4.4.6 of the Tender Specifications;
      * Forms F3, F15-F30, completed and signed by the bidder;
      * Documents and documentation for proof of compliance;

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F5** - General power of attorney

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name)*

General power of attorney

The undersigned ........................................................................, headquartered in ........................................................................................................., registered with the Trade Register under no. ..........................., unique registration code .................., legally represented by ......................................................, as ......................................................, we hereby empower ......................................................, specimen signature............................... domiciled in .................................... ......................................., identified with B.I./C.I. series ......, no. .................., CNP .............................., issued by .............................., on ............, having the function of ..................................................., to represent us at the ........................ procurement procedure, organized by ............................................, on ............ hour...... for the purpose of awarding the contract.

In fulfilling his mandate, the proxy will have the following rights and obligations:

1. To sign all the acts and documents resulting from the undersigned in connection with the participation in this procedure;

2. To participate on behalf of the undersigned in the procedure and to sign all the documents resulting during and/or following the procedure.

3. To sign the replies to the requests for clarification made by the evaluation commission during the procedure.

4. To submit on behalf of the undersigned the appeals regarding the procedure.

5. Sign the public procurement contract.

Hereby, our representative is fully authorized to engage the responsibility of the undersigned with respect to all acts and facts arising from participation in the procedure.

Note: The power of attorney will be accompanied by a copy of an identity document of the authorized person(s) (*identity card, identity card, passport*).

Date\_\_\_\_\_\_\_\_\_\_\_\_\_ Name of the principal

legally represented by

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*(Name, surname)*

**FORM F6** - Declaration on compliance with national environmental regulations

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

REGULATORY COMPLIANCE STATEMENT

IN THE FIELD OF ENVIRONMENT AND ENVIRONMENTAL PROTECTION

By this declaration the undersigned ...................................... legal representative of the ................................................., participant in the tender for the execution of: ...................... (investment objective) declare on my own responsibility, under the sanctions applied to the act of forgery and use of false declarations, that we will comply with the regulations established by the legislation adopted at the level of the European Union, the national legislation, by collective agreements or by the treaties, international conventions and agreements in the field of environment and environmental protection.

I also declare on my own responsibility that when preparing the offer I took into account the obligations related to environmental protection and included the cost for fulfilling these obligations

At the same time, I declare that I am aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a state body or institution or to another unit referred to in Article 175, in order to produce a legal consequence, for oneself or for another, when, according to the law or circumstances, The statement made serves to produce that consequence, it is punishable by imprisonment from 3 months to 2 years or a fine »

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F7** - Declaration on compliance with the regulations in the field of social and labour relations

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

REGULATORY COMPLIANCE STATEMENT

IN THE SOCIAL FIELD AND LABOUR RELATIONS

Undersigned....................................................... (clear name and surname of the authorised person), representative of ....................................................................... (name of the bidder and identification data) declare on my own responsibility that we will comply during the supply of the equipment and services included in the offer with the regulations established by the legislation adopted at the level of the European Union, national legislation, by collective agreements or by international treaties, conventions and agreements in the field of social and labor relations.

I also declare on my own responsibility that:

* When preparing the offer, we took into account the obligations related to working conditions and labor protection and included the cost for fulfilling these obligations.
* we will comply with all applicable laws prohibiting the use of forced or compulsory labor;
* we will provide employees with working conditions, including the payment of salaries and benefits, in accordance with all applicable laws;
* we will ensure that all our employees meet the legal requirements regarding the working age required in the country of employment;

At the same time, I declare that I am aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a state body or institution or to another unit referred to in Article 175, in order to produce a legal consequence, for oneself or for another, when, according to the law or circumstances, The statement made serves to produce that consequence, it is punishable by imprisonment from 3 months to 2 years or a fine »

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F8** - Declaration of information considered confidential

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

The undersigned \_\_\_\_\_\_\_\_\_\_\_\_, legal representative of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*(name and identification data of the economic operator)*

I declare on my own responsibility that for "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"

*(the name of the procedure is mentioned)*

The following information contained in the technical proposal/financial proposal[[1]](#footnote-2) shall be confidential:

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................... .................................

We attach to this evidence that the information indicated as confidential is confidential, including technical or trade secrets and confidential elements of the offers.

We attach to this evidence that confers the confidential nature of the information indicated as confidential because it is *(the correct version will be checked):*

* personal data □
* technical or trade secrets □
* are protected by an intellectual property right. □

We understand that the information indicated by us, from the technical proposal/financial proposal as confidential must be accompanied AT THE DATE OF SUBMISSION OF THE OFFER by the proof that gives them the character of confidentiality, proof that becomes an annex to the offer, otherwise the offer will be considered public without any clarifications being requested on this aspect.

We understand that it is not enough to simply mention that the offer is confidential and we also understand that if we do not attach the evidence requested above or if they are not conclusive, our offer in its entirety will be a public document.

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F10** - Association Agreement Model

ASSOCIATION AGREEMENT

No. \_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CHAPTER I - PARTS OF THE AGREEMENT

Art. 1 This agreement is concluded between:

S.C..................................................., headquartered in ....................................., str. ..................................... no..................., telephone ....................., fax ........................., registered with the Trade Register of ......................................... under no. .........................., unique .................................... registration code, bank account where payments will be made by the Beneficiary ............................................, opened at .........................................., bank address: ....................., represented by ...................................................... having the position of.......................................... , as an associate - ASSOCIATION LEADER

and

S.C................................................., headquartered in .................................., str. ................................, No..................., telephone ....................., fax ................................, registered with the Trade Register of ........................................, under no. ..........................., unique registration code ...................................., ............................................. account, opened at ............................................, represented by ................................................................., having the function of .........................................., as an ASSOCIATE

CHAPTER II - OBJECT OF THE AGREEMENT

Art. 2.1 The Parties agree to establish an Association composed of:

* *(i - association leader)*...............................;
* *(ii - Associate 1)* ...........................;
* *(iii - Associate n),*

With the aim of:

a) participation in the procedure organized by the \_\_\_\_\_\_\_\_ for the award of the contract \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) joint implementation/implementation of the public procurement contract *in case of designation of the joint bid as the winner,* in compliance with the provisions of this Association Agreement.

Art. 2.2 The Association will conclude the Contract with the Beneficiary, in order to fulfill the contractual obligations according to the provisions of the Award Documentation, based on the offer submitted by the Association and declared the winner following the transmission by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the communication of the result of the procedure.

Art. 2.3. The association does not have legal personality and cannot be treated as an independent entity, not having the quality of a distinct subject of law *(Art. 1951 Civil Code).*

Art. 2.4. The activity carried out within the Association is carried out on the basis of the principle of commercial and legal independence of each Party and that of mutual support regarding the contractual obligations assumed in order to achieve the purpose of the Association.

CHAPTER III - TERM OF VALIDITY OF THE AGREEMENT

Art. 3. This agreement remains in force until the expiry of the validity period of the contract signed with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, respectively until all debts related to it are extinguished and all obligations assumed by the Association towards the Beneficiary are fulfilled.

CHAPTER IV - OBLIGATIONS OF THE PARTIES

Art. 4.1. The Parties agree that the Association Leader is ................................................................................

The awarded contract will be signed with the Beneficiary by the Association Leader, who will be designated as an authorized representative to receive the contractual instructions for and on behalf of all the members of the Association, from the Beneficiary, to carry out all correspondence with the Beneficiary and, at the same time, will have the power of representation of the Association in relation to the Beneficiary.

Art. 4.2. The .............................., having the capacity of Leader of the association, is empowered to prepare the joint offer and to submit it in the name and for the association established by this agreement.

Art. 4.3. The parties shall be individually and jointly liable to the Beneficiary in respect of all responsibilities and obligations arising out of or in connection with the Agreement.

Art. 4.4. Each Party shall indemnify, defend and indemnify the other Party for all foreseeable or unforeseeable damages, which may result from or in connection with the breach of obligations assumed by the Contract, by the At-Fault Party.

Art. 4.5. In the event that the Beneficiary suffers a prejudice in the implementation / performance of the "................................." contract will be directed against any member of this association, in order to obtain the recovery of the damage suffered, regardless of whether the damage was caused by the action/omission of another member of the association.

CHAPTER V - TERMINATION OF THE ASSOCIATION AGREEMENT

Art. 5. The termination of the Association Agreement may take place in the following cases:

a) the non-conclusion, for any reason, of the Contract between the Association and the Beneficiary;

b) to the full fulfillment of the object of the contract;

c) upon the automatic termination of the Contract concluded between the Association and the Beneficiary, in accordance with the provisions of the Contract.

CHAPTER VI - OTHER CLAUSES

Art. 6.1. The members of the association agree that the associate ....................................................... - as Leader of the Association, to be designated as the account holder, in order to carry out the financial-accounting operations, respectively the issuance and collection of the invoices related to the "...................................." Contract.

The identification data are as follows:

Account Holder Name:

Address:

VAT number:

Legal Representative:

Phone/fax/e-mail:

Bank Name:

Bank Address:

Bank account number:

IBAN:

\*The ..................... Associate - as the Leader of the Association, will issue and collect the invoices related to the Contract through its branch in Romania, which has the following identification data:

Name:

Registered Office:

Unique Registration Code:

Serial number in the Trade Register:

Bank Account:

Bank Name:

Bank Address:

Legal Representative:

Note: \* *will be completed if the associate appointed for the issuance and collection of invoices is a non-resident legal entity in Romania*."

Art. 6.2. (1) In case of award, the partners have agreed on the following participation rates within the association:

................................................................................................ % (in *letters*),

................................................................................................ % (in *letters*)

(2) In case of award, the partners agreed that the members of the association will each perform the activities that are components of the object of the contract, as follows:.................. (*it will be expressly mentioned for each partner which are the activities within the object of the contract that he will execute)*

Art. 6.3. The associates agree to support each other whenever necessary throughout the execution of the contract, providing technical, managerial and/or logistical support whenever the situation requires it.

Art. 6.4. Neither Party shall be entitled to sell, assign or otherwise encumber or convey its share or part thereof other than by operation of law and by obtaining the prior written consent of both the other Parties and the Beneficiary.

Art. 6.5. This agreement is supplemented in terms of terms and conditions for the provision of services, with the provisions of the contract to be concluded between .................................. (association leader) and Beneficiary.

Art. 6.6. (1) This Association Agreement together with all aspects and all effects arising out of, or in connection with, shall be governed by Romanian law.

(2) Disputes arising from or in connection with the Association Agreement, between the members of the Association, shall be submitted to the ordinary courts.

(3) The settlement of disputes arising from or in connection with the Association Agreement, between the members of the Association and the Beneficiary, shall be carried out by the Romanian administrative and tax court, according to the Agreement.

Art. 6.7. This Association Agreement will be drafted in Romanian.

This Association Agreement was concluded today ..................................... in........... Copies.

ASSOCIATE LEADER

*(legal representative/empowered according to the company's articles of association)*

*Name and surname*

*....................................*

(signature and stamp)

ASSOCIATE 1

*(legal representative/empowered according to the company's articles of association)*

*Name and surname*

*.....................................*

(signature and stamp)

ASSOCIATE n

*(legal representative/empowered according to the company's articles of association)*

*Name and surname*

*.....................................*

(signature and stamp)

Note 1: *This Association Agreement contains the mandatory clauses, the parties may add other clauses.*

Note 2: *The lack of signature of the legal representative or the representative empowered according to the articles of association/incorporation of the company automatically leads to the nullity of the Association Agreement.*

**FORM F11** - Commitment regarding the technical and professional support of the bidder/group of economic operators

..........................

(*name supporter*)

Commitment

on technical and professional support

of the bidder/candidate/group of economic operators

Towards..............................................

*(name of contracting authority and full address)*

The procedure for awarding the contract ................*...... (name of the public procurement contract)*we............. *(name of the third party technical and professional supporter*), having its registered office at .......... .............*(address of the third party technical and professional supporter),* we are firmly, unconditionally and irrevocably obliged to make available.............. (*name of the bidder/group of economic operators)* all the technical and professional resources necessary for the full and timely fulfillment of all the obligations assumed by it/them, according to the bid submitted and the public procurement contract to be concluded between the bidder and the contracting authority.

The provision of technical and professional support does not involve any other costs for the buyer, except for those that were included in the financial proposal.

In this regard, we are firmly, unconditionally and irrevocably committed to making available .......... (*name of the tenderer/candidate/group of economic operators)* the technical and/or professional resources of ................................................ .................................................................. necessary for the full, regulatory and timely fulfillment of the public procurement contract.

We....................... *(the name of the third party technical and professional supporter),* we declare that we intend to be unconditionally liable to the contracting authority for the non-performance of any obligation assumed by ....................... *(name of the bidder/candidate/group of economic operators)*, based on the public procurement contract, and for which ................ *(name of the operator/candidate/group of economic operators)* has received the technical and professional support in accordance with this commitment, waiving in this regard, definitively and irrevocably, the invocation of the benefit of division or discussion.

We.................. *(the name of the third party technical and professional supporter),* we declare that we intend to definitively and irrevocably waive the right to invoke any exception of non-performance, both against the contracting authority and against ................. (*name of bidder/group of bidders),* which could lead to the partial or total non-performance or late or improper performance of the obligations assumed by us under this commitment.

We.................................. *(the name of the third party technical and professional supporter),* we declare that we intend to be liable for the damages caused to the contracting authority as a result of the non-compliance with the obligations provided for in the commitment.

We.................................. *(the name of the third party financial supporter),* we declare and guarantee to the contracting authority that we will intervene concretely to fulfill all contractual obligations. In support of this assertion *:*

1. We specify the way in which we will intervene concretely to fulfill the obligations for which we have provided support: *..........................................................................................................................*

*(In this section you will describe the specific way in which, in the event that the Bidder is unable to perform the contract related to this procedure, the Supporting Third Party will perform the contract in question.*

*To this end, in the event that the Bidder is unable to carry out the contract related to this procedure, starting from the Supporting Third Party's own expertise in the field of the contract to be awarded and in relation to the needs, objectives and constraints of the contracting authority, as described in the Tender Specifications, your response will include relevant information regarding the approach proposed by the Supporting Third Party for the execution of the Contract.*

*Your answer will be elaborated in such a way as to provide the possibility of verifying the way in which the supporting third party will perform the contract, while ensuring the correspondence of the execution method with the requirements provided in the Tender Specifications and its annexes.*

*You will attach supporting documents in this regard).*

1. We indicate technical and professional resources that we will make available at any time necessary and requested by the Purchaser *...................................... (the resources will be indicated and the concrete way in which they will be made available will be described).*

*(In this section: you will present the technical and professional resources you will make available, how to access them and supporting documents; you will conclusively show that you will be able to move your resources/machinery/staff in such a way as to intervene efficiently, within a reasonable time, if the situation requires it, regardless of where you are established in Romania or in another Member State of the European Union or a third country. In this context, you must concretely present what are the resources/machinery/personnel that you will be able to mobilize as a third party(s) supporter and show how you undertake to intervene in case the contractor encounters difficulties during the performance of the contract).*

This represents our firm commitment concluded in accordance with the provisions of Law 98/2016, which gives the contracting authority the right to legitimately request the fulfillment by us of certain obligations arising from the technical and professional support provided .............................................................. (*name of the bidder/candidate/group of economic operators).*

Date of completion, Third-party supporter,

........................... .....................

*(authorized signature)*

........................... .....................

*(authorized signature)*

**FORM F12** - Subcontracting Agreement

SUBCONTRACTING AGREEMENT

No.........../............

Art.1. Parties to the agreement:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, represented by................................, as a contractor within the

(*name of economic operator, headquarters, telephone*)

contract no............... concluded with the contracting authority .......................... having as its object...............

and

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ represented by............................... as a subcontractor

(*name of economic operator, headquarters, telephone*)

Art. 2. Object of the agreement:

The parties agreed that in case of designation of the bid as the winner of the public procurement procedure organized by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_subcontractantul to carry out the following activities to be subcontracta\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Art.3. The value in lei excluding VAT of the activities to be performed by the subcontractor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ represents a percentage of \_\_\_\_\_% of the total value in lei excluding VAT of the financial offer submitted within the procedure referred to in this subcontracting agreement.

Art.4. The duration of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (services) is \_\_\_\_\_\_\_\_ months.

Art. 5. Other provisions:

Termination of the subcontracting agreement

The Agreement ceases its activity as a result of the following causes:

a) the expiry of the duration for which the agreement was concluded;

b) other causes provided by law.

Art. 6. Communications

Any communication between the parties is validly fulfilled if it is made in writing and will be sent to the address(es) ......................................................., provided for in art.1

Art.7. The subcontractor undertakes towards the contractor with the same obligations and responsibilities that the contractor has towards the investor according to contractului\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*(contract name*).

The subcontractor hereby gives its advance consent to the assumption of the obligations of the main contractor towards the contracting authority.

Art.8. Disagreements between the parties will be resolved amicably. If this is not possible, the disputes will be resolved by legal means.

This Agreement shall be concluded in two copies, one copy for each Party.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(contractor) (subcontractor)

*Note: This agreement is an indicative model and will be completed according to the specific requirements of the object of the contract(s).*

*If the bid is declared successful, a subcontracting contract will be concluded under the same conditions under which the contractor signed the contract with the contracting authority. Total subcontracting of the contract is prohibited*.

**FORM F14** - Model Guarantee Instrument/Letter of Bank Guarantee of Good Performance/ Letter of Technical Guarantee of Good Performance

Towards:

(*the name and address of the contracting authority will be filled in*)

Name of the contract: ................................... (*shall be completed with the name Procedure*)

We have been informed that (*name and address of the Bidder*) (hereinafter referred to as the "Principal") is your Supplier for this Contract, for which it is provided to obtain a performance guarantee.

At the request of the Principal, we (*name and address of the bank*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hereby irrevocably undertake to unconditionally honour any request for payment from the contracting authority, up to a limit of 10% of the offered value of the contract, i.e. the amount of RON \_\_\_\_\_\_\_\_\_\_\_ (in letters and figures) on its first written request and without the latter having the obligation to justify its respective request, in the event that the contracting authority declares that the amount requested by it and due to it is caused by the fault of the supplier, in accordance with the guaranteed contract and the situation provided for by Article 41 of GD 395/2016.

The payment request must be received by us at our address and anume\_\_\_\_\_\_\_\_\_\_(*address of the bank issuing the guarantee*), on or before the expiry date (the *"expiry date"),* at which point this guarantee will expire.

The competence to settle any dispute arising in connection with this letter of guarantee of good performance lies with the courts of law of Romania.

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[*stamp of the body providing the guarantee*]

*Note: The guarantee instrument presented in the case of an association of economic operators as proof of the constitution of the performance guarantee, must be issued in the name of the association and must include the express mention that the respective guarantee instrument jointly covers all the members of the association with their nomination, the issuer of the guarantee instrument declaring that it will pay from the performance guarantee the amounts provided by the legal provisions applicable in case of fault of any of the members of the association*.

**FORM F15** - Service List Form

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

List of Services

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No.  Crt. | Name  Installation | Category  Services | Service Item Name | Specifications | U.M | Quantity |
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Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F16** - FORM regarding the list of equipment, parts and materials offered

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name(s*))

List of Equipment, Parts and Materials offered

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No.  Crt. | Name  equipment and materials | Identification No/Code | Item name  Purchase | Specifications | U.M | Quantity |
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Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

*Note: The table must contain the products specified in FORM F2 - PRICE CENTRALIZER and for each of these products all the equipment, parts and related materials offered will be indicated, including software components, tools, diagnostic devices, spare parts and consumables at the level of detail necessary for identification, counting or measurement for quantitative acceptance. The bidder may offer and add to this form other products than those listed in FORM F2 - PRICE CENTRALIZER that it considers necessary to ensure compliance with the parameters and performance indicators required by the specifications.*

**FORM F17** - FORM regarding the list of electricity consumers

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

List of Electricity Consumers

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No.  Crt. | Name  installation | Identification No. | Item name | Specifications | Installed Power (kW) | Power Consumption(kW) |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
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Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F18** - FORM on the list of process tools

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

List of Process Tools

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No.  Crt. | Name  installation | Identification No./Code | Item name  work | Measurement Domain | U.M | Quantity |
|  |  |  |  |  |  |  |
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Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F19** - FORM for Valves and Actuators

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*) List of Valves and Actuators

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No.  Crt. | Name  installation | Identification No./Code | Item name  work | Features | U.M | Quantity |
|  |  |  |  |  |  |  |
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Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F20** - DATA SHEET FORM (Model)

DATA SHEET No. \_\_\_\_\_\_\_\_

Equipment Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Crt. No. | Technical specifications required by the tender specifications | Unit of measure | Correspondence of the technical proposal with the technical specifications required by the tender specifications |
| 0 | 1 | 2 | 3 |
| 1 | Identification data: |  |  |
|  | Equipment/System Model/Code: |  |  |
|  | Manufacturer: |  |  |
|  | Country of origin: |  |  |
|  | Authorized Maintenance / Service Representative: |  |  |
|  | Process Symbol/Code: |  |  |
|  | Place of installation: |  |  |
|  | Quantity: | Pcs |  |
| 2 | Technical and functional parameters: |  |  |
|  | *(according to the requirements of the specification)* |  |  |
| 3 | Supply configuration: |  |  |
|  | *(according to the requirements of the specification)* |  |  |
| 4 | Performance specifications.  Conditions regarding operational safety: |  |  |
|  | *(according to the requirements of the specification)* |  |  |
| 5 | Compliance with relevant standards: |  |  |
|  | *(according to the requirements of the specification)* |  |  |
| 6 | Warranty and post-warranty conditions: |  |  |
|  | *(according to the requirements of the specification)* |  |  |
| 7 | Other technical conditions: |  |  |
|  | *(according to the requirements of the specification)* |  |  |
|  |  |  |  |

Date :[ZZ. LL.YYYY]

(name and surname)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

*Note: For each main equipment, the technical specification (manufacturer data sheet) will be attached, highlighting the main technical characteristics.*

**FORM F21** - GUARANTEED PARAMETERS

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

GUARANTEED PARAMETERS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Crt. No. | Parameter Symbol | Guaranteed Parameter Name | Unit of measurement | Limit value | Guaranteed value |
| 0 | 1 | 2 | 3 | 4 | 5 |
|  | Cogeneration plant with thermal engines with a total electrical power of at least 27 MW and a total thermal power of at least 26.10 MW | | | |  |
| 1 | On | Electrical power | kWe | ≥ 27,000 |  |
| 2 | Qt | Thermal power | kWt | ≥ 26,100 |  |
| 3 | ηg | Overall yield under ISO conditions | % | ≥ 88.5 |  |
| 4 | Pem | The electrical power of each motor | kWe | ≥ 9,000 |  |
| 5 | Qtm | Thermal power of each motor | kWt | ≥ 8,700 |  |
| 6 | ηgm | Overall efficiency of each engine under ISO conditions | % | ≥ 88.5 |  |
| 7 | Nox | NOx emission level in flue gases discharged to the chimney | mg/Nm3  (15% dry O2) | < 75 |  |
| 8 | CO. | The level of CO emission in the flue gases discharged to the chimney | mg/Nm3  (15% dry O2) | < 100 |  |
| 9 | YES | Annual uptime for any engine | % | ≥ 95% |  |

Site (reference) conditions are defined in the Specification:

Climatic parameters

Air temperature, multiannual monthly average: +11.1°C;

Maximum calculation ambient temperature of CHP: +40°C;

Minimum calculation ambient temperature to CHP: -20°C;

Relative humidity, multiannual monthly average: 73.2%;

Altitude: 220m.

The ISO (standard) conditions are as follows:

Air temperature: 15°C;

Relative humidity: 60%;

Altitude: 0 m, sea level.

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F22** - GUARANTEED INDICATORS

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

GUARANTEED INDICATORS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Crt. No. | Indicator symbol | Guaranteed Parameter Name | Unit of measurement | Limit value | Guaranteed value |
| 0 | 1 | 2 | 3 | 4 | 5 |
|  | Cogeneration plant with thermal engines with a total electrical power of at least 27 MW and a total thermal power of at least 26.10 MW | | | |  |
| 1 | ΔEm | Greenhouse gas reduction | tCO₂/year | **≥ 39,696** |  |
| 2 | B | Savings in annual primary energy consumption | MWh/year | **≥ 196,462** |  |
| 3 |  | Installed capacity in high-efficiency, gas-fired cogeneration | MWe /MWt | **≥ 27/26.1** |  |
| 4 |  | Specific emissions | g CO₂eq/kWh | **< 250** |  |
| 5 | η | Annual gross overall return under benchmark conditions | % | **≥ 88.5** |  |

Site (reference) conditions are defined in the Specification:

Climatic parameters:

Air temperature, multiannual monthly average: +11.1°C;

Maximum calculation ambient temperature of CHP: +40°C;

Minimum calculation ambient temperature to CHP: -20°C;

Relative humidity, multiannual monthly average: 73.2%;

Altitude: 220m.

The ISO (standard) conditions are as follows:

Air temperature: 15°C;

Relative humidity: 60%;

Altitude: 0m, sea level.

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F23** - Manufacturer's Authorisation Binding Declaration (Model)

MANUFACTURER'S AUTHORIZATION

We, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the manufacturer of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ equipment, with the factories at the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ addresses, hereby confirm the following information specific to them, under the reference conditions specified in the specifications:

1. We confirm the following basic performance at rated load under ISO conditions:

* Electrical power at generator terminals: \_\_\_\_
* Rated heat: \_\_\_\_
* Electrical efficiency: \_\_\_\_
* Thermal Efficiency: \_\_\_\_
* Overall Yield: \_\_\_\_
* Maximum hydrogen content mixed with natural gas, for which no additional purchase costs are required for equipment upgrade: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* NOx Emission: \_\_\_\_\_
* CO Emission: \_\_\_\_\_
* Average oil consumption: \_\_\_\_\_ based on the attached technical proposal (only for internal combustion engines).

1. We provide a technical warranty of .... months from the date of commissioning.

1. We provide maintenance services in accordance with the requirements of the tender specifications, based on the attached proposal. We hereby confirm as an authorized provider of specific maintenance services the economic operator: \_\_\_\_\_\_\_\_\_\_\_\_\_.

1. Compliance with European and national regulations on the connection of generating units to electricity grids of public interest (Regulation 631/2016/EU NC RfG, ANRE Orders no. 72/2016, 214/2018, 51/2019): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (according to the requirements of the tender specifications)

Authorized Manufacturer Representative: Date:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_

*Note 1: This form contains the manufacturer's confirmations regarding the basic performance of the proposed equipment. All the supporting documents requested in the tender specifications will be attached.*

*Note 2: The form will be filled in by the manufacturer of the engine-generator assemblies and the boiler manufacturer.*

**FORM F24** - Declaration regarding the technical warranty offered

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

TECHNICAL WARRANTY STATEMENT

Undersigned............................................................. (*name, surname, identification document*), legal representative of SC ................................................................................. (*name of the economic operator and identification data: address, tel/fax number, cui, J.. etc*.), as bidder, declare on my own responsibility, under the sanctions applied to the act of forgery in public documents, that the procedure organized by .................... for the award of the public procurement contract having as its object *.....................*

The technical warranty term that we provide and guarantee for the products offered is ................ months.

At the same time, I declare that I am aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a state body or institution or to another unit referred to in Article 175, in order to produce a legal consequence, for oneself or for another, when, according to the law or circumstances, The statement made serves to produce that consequence, it is punishable by imprisonment from 3 months to 2 years or a fine »

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F25** - Agreement regarding the processing of personal data

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

Agreement regarding the processing of personal data

By this agreement, we declare that we have been informed that the personal data, voluntarily provided by the undersigned, in the performance of public procurement procedures as well as in the execution of a possible contract, are processed by the Contracting Authority in compliance with all the provisions of the European Regulation no. 679/2016. The purpose of collecting this data is to be used only and only in the performance of the public procurement procedure as well as in the execution of the contract (if it will be concluded with you).

We have become aware of the fact that in the event of a refusal to provide certain personal data, imperatively necessary for the legal conduct of the procedures, the rejection of the offer will be entailed.

To the extent that I consider it appropriate, I undertake to exercise my rights of access, intervention and opposition regarding the personal data provided, under the conditions provided by the E.U. Regulation no. 679/2016, through a written application, signed and dated, submitted at the institution's headquarters.

In view of the above, I intend to express my consent freely and unequivocally to the processing of personal data by the personal data controller, in order to carry out the public procurement procedure and execution of the contract.

Date :[ZZ. LL.YYYY]

*(name and surname)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,*

**FORM F26** - Declaration on the Thermal Efficiency **of the Thermal Engine Cogeneration Plant** ηt [%]

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

DECLARATION Thermal efficiency of **the cogeneration plant with thermal engines** ηt [%]

Undersigned............................................................. (*name, surname, identification document*), legal representative of SC ................................................................................. (*name of the economic operator and identification data: address, tel/fax number, cui, J.. etc*.), as bidder, declare on my own responsibility, under the sanctions applied to the act of forgery in public documents, that the procedure organized by .................... for the award of the public procurement contract having as its object *.....................*

The thermal efficiency of the **cogeneration plant with thermal engines**  ηt [%] that we ensure and guarantee is.................

At the same time, I declare that I am aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a state body or institution or to another unit referred to in Article 175, in order to produce a legal consequence, for oneself or for another, when, according to the law or circumstances, The statement made serves to produce that consequence, it is punishable by imprisonment from 3 months to 2 years or a fine »

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F27** - Declaration form on the overall efficiency of **the cogeneration plant with thermal engines** ηg [%]

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

DECLARATION Overall efficiency of **the cogeneration plant with thermal engines** ηg [%]

Undersigned............................................................. (*name, surname, identification document*), legal representative of SC ................................................................................. (*name of the economic operator and identification data: address, tel/fax number, cui, J.. etc*.), as bidder, declare on my own responsibility, under the sanctions applied to the act of forgery in public documents, that the procedure organized by .................... for the award of the public procurement contract having as its object *.....................*

At the same time, I declare that I am aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a state body or institution or to another unit referred to in Article 175, in order to produce a legal consequence, for oneself or for another, when, according to the law or circumstances, The statement made serves to produce that consequence, it is punishable by imprisonment from 3 months to 2 years or a fine »

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

*NOTE: The overall efficiency of the high-efficiency cogeneration plant consisting of the 3 CHP units is defined as the ratio between the useful energy, calculated as the sum of the electricity produced at the generator terminals (EE) and the thermal energy produced in the form of hot water for heating (ET) and the energy of the consumed fuel (EF) respectively ηg = (EE + ET) / EF [%].*

**FORM F28** - Declaration on the Amount of GHG Emission of **the Cogeneration Plant with MC Thermal Engines** [tCO2eq/year]

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

DECLARATION regarding the amount of GHG emission of **the cogeneration plant with thermal engines**  MC [tCO2eq/year]

Undersigned............................................................. (*name, surname, identification document*), legal representative of SC ................................................................................. (*name of the economic operator and identification data: address, tel/fax number, cui, J.. etc*.), as bidder, declare on my own responsibility, under the sanctions applied to the act of forgery in public documents, that the procedure organized by .................... for the award of the public procurement contract having as its object *.....................*

The amount of GHG emission from the units **of the cogeneration plant with thermal engines** [tCO2eq/year] that we provide is................

At the same time, I declare that I am aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a state body or institution or to another unit referred to in Article 175, in order to produce a legal consequence, for oneself or for another, when, according to the law or circumstances, The statement made serves to produce that consequence, it is punishable by imprisonment from 3 months to 2 years or a fine »

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F29** - Declaration on the Oil Consumption of **the Cogeneration Plant with Thermal Engines** (U) liters/h

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

DECLARATION regarding the Oil Consumption of **the Cogeneration Plant with Thermal Engines in** liters/h

Undersigned............................................................. (*name, surname, identification document*), legal representative of SC ................................................................................. (*name of the economic operator and identification data: address, tel/fax number, cui, J.. etc*.), as bidder, declare on my own responsibility, under the sanctions applied to the act of forgery in public documents, that the procedure organized by .................... for the award of the public procurement contract having as its object *.....................*

The oil consumption of the **cogeneration plant with thermal engines in** liters/h that we declare is................

At the same time, I declare that I am aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a state body or institution or to another unit referred to in Article 175, in order to produce a legal consequence, for oneself or for another, when, according to the law or circumstances, The statement made serves to produce that consequence, it is punishable by imprisonment from 3 months to 2 years or a fine »

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

**FORM F30** - Declaration on the Cost of Maintenance

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

DECLARATION on the Cost of Maintenance

**Cogeneration plant with thermal engines**

Undersigned............................................................. (*name, surname, identification document*), legal representative of SC ................................................................................. (*name of the economic operator and identification data: address, tel/fax number, cui, J.. etc*.), as bidder, declare on my own responsibility, under the sanctions applied to the act of forgery in public documents, that the procedure organized by .................... for the award of the public procurement contract having as its object *.....................*

The cost of maintaining the assemblies **of the cogeneration plant with thermal engines** that we declare is ................RON/MWh(e)

At the same time, I declare that I am aware of the provisions of Article 326 "False Statements" of the Criminal Code regarding "Improper declaration of the truth, made to a state body or institution or to another unit referred to in Article 175, in order to produce a legal consequence, for oneself or for another, when, according to the law or circumstances, The statement made serves to produce that consequence, it is punishable by imprisonment from 3 months to 2 years or a fine »

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

# FORM F31 - DECLARATION OF BENEFICIAL OWNERS

Tenderer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*name/name*)

DECLARATION OF BENEFICIAL OWNERS

The undersigned, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (*name and surname*), having domicile/residence in ........................................................................, identified (a) with an identity document (CI/passport), series .................., no. ............................................., issued by ................................................................................, on ......................................, CNP .................................................................., authorized legal representative of ............................................................................................................................... (*name/name and registered office/address*), as bidder/associate bidder/subcontractor/third party supporter (as the case may be), at the public procurement having as its object ..........................................................................., organized by .................................................., declare on my own responsibility, under the sanctions applied to the act of forgery in public documents, that the real beneficiary/beneficiaries of the legal person, as well as the manner of exercise of control, in accordance with the provisions of Law no. 129/2019 on preventing and combating money laundering and terrorist financing, as well as amending and supplementing certain regulatory acts, as subsequently amended and supplemented, transposing the provisions of Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, as amended by Directive (EU) 2018/843 of the European Parliament and of the Council, Are:

**1.** Name ........................................................ first name:..........................................................

DOB .................................... place of birth (city) ................................................ (county/sector/country) ........................................... CNP ...................................................... Identity document ............... Series............. No. ...........................................citizenship.......................................

☐ Domicile / ☐ Residence: Country...................................... Locality .................................................... Str................................................................... No. …….... block of flats............. Scale............ floor............ Ap......... county/sector ......................................................

|  |
| --- |
| The way in which the control over the company/legal person is exercised (check or fill in the corresponding version):  ☐ According to the provisions of art. 4 para. (2) letter a), item 1 of Law no. 129/2019;  ☐ According to the provisions of art. 4 para. (2) letter a), item 2 of Law no. 129/2019;  ☐ According to the provisions of art. 4 para. (2) letter b), item ...... of Law no. 129/2019  ☐ According to the provisions of art. 4 para. (2) letter d), item 1 of Law no. 129/2019;  ☐ According to the provisions of art. 4 para. (2) letter d), item 2 of Law no. 129/2019;  ☐ According to the provisions of art. 4 para. (2) letter d), item 3 of Law no. 129/2019;  ☐ According to the provisions of art. 4 para. (2) letter d), item 4 of Law no. 129/2019;  ☐ According to the provisions of art. 4 para. (2) letter c), item ....... . of Law no. 129/2019;  Description:....................................................................................................................................................... |

**2.** Name ........................................................ first name:............................................................

DOB ....................... place of birth (city) ............................................... (county/sector/country) ........................................................ CNP ...................................................... Identity document ............... Series............. No. ................................................... citizenship.......................................

☐ Domicile / ☐ Residence: Country........................... locality .................................................... Str.................................................................. No. ……......... block of flats............. Scale............ floor........ Ap......... county/sector ......................................................

The way in which the control over the company/legal person is exercised (check or fill in the corresponding version):

☐ According to the provisions of art. 4 para. (2) letter a), item 1 of Law no. 129/2019;

☐ According to the provisions of art. 4 para. (2) letter a), item 2 of Law no. 129/2019;

☐ According to the provisions of art. 4 para. (2) letter b), item ...... of Law no. 129/2019

☐ According to the provisions of art. 4 para. (2) letter d), item 1 of Law no. 129/2019;

☐ According to the provisions of art. 4 para. (2) letter d), item 2 of Law no. 129/2019;

☐ According to the provisions of art. 4 para. (2) letter d), item 3 of Law no. 129/2019;

☐ According to the provisions of art. 4 para. (2) letter d), item 4 of Law no. 129/2019;

☐ According to the provisions of art. 4 para. (2) letter c), item ....... . of Law no. 129/2019;

Description:......................................................................................................................................................

I mention that the data on the real beneficiaries are declared in the Central Register organized at the level of the National Trade Register Office / equivalent.

For the purposes of the above, I submit attached to this declaration a Certificate of Ascertainment issued by the Ministry of Justice-Trade Register Office (or equivalent in the case of foreign legal entities).

I, the undersigned, declare that the information provided is complete and correct in every detail and I understand that the contracting authority has the right to request, for the purpose of verifying and confirming the declarations, any supporting documents at our disposal.

I understand that in case of partial completion of the requested data or failure to fill in the data in the situation where they exist, it entails the rejection of the submitted offer.

I understand that if this statement is not in line with reality, I am liable to violate the provisions of the criminal legislation on false statements.

At the same time, I declare that I have become aware of the provisions of Article 326 "False statements" of the Criminal Code regarding "Improper declaration of the truth, made to a person of those provided for in Article 175 or to a unit in which he carries out his activity in order to produce a legal consequence, for himself or for another, when, according to the law or circumstances, the statement made serves to produce that consequence, is punishable by imprisonment from 3 months to 2 years or a fine."

Date :[ZZ. LL.YYYY]

(*name and surname*)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (*signature and stamp*), as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, legally authorized to sign the offer for and on behalf of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(*name/name of the economic operator*)

*Note 1: the relevant provisions of Law no. 129/2019*

*Art.4.*

*(1) For the purposes of this law, "beneficial owner" means any natural person who ultimately owns or controls the client and/or the natural person in whose name or in whose interest a transaction, operation or activity is carried out, directly or indirectly.*

*2. The concept of beneficial ownership shall include at least:*

*a) in the case of companies subject to registration in the Trade Register and foreign corporate entities:*

*1. the natural person or natural persons who ultimately own or control the company subject to registration in the commercial register by directly or indirectly exercising the right of ownership over a sufficient percentage of the number of shares or voting rights or by participating in the equity of the respective company, including by holding bearer shares, or by exercising control by means other than a company listed on a regulated market that is subject to disclosure requirements in accordance with European Union law or equivalent international standards that ensure appropriate transparency of information on the exercise of ownership. The holding of 25% plus one shares or participation in the capital of a company in a percentage of more than 25% by a natural person is an indication of the direct exercise of the right of ownership. The holding of 25% plus one share or the participation in the capital of a company in a percentage of more than 25% by a foreign corporate entity, which is under the control of a natural person, or by several foreign corporate entities, which are under the control of the same natural person, is an indication of the indirect exercise of the right of ownership;*

*(2) if, after all due diligence has been carried out and provided that there are no grounds for suspicion, no person is identified in accordance with paragraph 1 or if there is any doubt that the identified person is the beneficial owner, the natural person occupying a senior management position, namely: the administrator(s), members of the Board of Directors/Supervisory Board, directors with powers delegated from the administrator/board of directors, members of the Executive Board. The reporting entities shall keep track of the measures taken to identify the beneficial owners in accordance with point 1 and this point, as well as the difficulties encountered in the process of verifying the identity of the beneficial owner;*

*b) in the case of trusts or similar legal arrangements – all of the following persons:*

*1. the settlor(s), as well as the persons appointed to represent his/her interests under the law;*

*2. the trustee(s);*

*3. the beneficiary(ies) or, if his/her identity is not identified, the category of persons in whose main interest the trust or similar legal arrangement is established or operates;*

*(4) any other natural person who exercises ultimate control over the trust or similar legal arrangement under foreign law by direct or indirect exercise of the right of ownership or by other means;*

*c) in the case of non-profit legal entities:*

*1. associates or founders;*

*2. members of the board of directors;*

*3. persons with executive functions empowered by the board of directors to exercise its attributions;*

*4. in the case of associations, the category of natural persons or, as the case may be, the natural persons in whose main interest they were established, respectively, in the case of foundations, the category of natural persons in whose main interest they were established;*

*5. any other natural person who exercises control in the last resort, by any means, over the non-profit legal person;*

*d) in the case of legal persons, other than those referred to in letters a) - c), and entities that manage and distribute funds:*

*1. the natural person beneficiary of at least 25% of the assets, respectively the shares or shares of a legal person or an entity without legal personality, if the future beneficiaries have already been identified;*

*2. the group of persons in whose main interest a legal person or entity without legal personality is constituted or operates, if the natural persons benefiting from the legal person or legal entity have not yet been identified;*

*3. the natural person or persons exercising control over at least 25% of the assets of a legal person or entity without legal personality, including by exercising the power to appoint or dismiss the majority of the members of the administrative, management or supervisory bodies of that entity;*

*4. the natural person or persons who manage the legal person, if, after all due diligence has been taken and provided that there are no grounds for suspicion, no natural person is identified in accordance with items 1 to 3 or if there is any doubt that the identified person is the beneficial owner, in which case the reporting entity is also obliged to keep records of the measures applied for the purpose of identifying the beneficial owner in accordance with item 1 - 3 and this point."*

*Note 2: The form will be filled in by each participant in the procedure (sole bidder/associated bidder/subcontractor/third party supporter).*

*Note 3: The declaration will be updated and presented to the Purchaser whenever a change occurs, together with an ONRC extract/equivalent document.*

1. 1 One will be opted for by drawing up separate forms if both the financial and technical proposals contain confidential clauses [↑](#footnote-ref-2)