



INVITATION FOR BID

*Bidding Document for Procurement of Medical
Oxygen Pressure Swing Adsorption (PSA) Plants,
related devices, and Services*

IFB No.: IFB-ETH-GF-22 05-2022

Procurement Reference No.: EM/CSP/002/22

Project: Global Fund

Country: Ethiopia

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ACRONYMS

CHAI	Clinton Health Access Initiative
DDP	Delivered Duty Paid Incoterms
ETB	Ethiopian Birr
FHAPCO	Federal HIV/AIDS Prevention and Control Office
FMOH	Federal Ministry of Health
GF	Global Fund
HF	Health Facility
IFB	Invitation for Bid
PMED	Pharmaceutical and Medical Equipment Directorate
PO	Purchase Order
PPM	Planned Preventive Maintenance
PSA	Pressure Swing Adsorption
Q&A	Question and Answers
RHB	Regional Health Bureau
SLA	Service Level Agreement
UN	United Nations
USD	United States Dollar
COVID-19	Corona Virus Disease 2019

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BACKGROUND

Medical oxygen is one of the vital medicines for the management of hypoxemia due to COVID-19 and other respiratory distress induced diseases which remain ever present not only in Ethiopia, but also globally. A safe, reliable oxygen ecosystem is found to be one of the basic elements of health services, and necessary as the single, irreplaceable treatment for hypoxemia, and thus worthy of additional investment. The Ethiopian Ministry of Health (MOH) has been making deliberate efforts to build a resilient health system for a strong response to public health emergencies which include the COVID-19 pandemic and its catastrophic effects, part of which includes continued access to medicinal oxygen.

Clinton Health Access Initiative (CHAI) Ethiopia carries out a wide range of programs to support the Ministry of Health of Ethiopia in improving the health status of the country by ensuring access to quality health services. Apart from the current COVID-19 support to MOH, CHAI Ethiopia has eight programs: Maternal Newborn and Child Health (MNCH), Access to Medicine, Laboratory Services, Vaccines, Cancer, Woreda Transformations, and Global Health Financing.

PROCUREMENT CONTEXT

The MOH, in collaboration with its key stakeholders like CHAI Ethiopia and other implementing partners, has been working on the medical oxygen need assessment and analysis with all necessary actions including procurement of Pressure Swing Adsorption (PSA) oxygen generating plants, manifolds, pipeline systems and power generators to meet the additional oxygen need for COVID-19 pandemic management and beyond.

To improve access to medical oxygen in the country via narrowing the current huge demand-supply gaps at service delivery points, MOH would like to procure, install, and commission PSA medical grade oxygen plants, manifolds, Central or sub-central piping distribution systems (e.g. separate oxygen distribution manifold system for critical care in the scattered building) and power generators at ten hospitals across the country (see list of hospital on table 1 below) with the support of CHAI through its principal recipient of National HIV/AIDS Prevention and Control Office (HAPCO) Ethiopia as part of the Global Fund COVID-19 Response Mechanism (GF-C19RM) scheme.

CHAI invites eligible bidders for the supply and installation and commission of PSA medical grade oxygen generation plants, manifolds, pipeline systems and power generators at prioritized health facilities.

PROCESS

The procurement process will be conducted with consideration for efficiency, cost-effectiveness, value for money and long-term sustainability of the oxygen ecosystem. This procurement request was developed in direct partnership with the Ethiopian MOH.

OBJECTIVE AND SCOPE

CHAI is seeking quotes which include the procurement, installation, and commissioning of:

1. A total of ten (10) PSA oxygen generation systems, each with an output capacity of 60 Nm³/hr.
 - 1.1. **Lot 1 (Containerized solution):** seven (7) of ten PSA oxygen generation systems
 - All 7 systems to be placed at 7 different health facilities (HFs).
 - The vendor is to present appropriate configuration for supply security (e.g., duplexing and containerized)
 - Each system = 2 x +/-30NM³/hr. fitted to customized 40ft (12m) containers for each HF
 - Installation, commissioning is to include training of plant operators on site.
 - Advanced industrial training using a Training of Trainers (TOT) approach for the 7 HFs (2 per facility, 2*7=14) with oxygen PSA plants + 3 RHB/PMED of a total of 17 BME/Ts.
 - 1.2. **Lot 2 (Non-containerized solution):** three (3) of ten PSA oxygen generation systems
 - The vendor is to present appropriate configuration for supply security (e.g., duplexing and on-site)
 - Each system 2 x +/-30NM³/hr with on-site installation for each HF.
 - Installation and commissioning is to include training of plant operators on site.
 - Company certified training using a TOT approach with possible cascading trainings for the 3 HFs (two BME/Ts per facility 3*2=6) with oxygen PSA plants +2 RHB/PMED and total of 8 professionals

Additionally, CHAI is seeking offers for after-sales service level agreements (SLA) for the PSA plants to ensure continued quality operations over the course of two (2) years post warranty period, with the option of renewal. All planned preventive maintenance (PPM) to be covered by the SLA.

NB: The two years warranty should start from commissioning of PSA plants date.

2. **Lot 3:** Ten (10) power generators with a capacity of 175 - 200kW/ 200-250kVA for each facility
3. **Lot 4:** Piped distribution for medical oxygen, including manifolds and pipeline systems and labor cost for installation in ten hospitals, and ancillary equipment such as flowmeters and humidifiers.
4. The warranty should cover any malfunctioning component; the vendor will be responsible for liaising with component manufacturer to ensure warranty is honored.
5. The vendor should ensure availability of a continuous supply of spare parts, accessories, supplies and consumables for next five years (after warranty) with fixed USD but equivalent in Ethiopian Birr currency at the time of purchase.

Detailed specifications for all the above items can be found in **Annex A**, and requirements for after-sales service level agreement in **Annex B**. The contract shall include quantity of the items above; all taxes, duties and other levies payable shall be indicated separately.

Desired shipping, installation and commissioning costs should be under DDP INCOTERMS 2020.

Table 1: Items to be procured, by facility

SN	Name of Hospitals	Region	PSA Plant with total	Power Generator	Elevation

			output capacity	output capacity	
1	Dubti General Hospital	Afar	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	378m
2	Debretabor Specialized hospital	Amhara	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	2706m
3	Woldia Specialized hospital	Amhara	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	2112m
4	Assosa General Hospital	Benishangul	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	1570m
5	Adama Hospital Medical College	Oromia	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	1712m
6	Adolla General Hospital	Oromia	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	1758m
7	Yirgalem Hospital	Sidama	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	1777m
8	Arba Minch General Hospital	SNNP	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	1285m
9	Gode Hospital	Somali	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	358m
10	Adigrat ¹ , but there is possibility of location change	Tigray	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	175 -200 kW/ 200-250 kVA	2457m

¹ Due to the current security challenges, this is not confirmed and there would be site change in the region

SECTION 1. LETTER OF INVITATION

The Clinton Health Access Initiative (CHAI), in collaboration with the Ministry of Health Ethiopia, invites interested and capable vendors to respond to this tender for the procurement, delivery, installation, commissioning, and after sales support of Pressure Swing Adsorption medical grade oxygen generation plants, manifolds, pipeline systems and power generators.

This IFB includes the following documents and the General Terms and Conditions of Contract which is inserted in the Bid Data Sheet:

- Section 1: Letter of Invitation
- Section 2: Instruction to Bidders
- Section 3: Bid Data Sheet (BDS)
- Section 4: Evaluation Criteria
- Section 5: Schedule of Requirements and Technical Specifications
- Section 6: Returnable Bidding Forms
 - Form A: Bid Submission Form
 - Form B: Vendor/Bidder Details Form
 - Form C: Joint Venture/Consortium/Association Information Form
 - Form D: Qualification Form
 - Form E: Format of Technical Bid
 - Form F: Price Schedule/Financial Proposal
 - Form G: Form of Bid Security

If you are interested in submitting a Bid in response to this Invitation for Bid (IFB), please prepare your Bid in accordance with the National Competitive Bidding (NCB) requirements and procedure as set out in this IFB.

Bidders should submit Technical, Operational, and financial proposals. Offers are to be submitted in two (2) separate envelopes and they must be clearly labeled:

- a. Technical and Operational
- b. Price Schedule / Financial Proposal

It shall remain the bidder's responsibility to ensure that the quotation is submitted on or before the 5th of July 2022 deadline as indicated by CHAI, to the following address:

**Address: Clinton Health Access Initiative,
Bid Document for (IFB # CHAI/ EM/CSP/001/22), Meskel Flower Road
Tel # 011 416 6993-98, Fax: 011 416 6988 and P.O. Box 3297, Code 1250,
Addis Ababa, Ethiopia**

All bid documents submitted after the cut-off date set shall be rejected and returned unopened to bidders.

Bids shall be opened in the presence of the bidders and/or their representatives who choose to attend in person at the Clinton Health Access Initiative office at 2:15 PM on July 5, 2022. All bids must be accompanied by a 2% Bid Security of Bank "Certified Payment Order" in Ethiopian Birr.

All interested bidders must have renewed license and bidder's registration certificate from Government of Ethiopia - Ministry of Finance and Economic Development.

Issued by:

Name: Dinkineh Bikila

Title: Program manager for Essential Medicine

Date: June 3, 2022

Approved by:

Name: Rahel Belete (PhD)

Title: Country Director, CHAI Ethiopia

Date: June 3, 2022

IFB Terms and Conditions

Distribution of this document does not mean there is any commitment on the part of CHAI to engage an applicant. CHAI will not reimburse or otherwise bear any costs associated with this IFB regardless of whether applicant is selected to implement the project. Please note that no fee is required in submission of these quotes. All IFBs, along with any responses are considered the property of CHAI and the proposals will not be returned to the originator.

SECTION 2. INSTRUCTION TO BIDDERS

GENERAL PROVISION

- Introduction**
- 1.1 Bidders shall adhere to all the requirements of this IFB, including any amendments made in writing by CHAI.
 - 1.2 Any Bid submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Bid by CHAI. CHAI is under no obligation to award a contract to any Bidder as a result of this IFB.
 - 1.3 CHAI reserves the right to cancel the procurement process at any stage without any liability of any kind for CHAI, upon notice to the bidders or publication of cancellation notice.
 - 1.4 As part of the bid, it is desired that the Bidder have a renewed license and bidder's registration certificate from Government of Ethiopia - Ministry of Finance and Economic Development.
- Fraud & Corruption, Gifts and Hospitality**
- 1.5 The Global Fund (GF) does not tolerate corrupt, fraudulent, collusive, anti-competitive or coercive practices of any kind involving its resources, including grant funds.
 - 1.6 GF requires all bidders/vendors observe the highest standard of ethics during the procurement process and contract implementation.
 - 1.7 Bidders/vendors shall not solicit, offer, give or receive, or promise or represent to offer, give or receive, fees, gratuities, rebates, gifts, commissions, or other payments, except as disclosed in full to the Global Fund or the grant recipient, in connection with the procurement process or in contract execution.
 - 1.8 In this regard, CHAI:
 - a) Shall take strong, immediate action in all circumstances where it determines that there is substantive and credible evidence of corrupt, fraudulent, collusive, anti-competitive or coercive practices in connection with the procurement or performance of the contract in question.
 - b) Reserves the rights to reject a bid if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question;
 - c) Shall declare a vendor ineligible, either indefinitely or for a stated period, to be awarded a contract if at any time it determines that the vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a contract.
 - 1.9 All Bidders must adhere to the Code of Conduct for Suppliers – Global Fund, which may be found at https://www.theglobalfund.org/media/3275/corporate_codeofconductforsuppliers_policy_en.pdf
- Eligibility**
- 1.10 A vendor should not be suspended, debarred, or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other major international financing institution or organization. Vendors are therefore required to disclose to CHAI whether they are subject to any sanction or temporary suspension imposed by these organizations.
 - 1.11 It is the Bidder's responsibility to ensure that its employees, joint venture members, sub-

contractors, service providers, suppliers and/or their employees meet the eligibility requirements as established by GF.

Conflict of Interests

- 1.12 Bidders must strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. Bidders found to have a conflict of interest shall be disqualified.
- 1.13 Without limitation on the generality of the above, Bidders, and any of their affiliates, shall be considered to have a conflict of interest with one or more parties in this solicitation process, if they have interests that could improperly influence their performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations, and that such Conflict of Interest may contribute to or constitute a prohibited practice under this Code of Conduct for Suppliers – Global Fund, which may be found at https://www.theglobalfund.org/media/3275/corporate_codeofconductforsuppliers_policy_en.pdf.
- 1.14 Bidders will not apply or seek to apply undue influence on the decision-making processes and will not engage in any conduct that breaches or facilitates the breach of the Global Fund's Policy on Conflicts of Interest as stated at http://www.theglobalfund.org/media/6016/core_ethicsandconflictinterest_policy_en.pdf.
- 1.15 In the event of any uncertainty in the interpretation of a potential conflict of interest, Bidders must disclose to CHAI, and seek confirmation on whether or not such conflict exists.
- 1.16 Similarly, the Bidders must disclose in their Bid their knowledge of the following:
 - a) If the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel who are family members of GF staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving goods and/or services under this ITB; and
 - b) All other circumstances that could potentially lead to actual or perceived conflict of interest, collusion or unfair competition practices.
- 1.17 Failure to disclose such an information may result in the rejection of the Bid or Bids affected by the non-disclosure.
- 1.18 The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to further evaluation and review of various factors such as being registered, operated and managed as an independent business entity, the extent of Government ownership/share, receipt of subsidies, mandate and access to information in relation to this ITB, among others. Conditions that may lead to undue advantage against other Bidders may result in the eventual rejection of the Bid.

PREPARATION OF BIDS

- General Considerations**
- 1.19 In preparing the Bid, the Bidder is expected to examine the IFB in detail. Material deficiencies in providing the information requested in the IFB may result in rejection of the

- Bid.
- 1.20 The Bidder will not be permitted to take advantage of any errors or omissions in the IFB. Should such errors or omissions be discovered, the Bidder must notify CHAI accordingly.
- Cost of Preparation of Bid** 1.21 The Bidder shall bear all costs related to the preparation and/or submission of the Bid, regardless of whether its Bid is selected or not. CHAI shall not be responsible or liable for those costs, regardless of the conduct or outcome of the procurement process.
- Language** 1.22 The Bid, as well as any and all related correspondence exchanged by the Bidder and CHAI, shall be written in English; the language (s) specified in the Bid Data Sheet (BDS).
- Documents Comprising the Bid** 1.23 The Bid shall comprise of the following documents and related forms which details are provided in the BDS:
- a) Documents Establishing the Eligibility and Qualifications of the Bidder;
 - b) Technical Bid (including operational aspects);
 - c) Price Schedule/Financial Proposal;
 - d) Bid Security, if required by BDS;
 - e) Any attachments and/or appendices to the Bid.
- Documents Establishing the Eligibility and Qualifications of the Bidder** 1.24 The Bidder shall furnish documentary evidence of its status as an eligible and qualified vendor, using the Forms provided under Section 6 and providing documents required in those forms. In order to award a contract to a Bidder, its qualifications must be documented to CHAI's satisfaction.
- Technical Bid Format and Content** 1.25 The Bidder is required to submit a Technical Bid using the Standard Forms and templates provided in Section 6 of the ITB.
- 1.26 The Bid offers shall meet the following:
- a) Technical and Operational Requirements – These include Technical and performance criteria, Warranty, Service Level Agreement as well as Training Package.
 - b) Quality Requirements (including regulatory and standards and proof thereof).
- 1.27 A detailed checklist of all technical specifications is to be completed clearly for each part. Please see Annex A for detailed specifications required for the PSA medical grade oxygen plants, manifolds, pipeline systems and power generators, and ancillary devices in a template required to be used for submission.
- 1.28 If the proposed offer, in whole or in part, does not comply exactly with the technical specifications and descriptions provided herein, the nearest functional equivalent or closest standard should be offered as an alternative and clearly indicated with a justification of equivalence.
- 1.29 When applicable and required as per Section 5, the Bidder shall describe the necessary training Programme available for the maintenance and operation of the equipment offered as well as the cost to the CHAI. Unless otherwise specified, such training as well as training materials shall be provided in the language of the Bid as specified in the BDS.
- 1.30 When applicable and required as per Section 5, the Bidder shall certify the availability of spare parts for a period of at least five (5) years from date of warranty expiry, or as

otherwise specified in this IFB.

- 1.31 After sales service support, which will take form of a Service Level Agreement (SLA), for all units of 10 PSAs, inclusive of costs of spare parts, service, and maintenance. Details to be included, but not limited to:
- a) All spare parts shall be itemized as individual units and tallied based on total quantities required over term of contract.
 - b) Expected maintenance labour cost and time to be clearly indicated.
 - c) Maintenance response time and other pertinent information to be included.
 - d) Details to guarantee installation, including:
 - Details to guarantee delivery from time of contract award
 - Detailed timeline outlining including installation, testing, and commissioning.
 - Labor commitment for installation, testing, commissioning, and training.
 - Plan for hand-over, including final certification of functionality.
- 1.32 Please, see **Annex B** for expectations associated with an SLA, **FORM F** for spares pricing template which will be constant over the contract agreement period if required by facility to procure, and **Annex A** for expectations regarding training.
- 1.33 Additionally, if the SLA is to be managed or provided by 3rd party, describe nature of partnership, and provide details for all partners involved. A template for such details can be found in **FORM C**.

Price / **Schedule**
Financial Proposal

- 1.34 Interested parties are asked to submit, under separate cover, a detailed price schedule/financial proposal for procurement and delivery.
- 1.35 Value for money will be a key criterion in selection and the final budget will be agreed with the successful party.
- 1.36 The Price Schedule/Financial Proposal shall be prepared using the Form provided in Section 6 of the IFB and taking into consideration the requirements in the IFB.
- 1.37 The bidder should cost in Dollars (USD) for the following:
- a) PSA Plant ... Lot 1 & 2
 - PSA plant components (as per costing template)
 - Shipping, inland transportation to the facility and other costs as per DDP INCOTERMS 2020
 - Loading and unloading (crane other related expenses)
 - Labor costs (including installation, commissioning, and training)
 - b) Power generators... Lot 3
 - Power generator and its component
 - Shipping and inland transportation to the facility and other costs as per as per DDP INCOTERMS 2020
 - Loading and unloading (crane other related expenses)
 - Labor costs (including installation, commissioning, and training)
 - c) Manifold and pipeline systems... Lot 4
 - Manifold and Pipeline system materials as (as per costing template)
 - Shipping, inland transportation to the facility and other costs including installation

and commissioning will be as per DDP INCOTERMS 2020

- Loading and unloading and other related expenses
 - Labor costs (including installation, commissioning, and training)
- d) After sales SLA:²
- Spares, itemized, costed per unit and total (as per costing template) after warranty period
 - Consumables for service, labor costs associated with repair and maintenance within the warranty period
 - Shipping and inland transportation of the required items/consumables used for plant and other devices service in the warranty period to the facility and other costs as per DDP INCOTERMS 2020
- e) Vendor details:
- Corporate details as per template in **FORM B**

1.38 The rates quoted shall remain valid for a period until PO is signed with winner supplier.

1.39 Any requirement described in the Technical Bid but not priced in the Price Schedule/Financial Proposal, shall be assumed to be included in the prices of other activities or items, as well as in the final total price.

Note: Only when technical specifications have been met and terms of after sales have been deemed acceptable, the financial proposal will be considered.

Bid Security

1.40 Unless otherwise specified in the bid document, the Bidder shall furnish as part of its bid, a bid security in original form and in the amount and currency specified in the bid document. All bids must be accompanied by a 2% Bid Security of Bank "Certified Payment Order" in Ethiopian Birr.

1.41 The bid security shall be, at the Bidder's option, in any of the following forms:

- a) An unconditional Bank Guarantee.
- b) An irrevocable Letter of Credit.
- c) Cash, check certified by a reputable bank or financial institution, or payable order.

1.42 The Bid Security shall be valid for a minimum of twenty-eight (28) days beyond the end of validity period of the Bid. This shall also apply if the period for bid validity is extended.

1.43 CHAI reserves the right to accept or reject any or all bids if:

- a) The Bid Security is not included along with the Bid or is not found in the Bid as per indicated the IFB.
- b) The Bid Security amount or its validity period is found to be less than what is required.

Note:

- a) The bank guarantee from a banking institution recognized by the purchaser located in

² Please complete the unit price and required spare parts (any necessary but missed from the list) to be supplied after warranty period.

any eligible country shall be counter guaranteed by any local Commercial Banks.

- b) Unconditional bank guarantee should be submitted in its original form; copies will not be accepted.
- c) Bid security shall be issued in the name of Clinton Health Access Initiative (CHAI).

1.44 The Bid Security may be forfeited, and the Bid rejected, in the event of any, or combination, of the following conditions:

- a) If the Bidder withdraws its offer during the period of the Bid Validity specified in the BDS, or;
- b) In the event the successful Bidder fails:
 - to sign the Contract after being issued an award; or
 - to furnish the Performance Security, insurances, or other documents that may be required as a condition precedent to the effectivity of the contract that may be awarded to the Bidder.

Currencies

1.45 All prices shall be quoted in USD; the currency indicated in the BDS. Where Bids are quoted in different currencies, CHAI will not convert the currency quoted in the Bid into the preferred currency.

1.46 If the Bidder wishes to be paid in a combination of amounts in different currencies like ETB and USD, the bidder should indicate the percentage with list of specific goods and services, but this should be noted that the amount to be paid will be based on the national bank of Ethiopia exchange rate of USD on the date.

1.47 The payment currency for local agents for installation, after sales services and maintenance will be changed to local currency by referring to the current/updated Global Fund fixed rate.

Joint Venture, Consortium or Association

1.48 If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Bid, they shall confirm in their Bid that:

- a) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Bid; and
- b) if they are awarded the contract, the contract shall be entered into, by and between CHAI and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture.

1.49 After the Deadline for Submission of Bid, the lead entity identified to represent the JV, Consortium or Association shall not be altered without the prior written consent of CHAI.

1.50 The lead entity and the member entities of the JV, Consortium or Association shall abide by the provisions of Clause 9 herein in respect of submitting only one Bid.

1.51 The description of the organization of the JV, Consortium or Association must clearly define the expected role of each of the entities in the joint venture in delivering the requirements of the IFB, both in the Bid and the JV, Consortium or Association Agreement. All entities that comprise the JV, Consortium or Association shall be subject to the eligibility and qualification assessment by CHAI and the Global Fund.

- 1.52 A JV, Consortium or Association in presenting its track record and experience should clearly differentiate between:
- a) Those that were undertaken together by the JV, Consortium or Association; and
 - b) Those that were undertaken by the individual entities of the JV, Consortium or Association.
- 1.53 Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the JV, Consortium or Association or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials
- 1.54 JV, Consortium or Associations are encouraged for high value, multi-sectoral requirements when the spectrum of expertise and resources required may not be available within one firm.

Only One Bid

- 1.55 The Bidder (including the individual members of any Joint Venture) shall submit only one Bid, either in its own name or as part of a Joint Venture.
- 1.56 Bids submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:
- a) they have at least one controlling partner, director or shareholder in common; or
 - b) any one of them receive or have received any direct or indirect subsidy from the other/s; or
 - c) they have the same legal representative for purposes of this IFB; or
 - d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the Bid of another Bidder regarding this IFB process;
 - e) they are subcontractors to each other's Bid, or a subcontractor to one Bid also submits another Bid under its name as lead Bidder; or some key personnel proposed to be in the team of one Bidder participates in more than one Bid received for this IFB process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Bid.

Bid Validity Period

- 1.57 Bids shall remain valid for the period of 30 days (specified in the bid document) after the bid submission deadline prescribed by CHAI. A Bid valid for a shorter period may be rejected and rendered non-responsive.
- 1.58 During the Bid validity period, the Bidder shall maintain its original Bid without any change, including the availability of the Key Personnel, the proposed rates and the total price.

Extension of Bid Validity Period

- 1.59 In exceptional circumstances, prior to expiry of the bid validity period, CHAI may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing via email.
- 1.60 Bidders who are not willing to extend their bid validity period for whatever reason shall be disqualified from the bid without having forfeited their bid security.
- 1.61 Bidders agreeing to the CHAI's request for extension of their bid validity period have to express in writing their agreement to such request and for how long they are willing to extend the period. Similarly, they have to amend the validity period of their bid security on

the basis of the extension of the bid validity period they have agreed to or furnish new bid security to cover the extended period.

- 1.62 A bidder not agreeing to extend the validity period of his/its bid security shall be treated as a bidder refusing the CHAI's request for extension of bid validity period, and as such, shall be disqualified from further bid proceeding.

IFB-related Questions or Clarifications (from the Bidders)

- 1.63 Bidders may request clarifications on any of the IFB documents no later than the date indicated in the BDS. Any request for clarification must be sent in writing and directed to the email address EthiopiaProcurement@clintonhealthaccess.org until 22 June 2022. If inquiries are sent other than specified channel, CHAI shall have no obligation to respond or confirm that the query was officially received.
- 1.64 All questions will be collected into one document and all answers provided will be circulated to all parties who submitted for clarification, as well as be posted on any platform hosting the IFB.
- 1.65 CHAI shall attempt to provide responses to clarifications in a speedy manner, but any delay in such response shall not cause an obligation on the part of CHAI to extend the submission date of the Bids, unless CHAI deems that such an extension is justified and necessary.

Amendment of Bids

- 1.66 At any time prior to the deadline of Bid submission, CHAI may for any reason, such as in response to a clarification requested by a Bidder, modify the IFB in the form of an amendment to the IFB. Amendments will be made available to all prospective bidders.
- 1.67 If the amendment is substantial, CHAI may extend the Deadline for submission of Bid to give the Bidders reasonable time to incorporate the amendment into their Bids.

Alternative Bids

- 1.68 Unless otherwise specified in the BDS, alternative Bids shall not be considered. If submission of alternative Bid is allowed by BDS, a Bidder may submit an alternative Bid, but only if it also submits a Bid conforming to the IFB requirements. Where the conditions for its acceptance are met, or justifications are clearly established, CHAI reserves the right to award a contract based on an alternative Bid.
- 1.69 If multiple/alternative bids are being submitted, they must be clearly marked as "Main Bid" and "Alternative Bid"

Pre-Bid Conference

- 1.70 If it deems to be appropriate, CHAI may hold a Pre-Bid conference for prospective bidders for clarification and discussion on the Bidding Document or modification thereto.
- 1.71 CHAI shall give notice via email to all bidders to attend the Pre-Bid Conference, Notice will include time, date, and address where Pre-Bid Conference will be held.
- 1.72 CHAI shall welcome all prospective bidders to attend this Pre-Bid Conference. However, non-attendance by the Bidder, however, shall not result in disqualification of a prospective Bidder.
- 1.73 To give all prospective bidders the opportunity to participate in the pre-bid conference, prospective bidders are limited to sending two representatives to this conference. All the costs of attending this conference will be borne by the prospective bidders.

- 1.74 CHAI invites all prospective bidders to submit their questions / request for clarification by time and date and to the address indicated in Bid Document.
- 1.75 Minutes will be captured for Pre-Bid Conference and shall be shared to all prospective to enable them to prepare their bid documents by incorporating the content of clarification or modification.

SUBMISSION AND OPENING OF BIDS

Submission

- 1.76 As per the specifications indicated herein, interested, and eligible bidders can do hard copy (manual) submission by courier or hand delivery of documents to the address below at or before 5 Jul 2022.
- 1.77 The bidder should submit one original and one copy of the document and they should be clearly marked "Original", and copies marked "Copy" as appropriate.
- 1.78 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder.
- 1.79 This authorization shall consist of a written statement by a power of attorney (or notary statement, etc.) proving that the person, who signed the bid on behalf of the company/joint venture/consortium is duly authorized to do so and it shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid shall be signed or initialled by the person signing the bid.
- 1.80 All copies shall be made from the signed original only. If there are discrepancies between the original and the copies, the original shall prevail.
- 1.81 Bidders should submit Technical and Operational, as well as financial proposals. The Technical and Operational Bid as well as the Financial Proposal must be sealed and submitted in separate envelopes, which shall:
 - a) Bear the name of the Bidder.
 - b) Be addressed to CHAI; and
 - c) Bear a warning not to open before the time and date for Bid opening.
- 1.82 If the envelope with the Bid Documents is not sealed and marked as required, CHAI shall assume no responsibility for the misplacement, loss, or premature opening of the Bid.
- 1.83 Additional separate cost for Company certified training with cost-effective approach like a Training of Trainers (TOT) can be submitted on top of the Technical and Operational Bid and Financial Proposal.
- 1.84 CHAI may, by permission of the FMOH and FHAPCO, employ electronic method to send requests for quotation and receive quotations provided that the following conditions are satisfied. If the method employed by CHAI has a safety mechanism of ensuring that information sent and or received through that electronic communication method cannot be accessed by any person other than the person to whom/which the information is sent, before the time such information will be made public. Electronic submission through email, if allowed, shall be governed as follows:
 - a) Electronic files that form part of the Bid must be in accordance with the format and

requirements indicated in bid document

- b) Documents which are required to be in original form (e.g. Bid Security, etc.) must be sent via courier or hand delivered as per the instructions.

- 1.85 Availability of stock and delivery time must be stated clearly.
1.86 Late bids will be rejected and returned unopened to bidders.
1.87 Bids must be delivered to the address below:

**Clinton Health Access Initiative,
Bid Document for (IFB # CHAI/ EM/CSP/001/22), Meskel Flower Road
Tel # 011 416 6993-98, Fax: 011 416 6988 and P.O. Box 3297, Code 1250,
Addis Ababa, Ethiopia**

- 1.88 Bidders must be aware that the mere act of submission of a Bid, in and of itself, implies that the Bidder fully accepts the **General Contract Terms and Conditions**.

**Deadline for Submission
of Bids and Late Bids**

- 1.89 Complete Bids must be received by CHAI in the manner, and no later than 5 July 2022, specified in the BDS. CHAI shall only recognise the actual date and time that the bid was received by CHAI.
1.90 CHAI shall not consider any Bid that is received after the deadline for the submission of Bids.

**Withdrawal, Substitution,
and Modification of
Bids**

- 1.91 A Bidder may withdraw, substitute or modify its Bid after it has been submitted at any time prior to the deadline for submission.
1.92 Manual and Email submissions: A bidder may withdraw, substitute or modify its Bid by sending a written notice to CHAI, duly signed by an authorized representative, and shall include a copy of the authorization. The corresponding substitution or modification of the Bid, if any, must accompany the respective written notice. All notices must be submitted in the same manner as specified for submission of Bids, by clearly marking them as "WITHDRAWAL" "SUBSTITUTION," or "MODIFICATION"
1.93 Bids requested to be withdrawn shall be returned unopened to the Bidders (only for manual submissions), except if the bid is withdrawn after the bid has been opened.

Bid Opening

- 1.94 Bids will be opened in the presence of the bidders and/or their representatives who choose to attend in person at the Clinton Health Access Initiative office at 2:15 PM on July 5, 2022.
1.95 The Bidders' names, modifications, withdrawals, the condition of the envelope labels/seals, the number of folders/files and all other such other details as CHAI may consider appropriate, will be announced at the opening. No Bid shall be rejected at the opening stage, except for late submissions, in which case, the Bid shall be returned unopened to the Bidders.

PROCEDURES FOR BID EVALUATION

Confidentiality

- 1.96 Information relating to the examination, evaluation, and comparison of Bids, and the recommendation of contract award, shall not be disclosed to Bidders or any other

persons not officially concerned with such process, even after publication of the contract award.

- 1.97 Any effort by a Bidder or anyone on behalf of the Bidder to influence CHAI in the examination, evaluation and comparison of the Bids or contract award decisions may, at CHAI's decision, result in the rejection of its Bid and may subsequently be subject to the application of prevailing Global Fund's supplier's sanctions procedures.

Bid Evaluation

- 1.98 Evaluation will be conducted solely on the basis of the Bids received.
- 1.99 Evaluation of Bids shall be undertaken in the following steps and weighting:
- a) Preliminary Examination including Eligibility
 - b) Qualification assessment (if pre-qualification was not done)
 - c) Evaluation of Technical Bids (including operational aspects) – 70%
 - d) Evaluation of Price Schedule / Financial Proposal – 30%
- 1.100 Financial offers will only be opened and evaluated if critical criteria of technical and operational offers have been met.

Note: Only those vendors who provide complete documentation to satisfy the technical and operational aspects of the offer will be considered for financial evaluation.

Preliminary Examination

- 1.101 CHAI shall examine the Bids to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, and whether the Bids are generally in order, among other indicators that may be used at this stage. CHAI reserves the right to reject any Bid at this stage.

Evaluation of Eligibility and Qualification

- 1.102 Bidding will be conducted through the National Competitive Bidding (NCB) procedures and is open to all bidders.
- 1.103 Eligibility and Qualification of the Bidder will be evaluated against the Minimum Eligibility/Qualification requirements specified in the Section 4 (Evaluation Criteria).
- 1.104 To be eligible, suppliers must comply with the Code of Conduct for Suppliers (https://www.theglobalfund.org/media/3275/corporate_codeofconductforsuppliers_policy_en.pdf) and the Sanctions Panel Procedures (https://www.theglobalfund.org/media/6015/corporate_sanctionsprocedures_policy_en.pdf)
- 1.105 In general terms, suppliers that meet the following criteria may be considered qualified:
- a) They have not directly or indirectly, including through an agent or other intermediary, breached the Supplier Code, including, but not limited to, corrupt, fraudulent, collusive, anti-competitive or coercive practices in competing for, or performing under, a Global Fund-financed contract;
 - b) They have not engaged in misconduct which results in the imposition of sanctions by any partner organization, any comparable institution or by a Global Fund grant recipient for conduct that would constitute a breach of the Supplier Code or any other unethical or unlawful behaviour;
 - c) They have not engaged in misconduct which results in an investigation, proceedings or findings, either civil, criminal or administrative, or the imposition of sanctions, by another national or international authority for conduct that would constitute a breach of the Supplier Code;
 - d) They have not been involved in a significant and material breach of the contract

between the Global Fund and the vendor or between a grant recipient and the vendor that in the opinion of the Global Fund places Global Fund resources at risk;

- e) They have a good financial standing and have access to adequate financial resources to perform the contract and all existing commercial commitments,
- f) They have the necessary similar experience, technical expertise, production capacity, quality certifications, quality assurance procedures and other resources applicable to the supply of goods and/or services required;
- g) They are able to comply fully with the Global Fund's General Terms and Conditions of Contract;
- h) They do not have a consistent history of court/arbitral award decisions against the Bidder; and
- i) They have a record of timely and satisfactory performance with their clients.

**Evaluation of Technical
Bid and Price
Schedule/Financial
Proposal**

1.106 The evaluation team shall review and evaluate the Technical Bids on the basis of their responsiveness to the Schedule of Requirements as well as Technical & Operational Specifications and other documentation provided, applying the procedure indicated in the BDS and other IFB documents.

1.107 When deemed appropriate, CHAI will invite the short-listed competent suppliers with technically responsive bids for a presentation on their Technical Bids and Financial Proposals which could help for sound decision in the selection process of competent competitors. The conditions for the presentation shall be provided in the bid document where required.

Due diligence

1.108 CHAI reserves the right to undertake a due diligence exercise, aimed at determining to its satisfaction, the validity of the information provided by the Bidder. Such exercise shall be fully documented and may include, but need not be limited to, all or any combination of the following:

- a) Verification of accuracy, correctness and authenticity of information provided by the Bidder;
- b) Validation of extent of compliance to the IFB requirements and evaluation criteria based on what has so far been found by the evaluation team;
- c) Inquiry and reference checking with Government entities with jurisdiction on the Bidder, or with previous clients, or any other entity that may have done business with the Bidder;
- d) Inquiry and reference checking with previous clients on the performance on on-going or completed contracts, including physical inspections of previous works, as deemed necessary;
- e) Physical inspection of the Bidder's offices, branches or other places where business transpires, with or without notice to the Bidder;
- f) Other means that CHAI may deem appropriate, at any stage within the selection process, prior to awarding the contract.

Clarification of Bids

1.109 To assist in the examination, evaluation and comparison of Bids, CHAI may, at its discretion, request any Bidder for a clarification of its Bid.

1.110 CHAI's request for clarification and the response shall be in writing and no change in the prices or substance of the Bid shall be sought, offered, or permitted, except to provide clarification, and confirm the correction of any arithmetic errors discovered by CHAI in the

evaluation of the Bids, in accordance with the IFB.

1.111 Any unsolicited clarification submitted by a Bidder in respect to its Bid, which is not a response to a request by CHAI, shall not be considered during the review and evaluation of the Bids.

Responsiveness of Bid

1.112 CHAI's determination of a Bid's responsiveness will be based on the contents of the bid itself. A substantially responsive Bid is one that conforms to all the terms, conditions, specifications and other requirements of the IFB without material deviation, reservation, or omission.

1.113 If a bid is not substantially responsive, it shall be rejected by CHAI and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

**Nonconformities,
Reparable Errors and
Omissions**

1.114 Provided that a Bid is substantially responsive, CHAI may waive any non-conformities or omissions in the Bid that, in the opinion of CHAI, do not constitute a material deviation.

1.115 CHAI may request the Bidder to submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

1.116 For the bids that have passed the preliminary examination and technical evaluation, CHAI shall check and correct arithmetical errors as follows:

- a) if there is a discrepancy between the unit price and the line-item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line-item total shall be corrected, unless in the opinion of CHAI there is an obvious misplacement of the decimal point in the unit price; in which case, the line-item total as quoted shall govern and the unit price shall be corrected;
- b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail.

1.117 If the Bidder does not accept the correction of errors made by CHAI, its Bid shall be rejected.

AWARD OF CONTRACT

**Right to Accept, Reject,
Any or All Bids**

1.118 CHAI reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.

Award Criteria

1.119 Tenders submitted by vendors will be assessed as per details in Annex B. Vendors must have a legally established business and be of good conduct. Submitted quotes will be

reviewed and evaluated by the review committee based on criteria outlined for all components for the PSA medical grade oxygen plants, manifolds, pipeline systems and power generators. The offers shall meet:

a) Technical and operational requirements:

- Technical and performance criteria
- Warranty
- Service level agreement
- Training package

b) Quality requirements (including regulatory and standards and proof thereof)

1.120 Prior to expiration of the period of Bid validity, CHAI shall award the contract to the qualified and eligible Bidder that is found to be responsive to the requirements of the Schedule of Requirements and Technical Specification, and has offered the lowest price.

Debriefing

1.121 In the event that a Bidder is unsuccessful, the Bidder may request for a debriefing from CHAI. The purpose of the debriefing is to discuss the strengths and weaknesses of the Bidder's submission, in order to assist the Bidder in improving its future Bids for CHAI procurement opportunities. The content of other Bids and how they compare to the Bidder's submission shall not be discussed.

**Right to Vary Quantities
at the Time of Award**

1.122 At the time of award of Contract, CHAI reserves the right to increase or decrease the quantity of goods and/or scope of related services, by up to a maximum twenty percent (20%) of the total offer, without any change in the unit price or other terms and conditions.

Contract Signature

1.123 Promptly after notification of the proposed contract award, CHAI shall send the successful Bidder the Contract.

1.124 Within fifteen (15) days of receipt of the notification of award, the successful Bidder shall sign, date, and return it to CHAI the Contract

1.125 Where the successful bidder cannot or is unwilling to sign a contract or submit the Performance Security, CHAI may either declare the bidder submitting the second lowest evaluated bid the successful bidder or invite such bidder to sign a contract or advertise the bid afresh by assessing the benefit of the two options.

1.126 CHAI shall not sign a contract before seven (7) working days from the date bidders are notified of the result of their bid or of any complaint against the bid proceeding.

**Contract Type and
General Terms and
Conditions**

1.127 The purchase order and after sales service are the two expected contract agreements to be signed off.

1.128 The applicable Global Fund Contract General Terms and Conditions can be accessed at https://www.theglobalfund.org/media/3269/corporate_globalfundservices_termsconditions_en.pdf and https://www.theglobalfund.org/media/3268/corporate_globalfundgoods_termsconditions_en.pdf

Performance Security

1.129 Within fifteen (15) days from signing the contract, the successful Bidder shall furnish the performance security. Failure of the successful Bidder to submit Performance Security or sign the Contract shall constitute sufficient grounds for annulment of the award and forfeiture of the bid security.

1.130 Where a performance security is deemed necessary, the receipt of the performance security by CHAI shall be a condition for rendering the contract effective.

**Bank Guarantee for
Advanced Payment**

1.131 In case an advance payment is allowed as per the BDS, an equivalent of 30% of the total contract price will be permitted. The Bidder shall submit a Bank Guarantee of the equivalent amount to Advance Payment once the bid is awarded prior to any advance payment.

Liquidated Damages

1.132 CHAI shall apply Liquidated Damages for the damages and/or risks caused to CHAI resulting from the Contractor's delays or breach of its obligations as per Contract.

1.133 CHAI may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages with a penalty of 0.5% of the value of undelivered item for each day of delay. However, the cumulative penalty to be paid by the supplier shall not be 15% of the contract price within a maximum tolerable time of 30 days.

1.134 If the delay in performing the contract affects its activities, CHAI may terminate the contract by giving advance notice to the Supplier pursuant without any obligation to wait until the penalty reaches 15% of the value of the Contract.

**Bidders' Complaint
Lodging Procedure**

1.135 CHAI follows an open-door policy for management of any compliant lodging procedure in which the aggrieved supplier/bidder can lodge his/her complaint directly to office of Country Director or Deputy Country Director. There are standby committees in which members from different programs along with the principal benefit of this project/FMOH, are available to review the issues for timely solution.

SECTION 3. BID DATA SHEET (BDS)

The following data for the goods and/or services to be procured shall complement, supplement, or amend the provisions in the Invitation to Bid In the case of a conflict between the Instructions to Bidders, the Bid Data Sheet, and other annexes or references attached to the Bid Data Sheet, the provisions in the Bid Data Sheet shall prevail.

BDS No.	Ref. to Section .2	Data	Specific Instructions / Requirements
1	7	Language of the Bid	English
2		Submitting Bids for Parts or sub-parts of the Schedule of Requirements (partial bids)	Allowed [Award will be on lot-by-lot basis]
3	20	Alternative Bids	Shall not be considered
4	21	Pre-Bid conference	Will not be conducted
5	16	Bid Validity Period	30 days after the bid submission deadline prescribed by CHAI.
6	12	Bid Security	<p>Required in the amount equal to 2% Bid Security of Bank "Certified Payment Order" in Ethiopian Birr. The bid security shall be, at the Bidder's option, in any of the following forms:</p> <ol style="list-style-type: none"> a. An unconditional Bank Guarantee. b. An irrevocable Letter of Credit. c. Cash, check certified by a reputable bank or financial institution, or payable order. <p>NB:</p> <ol style="list-style-type: none"> a. The bank guarantee from a banking institution recognized by the purchaser located in any eligible country shall be counter guaranteed by any local Commercial Banks. b. Unconditional bank guarantee should be submitted in its original form; copies will not be accepted. c. Bid security shall be issued in the name of Clinton Health Access Initiative
7	42	Advanced Payment upon signing of contract	Allowed up to an equivalent of 30% of total contract value

8	43	Liquidated Damages	<p>Will be imposed as follows:</p> <ol style="list-style-type: none"> A penalty of 0.5% of the value of undelivered item for each day of delay until actual delivery or performance; but the cumulative penalty to be paid by the supplier shall not exceed 15% of the contract price. Max. number of days of delay 30, after which CHAI may terminate the contract. If the delay in performing the contract affects its activities, CHAI may terminate the contract by giving advance notice to the Supplier pursuant without any obligation to wait until the penalty reaches 15% of the value of the Contract or 30 days' time.
9	41	Performance Security	Required in the amount of 10% of the Contract Price
10	13	Currency of Bid	United States Dollar (USD)
11	18	IFB-related Questions or Clarifications (from the Bidders)	22 June 2022
12	18	Contact Details for submitting IFB-related Questions or Clarifications (from the Bidders)	E-mail address: EthiopiaProcurement@clintonhealthaccess.org
13	18, 19 and 21	Manner of Disseminating Supplemental Information to the IFB and responses/clarifications to queries	Direct communication to prospective bidders by email and Posting on any platform hosting the IFB
14	23	Deadline for Submission	5 July 2022, at 2:00PM
14	22	Allowable Manner of Submitting Bids	Delivery of Hard Copies
15	22	Bid Submission Address	<p>Clinton Health Access Initiative, Bid Document for (IFB # CHAI/ EM/CSP/001/22), Meskel Flower Road Tel # 011 416 6993-98, Fax: 011 416 6988 and P.O. Box 3297, Code 1250, Addis Ababa, Ethiopia</p>
16	22	Electronic submission (email) requirements	<ul style="list-style-type: none"> ▪ Format: PDF files only ▪ All files must be free of viruses and not corrupted. ▪ Mandatory subject of email: Bid Document for IFB # CHAI/ EM/CSP/001/22 ▪ Documents required in original (e.g. Bid Security) should be sent to the below address: <p>Clinton Health Access Initiative, Bid Document for (IFB # CHAI/ EM/CSP/001/22), Meskel Flower Road Tel # 011 416 6993-98, Fax: 011 416 6988 and P.O. Box 3297, Code</p>

			1250, Addis Ababa, Ethiopia
17	25	Date, time and venue for the opening of bid	Date: 5 July 2022 Time: 2:15 PM Venue: Clinton Health Access Initiative Office
18	27, 36	Evaluation Method for the Award of Contract	Lowest priced technically responsive, eligible and qualified bid.
19		Expected date for commencement of Contract	Within 10 days after notification of award
20		Maximum expected duration of contract	180 to 230 days after signing of the contract
21	36	CHAI will award the contract to:	One or more Bidders, depending on the following factors: <ul style="list-style-type: none"> ▪ Lowest priced technically responsive, eligible and qualified bid per lot. ▪ Delivery period
22	40	Type of Contract	Purchase Order and After Sales Service
23	40	Contract Terms and Conditions that will apply	Global Fund General Terms and Conditions for Contracts https://www.theglobalfund.org/media/3269/corporate_globalfundservices_termsconditions_en.pdf and https://www.theglobalfund.org/media/3268/corporate_globalfundgoods_termsconditions_en.pdf
24		Other Information Related to the IFB	<i>Please note that this invitation is for the procurement, delivery, installation, commissioning, and after sales support of Pressure Swing Adsorption medical grade oxygen generation plants, manifolds, pipeline systems and power generators.</i> <ul style="list-style-type: none"> • Please provide any other information or documentation that may facilitate the evaluation process, such as: <ul style="list-style-type: none"> ✓ <i>If the SLA is to be managed or provided by 3rd party, describe nature of partnership, and provide details for all partners involved.</i> ✓ <i>Additional separate cost for Industrial level training at company training center.</i>

SECTION 4. EVALUATION CRITERIA

PRELIMINARY EXAMINATION CRITERIA

Bids will be examined to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, and submitted in accordance with IFB requirements as per below criteria on a Yes/No basis:

- a) Latest Business License and Registration Certificate from Government of Ethiopia -Ministry of Finance and Economic Development;
- b) Technical BID – use template in **Annex A** and **FORM E**
 - Comprising/meeting all Technical and performance criteria, operational criteria, and quality requirements.
 - Details provided on specific configurations offered
- c) Product documentation (provision of user and service manuals)
 - Individual Equipment Drawings,
 - Individual Equipment Operation & Maintenance Manuals,
 - Foundation layout drawing,
 - Process Flow Diagram (PFD),
 - Piping & Instrumentation Diagram (PID),
 - Block Schematic,
 - PSA Medical Oxygen Plant Technical Manuals,
 - Bidder has submitted a complete technical offer including Make, Model and certifications in accordance with technical specifications with Non-Price BOM (Bill of Material) i.e., for each component or equipment installed with PSA Oxygen Generation Plant.

Note: Copies of Plant Documents to be submitted to the Hospital at handover at the time of commissioning.

- d) Proof of quality including Stringent Regulatory Authority (SRA) approval (e.g., CE certification under MDR) and all requisite standards.
- e) The unit price per terminal for manifold and pipeline system materials and labor cost should be submitted using the financial template in **FORM F**
- f) Written Self-Declaration of not being included in the UN Security Council 1267/1989 list, UN Procurement Division List or other UN Ineligibility List;
- g) Documentation of personnel training/qualifications, which may include:
 - Certifications of personnel
 - CV of lead system design engineer
 - Documentation summarizing the training program that the supplier requires of all engineers involved in medical gas system installation and design
 - QMS for company carrying out design and installation (either ISO 9001 or ISO 13485 with scope clearly defined) or detailed relevant work history
 - Statement of compliance with the following standards (or equivalent):
 - ISO 7396-1
 - ISO 8573-1

- ISO 12500 – Simplifying Compressed Air Filter Selection
 - BS EN 13348
 - BS EN 1057
- h) Minimum Bid documents provided
- i) Warranty for device and warranty on labor, where applicable
- j) Proof of approval from local Regulatory Authorities in Ethiopia, where available, and applicable and import permits.
- k) Standard Operating Procedure for product recall, where applicable
- l) Vendor/Bidder Details – use template in **FORM B**
- m) After sales Service Level Agreement – See proposal of requirements in **Annex B**
- Bidder to adjust proposed framework to meet needs of product on offer.
 - Bidder to indicate the involvement of any 3rd party.
- n) Price Schedule/Financial Proposal – use template in **FORM F**
- o) Bid Security submitted as per IFB requirements with compliant validity period

Minimum Eligibility and Qualification Criteria

Eligibility and Qualification will be evaluated on a Pass/Fail basis.

If the Bid is submitted as a Joint Venture/Consortium/Association, each member should meet the minimum criteria, unless otherwise specified.

SUBJECT	CRITERIA	DOCUMENT SUBMISSION REQUIREMENT
ELIGIBILITY		
Legal Status	Vendor is a legally registered entity.	Form B: Bidder Information Form
Eligibility	Vendor is not suspended, nor debarred, nor otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization in accordance with IFB clause 3.	Form A: Bid Submission Form
Conflict of Interest	No conflicts of interest in accordance with IFB clause 4.	Form A: Bid Submission Form
Bankruptcy	Has not declared bankruptcy, is not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against the vendor that could impair its operations in the foreseeable future.	Form A: Bid Submission Form
Certificates and Licenses	<ul style="list-style-type: none"> ▪ Duly authorized to act as Agent on behalf of the Manufacturer, or Power of Attorney, if bidder is not a manufacturer. ▪ Official appointment as local representative, if Bidder is submitting a Bid on behalf of an entity located outside the country ▪ Patent Registration Certificates, if any of technologies submitted in the Bid is patented by the Bidder ▪ Export/Import Licenses, if applicable 	Form B: Vendor/Bidder Details Form
Other details	<ul style="list-style-type: none"> ▪ Conformity to the minimum quality standards indicated as part the IFB documents 	

QUALIFICATION

History of Non-Performing Contracts³	Non-performance of a contract did not occur as a result of contractor default for the last 3 years.	Form D: Qualification Form
Litigation History	No consistent history of court/arbitral award decisions against the Bidder for the last 3 years.	Form D: Qualification Form
Previous Experience	Minimum 3 years of relevant experience. Minimum 3 contracts of similar value, nature and complexity implemented over the last 3 years. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i>	Form D: Qualification Form Form D: Qualification Form
Financial Strength	Minimum cumulative sales turnover of USD (insert figure) for the last 3 years. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i> Bidder must demonstrate the current soundness of its financial standing and indicate its prospective long-term profitability. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i>	Form D: Qualification Form Form D: Qualification Form
Technical Evaluation	The technical bids shall be evaluated on a pass/fail basis for compliance or non-compliance with the technical specifications identified in the bid document.	Form E: Technical Bid Form
Financial Evaluation	Detailed analysis of the price schedule based on requirements listed in Section 5 and quoted for by the bidders in Form F. Price comparison shall be based on the shipping and inland transportation of the required items/consumables used for plant and other devices service in the warranty period to the facility and other costs as per DDP INCOTERMS 2020. The total cost of ownership (including spare parts, consumption, installation, commissioning, training, special packaging, etc., where applicable) will be incorporated in price comparison.	Form F: Price Schedule/Financial Proposal Form
Additional requirements	Current Ethiopian Standards Agency (ESA) certification, will be an added advantage	

³ Non-performance, shall include all contracts where (a) non-performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non-performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non-performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

SECTION 5A: SCHEDULE OF REQUIREMENTS AND TECHNICAL SPECIFICATIONS/BILL OF QUANTITIES

The table below shows a summarized version of the Technical Specifications. The Detailed Technical Specifications are as shown in the attached Annexes. **Table 2: Summary of the Technical Specifications**

LOT	CAPACITY	TOTAL TENTATIVE QUANTITY	UNIT	DETAILED TECHNICAL SPECIFICATIONS
1	Medical Grade PSA Oxygen Plant (Containerized Solution)			Annex A1, A2, A3 & A6
	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	7	No.	
2	Medical Grade PSA Oxygen Plant (Onsite Installation Required)			Annex A4, A5 & A6
	60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	3	No.	
3	Power Generator			Annex A7
	175 - 200 kW/ 200 – 250 KVA	10	No.	
4	Number of hospitals for piped Distribution of Medical Oxygen ⁴			Annex A8
		15	No	
5	Number of BME/TS get company certified training on PSA plant			Annex A6/Training package

⁴ The manifold and pipeline system installation will be at 10 plus hospitals with oxygen PSA plants

		25	NO	
6	Preparation of infrastructure for oxygen plant location	10	NO	Annex A9

For the summarized version of the items to be procured by facility as well as a brief details of the location for each PSA Medical Oxygen Plant, please see **Table 1**.

ANNEX A: EQUIPMENT SPECIFICATIONS

Annex A1: Medical Grade PSA Oxygen plant Technical Specification (Containerized Solution)

Table 3: Technical Specification for Containerized Solution

SN	Component	Specification
1	Plant size:	The total minimum capacity of 60 N m ³ /hr. for seven hospitals. PSA technology (Pressure Swing Adsorption Technology) with mandatory duplex configuration capable of producing minimum of 30 N m ³ /hr oxygen each.
2	Plant quantity	7 duplexes (Number of plants dependent on containerized solution configurations to meet minimum capacity)-Refer to the plant size described above.
3	Oxygen Purity:	93±3% with continuous output Pressure between 300-600 kPa (3-6bar), the range fall between the minimum and maximum is acceptable. All analyzers included with +/- 1% accuracy
4	Filters	<ul style="list-style-type: none"> • Including air filtration package consisting of the particulate filter (>5 microns), coalescing 0.01micron, oil filter and (optional) carbon absorption filter • Bacterial outlet (product) filter and other standard filters
5	Operating conditions:	<ul style="list-style-type: none"> • Supplying oxygen concentration continuously in ambient temperature from 10-45°C and < 95% Relative Humidity • Compatible at an elevation of Debretabor hospital 2706 m, Adama 1712 m, Woldia 2112 m, Assosa 1570 m, Adolla 1758 m, Yirgalem 1777 m, Adigrat (Tigray) 2457 m above sea level
6	Power Requirement:	380 volts /50 Hz (3 Phase) The plant must operate with the backup generator of 175-200KW/200 – 250KVA power; The plant with power requirement above 250KVA is not acceptable.
7	Compressors:	<p>Input feed air compressor:</p> <ul style="list-style-type: none"> • The compressor can be oil-injected (Class- 1) or oil-free (Class- 0) • Has the capacity to fill >2000L Air receiver tank • Certificate is requested of the medical-grade (Medical Air) compressor <p>Maximum of 750 kPa/7.5 bar</p> <ul style="list-style-type: none"> • application • Screw-type technology • External air dryer <p>Oxygen boosting compressor:</p> <ul style="list-style-type: none"> • Rix (or equivalent) (need to bind certification for Rix Equivalent) • 20,000 kPa output pressure (150 bar) • 30Nm³/hr with filling ramp of-at least 100 Cylinders/day output • One boosting compressor for each of 7 quantities of 30Nm³/hr producing PSA oxygen plant for refilling cylinders.
9	System Operation	<p>Program logic-controlled System</p> <p>Touch-screen control panel in English</p> <ul style="list-style-type: none"> • All displayed in SI units • Air receiver tank capacity, ≥2000L • Function of the purge of low concentration of oxygen • Integrated Automatic Oxygen sample concentration analyzer and monitor (two Sample analyzers, 1 per each PSA plant) • The capacity of Oxygen tank shall be ≥2000L
10	User Interface/Control panel	<p>Touch screen control panel with clearly visible, digital display in English at least:</p> <ul style="list-style-type: none"> • Oxygen concentration [%] • Oxygen production trending [Nm³/hour] • Output pressure in PSI/bar • System status, including current maintenance need

		<ul style="list-style-type: none"> Cumulative hours of operation (digital or analog meter) Audible and visual alarms for: <ul style="list-style-type: none"> High temperatures Low/high pressure (ex., output pressure < 3 bar / 44 psi) Low oxygen concentration (<90%) Power failure; system failure Second/reserve source active Air dryer pressure dew point (>3°C)
10	Mobility/Installation ready	<ul style="list-style-type: none"> Containerized solution, pre-configured with requisite intake, ventilation, HVAC, and exhaust vents and louvres. Containerized solution with interior air conditioning and precooling of intake air system Detail Container specification is as in Annex A3
11	Maintenance service	Minimum of two (2) years' post-installation to provide maintenance services and provision of requisite spares parts and consumables
12	Warranty	<ol style="list-style-type: none"> All components of the PSA oxygen plant system should have at least 2 years warranty period after commissioning (this includes managing the designing problem, and related curative maintenance). Within this warranty period, the manufacturer will be responsible for the prompt repair of malfunctioning equipment within the system. The supplier must ensure the availability of spare parts for at least 5 years
13	Testing and commissioning	<p>Pre-shipment: Certificate of quality, calibration, and inspection</p> <p>On-site: Inspection, testing, and commission should be done before handover.</p>
14	Company Certified Training	<ul style="list-style-type: none"> The supplier will provide operator's training on the site. Advanced and intensive company training for biomedical engineers/technicians shall be given separately on the PSA Oxygen plant. See Annex A6. Training Package for detail
15	Regulatory and Standards:	<p>Regulatory approval as per WHO recommendation: Australia, Canada, Japan, USA, or European Community (e.g., FDA and/or CE under MDR)</p> <p>Standards: the following certificates given by a certified third-party for the system proposed (or an equivalent thereof):</p> <p>General:</p> <ul style="list-style-type: none"> Certified Quality Management Systems (ISO 13485, ISO 9001) Met Healthcare Technology Memorandum (HTM)-02-01 <p>Component-specific:</p> <ul style="list-style-type: none"> ISO 7396-1: Medical gas pipeline systems — Part 1: Pipeline systems for compressed medical gases and vacuum. ISO 8573-1: Compressed air – Part 1: Contaminants and purity classes. ISO 8573-2: Compressed air – contaminant measurement – Part 2: Oil aerosol content. ISO 8573-4: Compressed air – contaminant measurement – Part 4: particle content. ISO 5011: Inlet air cleaning equipment for internal combustion engines and compressors – performance testing. ISO 12500 – Simplifying Compressed Air Filter Selection ISO 21969: High pressure flexible connections for use with medical gas systems. <p>All pressurized vessels to be:</p> <ul style="list-style-type: none"> Designed according to PED or ASME VIII, or equivalent. Certified PED or ASME III, or equivalent. Cleaned according to ISO 15001, ASTM G93, or equivalent.
16	Documentation	<p>Hard and soft copies, in English language of:</p> <ul style="list-style-type: none"> life span of minimum 10 years; guaranteed by a letter from the manufacturer; certificate of quality, calibration and inspection; user manual, detailing: <ul style="list-style-type: none"> ✓ specific protocols for operation. ✓ list of equipment and procedures required for cleaning, disinfection, troubleshooting, calibration, and routine maintenance; Service manual; Equipment Drawings,

		<ul style="list-style-type: none"> • Foundation, layout and assembly drawings, • Process Flow Diagram (PFD) or Block Schematic, • Piping & Instrumentation Diagram (PID), • contact details of manufacturer, and authorized distributors (if applicable), and local service agent. • Pressure testing certificates for all pressure equipment, in accordance with relevant standards and country regulations. • Certificate of conformance • Certificate of calibration for instrumentation including transmitters, analysers. • Electrical/control wiring diagrams • Sequence of operation, including system controls and interlocks • Installation manual. • Operating and maintenance manuals. • Equipment specifications (including compressors, blowers, filters, dryers, refrigerators, vessels, absorber vessels). • Piping and fitting specifications. • Pressure regulators and safety valve specifications. <ul style="list-style-type: none"> ✓ Instrumentation specifications, including pressure and temperature gauges, temperature/flow/pressure transmitters, including oxygen analysers, carbon monoxide/carbon dioxide analysers, differential pressure analyser. • Performance test of the PSA unit(s) including certificate and testing report. • Hazard review. • SDS - Safety data sheets for the material used.
17	Product labelling	<ul style="list-style-type: none"> • Electrical power input requirements (voltage, frequency and socket type) • Manufacturer serial number for tracking/inventory management • Labelling as required to meet international safety standards for medical O₂ systems • Designating required environmental conditions for storage and operation (e.g. temperature, pressure, light, humidity)

Annex A2: Detail lists of PSA plant with accessories for containerized solution⁵

Table 4: List of Plant Components and Accessories

Item No.	Item Description	Model	Supplier	Manufacturer
1	PSA Oxygen Generator			
1.1	Screw Air Compressor			
1.2	Refrigerate Air Dryer			
1.3	Air Buffer Tank			
1.4	Air Purification Filters			
1.5	PSA Oxygen concentrator			
1.6	Oxygen Analyzer (ultrasonic sensor)			
1.7	Pressure Transmitter			
1.8	Oxygen Flowmeter			
1.9	Oxygen Buffer Tank			
1.1	Oxygen Purification Filters			
1.11	HMI Control Cabinet			
1.12	Pipes and Accessories			
1.13	APP Monitoring Platform			
1.14	Maintenance Tools			
2	Oxygen Booster			
2.1	-Required certificate for quality standards Including accessories, consumables, and spare parts			
2.2	Water Cooling Machine			
2.3	Oxygen Cylinders Filling Station including vacuum/purge compressor			
3	Customized Containerized Design			

⁵ Please add any major components that might be missed from the list of Annex A2 table

Annex A3: Technical Specifications for Container... (Parts of Lot 1)

Standard containers are to be accessed via double doors at one end of the container whereas full side access containers offer bi-folding doors along the longest side of the container. This can make the process of integrating the PSA plant and easy installation, operation/use and maintenance and repair activities.

1. The floor should be checkered steel plate with $\geq 4\text{mm}$ thickness
2. A door must be opened in the parallel position of the plant parts for ease of use and maintenance
3. Required features:
 - 3.1. The exterior paint is pure white (*to reflect the direct sun light*),
 - 3.2. The interior is gray (since gray is the perfect neutral, soothing presence),
 - 3.3. Heat *insulated wall and ceiling* (non-toxic insulation for temperature reduction)
(*Supplier has to state the insulation type and guarantee the material has no side effect on users' health*),
 - 3.4. Sound and noise-proof ($< 6\text{ dB}$) or sound-absorbing,
 - 3.5. Fireproof and equipped with the fire extinguisher,
 - 3.6. Aesthetically and ergonomically built machine for best performance
 - 3.7. Insect nets need to be welded on the inside of all blinds.
 - 3.8. All doors and walls must be waterproof and sealed.
4. Container Types and Sizes: -
 - 4.1. Size: Length of $L = 40\text{ft}$ (12m), $W = 2.35\text{m} - 2.65\text{m}$, $H = 2.9\text{m}$
 - 4.2. Type: Special container
 - 4.2.1. *Full side access containers (bi-folding doors along the longest side of the container)*
 - 4.2.2. *Made up of steel*
5. Decoration: internal 50mm porous sound-absorbing cotton + explosion-proof lamps + darkening of the top and sides: (the end of the thread (dark line) is reserved at the electrical control cabinet)
6. Containers should be required to come with active air conditioning (mini split system), that will be critical for plant performance in high temperature conditions.
7. Ventilation exhaust fan (large 6500m³/h) *2 sets, power connector, pre-configured by manufacturer. It cannot be left or right and shakes back and forth. (Explosion-proof lamp, exhaust fan line concealed installation, top surface, pipe through, wire recessed in trough or within trunking, access to electrical control cabinet)
8. The internal equipment is required to be fixed, and the equipment shall be made of a movable fixed base (the movable fixed base is fixed to the container, and the equipment is fixed to the movable fixed base). The manufacturer shall consider the fixed base and load-bearing issues.
9. There is an exhaust vent on the box. Note that due to a large amount of equipment inside the box, heat needs to be removed, and a high-power exhaust fan is required.
10. The air compressor equipment has a reserved heat dissipation duct outlet, the outside of the box is shuttered, and the inside is fixed with a duct adapter.
11. The oxygen filter holder is processed by the manufacturer and fixed with bolts and nuts.
12. There are drainage holes outside the container, and the location of the power inlet (the window should be equipped with a movable door cover)
13. The sheet metal parts of the manual filling station are processed by the factory, including the sheet metal accessories such as the filling station control box
14. At the position of the manual filling station, a movable ramp plate needs to be processed so that the oxygen cylinder can be moved to the table. When not in use, the movable slope plate can be disassembled and placed in the manual filling station with the door closed.
15. Cylinder manifold should be outside the container, but booster can be inside the container.

Annex A4: Medical Grade PSA Oxygen plant Technical Specification (Onsite Installation Required) – Lot

2

Table 5: Technical Specification for Non-containerized Solution

SN	Component	Specification
1	Plant size:	The total minimum capacity of 60 N m ³ /hr. for three hospitals. PSA technology (Pressure Swing Adsorption Technology) with mandatory duplex configuration capable of producing minimum of 30 N m ³ /hr oxygen each.
2	Plant quantity	3 duals (Number of plants dependent on configurations proposed to meet minimum capacity)-Refer to the plant size described above
3	Oxygen Purity:	93±3% with continuous output Pressure between 300-600 kPa (3-6bar), the range fall between the minimum and maximum is acceptable All analyzers included with +/- 1% accuracy
4	Filters	<ul style="list-style-type: none"> • Including air filtration package consisting of the particulate filter (>5 microns), coalescing 0.01micron oil filter and (optional) carbon absorption filter • Bacterial outlet (product) filter and other standard filters
5	Operating conditions:	10-45°C and < 95% Relative Humidity Compatible at an elevation of Dubti hospital 378 m, Gode hospital 358 m, Arba Minch hospital 1285 m above sea level
6	Power Requirement:	380 volts /50 Hz (3 Phase) The plant must operate with the backup generator of 175-200KW/200 – 250KVA power; The plant with power requirement above 250KVA is not acceptable.
8	Compressors:	<p>Input feed air compressor:</p> <ul style="list-style-type: none"> • The compressor can be oil-injected (Class-1) or oil-free (Class- 0) • Has the capacity to fill >3000L Air receiver tank • Certificate is requested of the medical-grade (Medical Air) compressor <p>Maximum of 750 kPa/7.5 bar</p> <ul style="list-style-type: none"> • application • Screw-type technology • External air dryer <p>Oxygen boosting compressor:</p> <ul style="list-style-type: none"> • Rix (or equivalent) (need to bind certification for Rix Equivalent) • 20,000 kPa output pressure (150 bar) • 30 Nm³/hr with filling ramp of-at least 100 Cylinders/day output • One boosting compressor for each of 3 quantities of 30Nm³/hr producing PSA oxygen plant.
9	System Operation	<p>Program logic-controlled System</p> <p>Touch-screen control panel in English</p> <ul style="list-style-type: none"> • All displayed in SI units • Automatic drain on the air receiver tank • Air receiver tank capacity, ≥3000L • Function of a purge of low concentration of oxygen • Integrated Automatic Oxygen sample concentration analyzer and monitor (two Sample analyzers, 1 per each PSA plant) • The capacity of Oxygen tank shall be ≥3000L
10	User Interface/Control panel	<p>Touch screen control panel with clearly visible, digital display in English at least:</p> <ul style="list-style-type: none"> • Oxygen concentration [%] • Oxygen production trending [Nm³/hour] • Output pressure in PSI/bar • System status, including current maintenance need • Cumulative hours of operation (digital or analogue meter) <p>Audible and visual alarms for:</p> <ul style="list-style-type: none"> • High temperature

		<ul style="list-style-type: none"> • Low/high pressure (ex., output pressure < 3 bar / 44 psi) • Low oxygen concentration (<90%) • Power failure; system failure • Second/reserve source active • Air dryer pressure dew point (>3°C)
10	Mobility/Installation ready	<ul style="list-style-type: none"> • Onsite installation required. • Open air ventilation or Ventilated room with appropriate AC • All the required material should be avail by vendor except the building (Which will be constructed by HFs)
11	Maintenance service	Minimum of two (2) years' post-installation to provide maintenance services and provision of requisite spares parts and consumables
12	Warranty	<ol style="list-style-type: none"> 1. All components of the PSA oxygen plant system should have at least 2 years warranty period after commissioning (this includes managing the designing problem, and related curative maintenance). Within this warranty period, the manufacturer will be responsible for the prompt repair of malfunctioning equipment within the system. 2. The supplier must ensure the availability of spare parts for at least 5 years
13	Testing and commissioning	<p>Pre-shipment: Certificate of quality, calibration, and inspection</p> <p>On-site: Inspection, testing, and commission should be done before handover.</p>
14	Company Certified Training	<ul style="list-style-type: none"> • The supplier will provide operator's training on the site. • Advanced and intensive company training for biomedical engineers/technicians shall be given separately on the PSA Oxygen plant. See Annex A6. Training Package for detail
15	Regulatory and Standards:	<p>Regulatory approval as per WHO recommendation: Australia, Canada, Japan, USA, or European Community (e.g. FDA and/or CE under MDR)</p> <p>Standards: the following certificates given by a certified third-party for the system proposed (or the equivalent thereof):</p> <p>General:</p> <ul style="list-style-type: none"> • Certified Quality Management Systems (ISO 13485, ISO 9001) • Met Healthcare Technology Memorandum (HTM)-02-01 <p>Component-specific:</p> <ul style="list-style-type: none"> • ISO 7396-1: Medical gas pipeline systems — Part 1: Pipeline systems for compressed medical gases and vacuum. • ISO 8573-1: Compressed air – Part 1: Contaminants and purity classes. • ISO 8573-2: Compressed air – contaminant measurement – Part 2: Oil aerosol content. • ISO 8573-4: Compressed air – contaminant measurement – Part 4: particle content. • ISO 5011: Inlet air cleaning equipment for internal combustion engines and compressors – performance testing. • ISO 12500 – Simplifying Compressed Air Filter Selection • ISO 21969: High-pressure flexible connections for use with medical gas systems. <p>All pressurized vessels to be:</p> <ol style="list-style-type: none"> a. Designed according to PED or ASME VIII, or equivalent. b. Certified PED or ASME III, or equivalent. c. Cleaned according to ISO 15001, ASTM G93, or equivalent.
16	Documentation	<p>Hard and soft copies, in English language of:</p> <ul style="list-style-type: none"> • life span of minimum 10 years; guaranteed by a letter from the manufacturer; • certificate of quality, calibration and inspection; • user manual, detailing: <ul style="list-style-type: none"> ✓ specific protocols for operation. ✓ list of equipment and procedures required for cleaning, disinfection. ✓ troubleshooting, calibration, and routine maintenance; • Service manual; • Equipment Drawings, • Foundation, layout and assembly drawings, • Process Flow Diagram (PFD) or Block Schematic, • Piping & Instrumentation Diagram (PID),

		<ul style="list-style-type: none"> • contact details of manufacturer, and authorized distributors (if applicable), and local service agent. • Pressure testing certificates for all pressure equipment, in accordance with relevant standards and country regulations. • Certificate of conformance • Certificate of calibration for instrumentation including transmitters, analysers. • Electrical/control wiring diagrams • Sequence of operation, including system controls and interlocks • Installation manual. • Operating and maintenance manuals. • Equipment specifications (including compressors, blowers, filters, dryers, refrigerators, vessels, absorber vessels). • Piping and fitting specifications. • Pressure regulators and safety valve specifications. • Instrumentation specifications, including pressure and temperature gauges, temperature/flow/pressure transmitters, including oxygen analysers, carbon monoxide/carbon dioxide analysers, differential pressure analyser. • Performance test of the PSA unit(s) including certificate and testing report. • Hazard review. • SDS - Safety data sheets for the material used.
17	Product labelling	<ul style="list-style-type: none"> • Electrical power input requirements (voltage, frequency and socket type) • Manufacturer serial number for tracking/inventory management • Labelling as required to meet international safety standards for medical O₂ systems • Designating required environmental conditions for storage and operation (e.g. temperature, pressure, light, humidity)

Annex A5: Detail lists of PSA plant with accessories for non-containerized solution-Lot 2⁶

Table 6: List of Plant Major Components for Non-containerized Solution

Item No.	Item Description	Model	Supplier	Manufacturer
1	PSA Oxygen Generator			
1.1	Screw Air Compressor			
1.2	Refrigerate Air Dryer			
1.3	Air Buffer Tank			
1.4	Air Purification Filters			
1.5	PSA Oxygen concentrator			
1.6	Oxygen Analyzer (ultrasonic sensor)			
1.7	Pressure Transmitter			
1.8	Oxygen Flowmeter			
1.9	Oxygen Buffer Tank			
1.1	Oxygen Purification Filters			
1.11	HMI Control Cabinet			
1.12	Pipes and Accessories			
1.13	APP Monitoring Platform			
1.14	Maintenance Tools			
2	Oxygen Booster			
2.1	Required Certificate quality standards including accessories, consumables, and spare parts			
2.2	Water Cooling Machine			
2.3	Oxygen Cylinders Filling Station including vacuum/purge compressor			
3	Customized Containerized Design			

⁶ Please add any major components that might be missed from the list on table Annex A5

Annex A6: Training Package

Provision of company certified training for Biomedical Engineers/Technicians (BMET) and operators /proposal for any cost-effective approach is advantageous

- A Training of Trainers (TOT) on maintenance or any cost-effective and innovative approach (certification required) will be provided to BME/T by the manufacturer-certified trainer.
- The number of trainees will be two BME/T per plant, 5 BMET from FMOH and RHB, total of 25 Biomedical Engineers with close monitoring and certification of cascading trainings as required.
- The training should be conducted before the handover and commissioning of the plants.
- *The training cost should submit separately as per individual Breakdown cost.*

Annex A7: Power generator specifications – LOT 3

General description: Diesel engine generator set (engine and alternator) with 380 volts (3 phase), 50Hz frequency, with 1500 RPM outputs, complete with regulating and starting accessories and instruments, and bonding work to low voltage system earthing through conductor.

The generator sets shall have an electric starter with battery (24 Volts), directly coupled by means of plate coupling, and fixed on a bed frame with: automatic circuit breaker, voltmeter, ammeter, frequency meter, hour meter, starting key, indication lights for low oil pressure, high water temperature, low fuel level and battery charger dynamo. There shall be sockets for three-phase and single-phase output. The generation set should have automatic mains failure panel with automatic transfer switch (ATS).

Table 7: Power Generator Specifications

NOTE: The generator sets shall be contained within sound-proof housing, a sound attenuated enclosure, ready for operation with all complete sets of accessories and recommended spare parts available.		
Component	Specification	Meets Requirements
Generator size:	Capacity: 175 - 200 kW/ 200 – 250 kVA for each facility	
Plant quantity	10units x (175 - 200 kW/ 200 – 250 kVA)	
Engine	Standby Type Generator <ul style="list-style-type: none"> • Electronic governor with ISO 8528 • Heavy duty diesel engine • Cooling system: water and air cooled • Lubricating oil with fuel filter cartridge • Heat exchanger for the lubricating oil • Lubrication is forced by gear pump • Silenced exhaust muffler (residential type) • Engine speed 1500 rpm • Injection type: Direct injection • Aspiration: turbocharged • Exhaust manifold • Flex dilator • Pump injector with regulator 	
Alternator	Stamford, Leroy Somer, ABB, or Marathon type (or equivalent) and subject to the engineer's / consultant's approval. <ul style="list-style-type: none"> • 3-phase, synchronous, brushless, self-excited • Self-regulated with Automatic Voltage Regulator (AVR) • Nominal Power: 180kW / 225 kVA at power factor 0.8 • Nominal Tension: 400/230 V, 3-phase • RPM: 1500 RPM • Frequency: 50 Hz • Protection class: IP 23 • Insulation Class: H 	

Control panel	<p>Mounted on the generator for automatic key start on mains having the following instrumentation and protection features:</p> <ul style="list-style-type: none"> • Engine temperature gauge • Battery condition voltmeter • AC output voltmeter, ammeter, frequency meter for each phase • Engine start/stop selector switch • Oil pressure and water temperature gauge • Over speed and under speed of the engine • Voltage of alternator out of limit • Lock up on diesel engine failure to start • Engine running time meter • Emergency stop button • Over current of the alternator detected • Short circuit in the lines detected • Three phase and single-phase output sockets • Indicator light and shut down for high engine temp. • Indicator light and shut down for over speed of the engine • Indicator light and shut down for belt failure • Indicator light and shut down for low fuel failure <p>All the protection and alarms are shown on panel display and as well as meter base set.</p> <p>Mounted on steel base frame via anti-vibration mount.</p>	
Automatic Transfer Switch (ATS)	According to manufacturer of generator set, match to starting system including necessary accessories.	
Assembly and mounting	The generation sets are fully mounted on electrically welded steel base frames.	
Coupling	The generation sets are coupled by means of plate type coupling which can take any type of vibration initiated from misalignments.	
Fuel tank	<ul style="list-style-type: none"> • Mounted on a bed frame and it is complete with fuel filter and drain plug connected to the engine with its capacity. • Capacity as per the load. • Equipped with flexible return and supply hoses from/to the engine. • Day Tank 	
Vibration damper	Vibration damper is incorporated in between the bed plate and the generating set.	
Batteries	Heavy duty lead acid storage batteries, capacity according to manufacturer of generator set. Match battery voltage to starting system, and include necessary cables and clamps	
Battery Charger	Standalone / wall mountable, 10A, 240V.	
Mobility/Installation ready	<p>WEATHERPROOF CANOPY</p> <p>Compactly designed with the necessary openings and lockable hinged doors. The enclosure is made of robust insulated panel to provide sound</p>	

		and thermal insulation and access around engine generator sheet steel construction.	
Maintenance tools		Each generating set is supplied with routine maintenance tool.	
Training and orientation		Supplier should provide training and orientation on preventative and curative maintenance	
Spare parts		Generating set will be delivered with the following spare parts: <ul style="list-style-type: none"> • Air Filter • Oil Filter • Fuel Filter All other manufacturer-recommended spares for two years operation Other recommended spare parts is mandatory	
Accessories		All necessary accessories to connect the generator ATS (Automatic Transfer switch) and CMDB (Central main distribution board).	
Operating conditions:		<ul style="list-style-type: none"> • Altitude: Compatible at elevation of Debretabor Hospital 2706 m, Adama 1712 m, Dubti 378 m, Woldia 2112 m, Assosa 1570 m, Adolla 1500 -2500 m, Yirgalem 1777 m, Arba Minch 1285 m, Gode 358 m, Adigrat (Tigray) 2457 m above sea level • Ambient Temperature: up to 48°C • Relative Humidity: up to 95% 	
Documentation		The following documents must be submitted with offer in English : <ul style="list-style-type: none"> - Complete operator's manual: showing standard operations and required maintenance, recommended spare parts catalogued, electrical diagrams, and troubleshooting guidance. - Test certificate, brochures, leaflet, and catalogues that describe detail technical data. 	
Warranty		One year warranty (warranty commitment agreement or certificate)	
Testing and commissioning	and	Generation set is subjected to a strict load test before delivery. Test certificate shall be provided.	
Regulatory Standards:	and	ISO 8528, IEC 34.1, CEI 2.3, VDE0530, BS4999-5000 NF 51-100 and is fully accredited ISO 9001 Company.	

Annex A8: Specifications for piped distribution of medical oxygen -lot 4

Annex A8-1: Specifications and per-unit Bill of Quantity pipeline system⁷

SN	Item Description	Unit	Quantity	Remark
1	Automatic oxygen manifold system	Set	10	
1.1	HTM standard. The unit is supplied as a complete factory tested package.			
1.2	The Manifold includes exhaust, relief valve, pressure switch, supply isolation valve, non-return valve and all accessories to make the system functional.			
1.3	control type- fully automatic			
1.4	No of cylinder connection points- 2X12			
1.5	Compliance with ISO 10524-2, Pressure regulators for use with medical gases — Part 2: Manifold and line pressure regulators			
1.6	Bears CE marking under MDR			
2	MEDICAL GAS TERMINAL UNITS	Pieces	10	
2.1	The unit is supplied as a complete package, fully tested prior to shipping. The unit includes maintenance valve safety nut, check valve, flush box with base block, O-ring, plug -in coupling, internal and external gas identification, release bushing and cover plate.			
2.2	Oxygen terminals, wall mounted, BS type must fulfill HTM 02-01			
2.3	Regulatory & standards: bears CE marking under MDR, ISO 13485, compliance with ISO 9170-1			
3	AREA ALARM UNIT	Pieces	10	
3.1	The unit is supplied as a complete package, fully tested prior to shipping. shall be used for all medical gases specified on the drawing.			
3.2	The module must fulfill HTM 02- 01 requirements.			
4	ZONE SERVICE UNITS/GASES AREA ALARM UNITS WITH DIGITAL ALARM	Pieces	10	
4.2	The unit is supplied as a complete package, fully tested prior to shipping. The unit equipped with stamped gas identification shut-off valve (100% leakage free) The unit shall be used for all medical gases specified on the drawing.			
4.3	The module must fulfill HTM 02-01 requirements.			
5	OXYGEN FLOW METER W/HUMIDIFIER	Pieces	100	
5.1	Supply of medical oxygen gas flow meter with humidifier compatible with BS type wall terminal units. (See annexed specification for Flowmeter and Humidifier)			
5.2	As per specification in the Annex part, including regulatory & standards: bears CE marking under MDR, ISO 13485			
6	Medical copper pipe (size in mm) Seamless, round copper tubes for medical oxygen.⁸			

⁷ The Bill of Quantity for manifold and pipeline materials will be revised based on final designing works after site modification/preparedness support

⁸ The items should meet the ISO standard or equivalent stated under #9 in the table and facility specific size of the copper pipe will be calculated based on the unit price given here

6.1	Dia. 12mm	Meter		
6.2	Dia. 15mm	Meter		
6.3	Dia. 22mm	Meter		
6.4	Dia. 28mm	Meter		
6.6	Dia. 35 mm	Meter		
7	Support structure			
7.1	Supply and install all the necessary support structure for the medical gas system pile line and Equipment's as per the drawing and HTM standard	Lps (Lamp sum)	10	
8	Pipe trunking			
8.1	Supply and install all the necessary Trunking for the medical gas system pile line and Equipment's as per the drawing and HTM standard	Lps (Lamp sum)	10	
9	<p>The following standards (most recent) should be applied, and certifications should be provided:</p> <ul style="list-style-type: none"> • ISO 7396-1 • BS EN 1057: Copper and copper alloys. Seamless, round copper tubes for water and gas in sanitary and heating applications or equivalent • BS EN 13348: Copper and copper alloys. Seamless, round copper tubes for medical gases or vacuum or equivalent <p>Manufacturer's test certificates for both chemical composition and physical properties. 3rd party certification may be required.</p>			

Annex A8-2: Manifold technical specifications

SN	Technical spec for manifold	Meets Requirements
1	Automatic Oxygen manifold system	
1.1	The fully Automatic manifold control system shall comply to ISO 7396-1 – medical graded gas pipeline systems, and NHS Health Technical Memorandum HTM 02-01. The entire system shall be 'duplexed' such that any single functional component failure will not affect the integrity of the medical oxygen supply. The manifold shall be supplied fully assembled and factory tested.	
1.2	<p>Configuration: The Manifold system includes the following materials to operate 12 cylinders in left and 12 cylinders in the right</p> <ol style="list-style-type: none"> 1. High-pressure collecting pipe 2. Automatic changeover panel with alarm & status monitoring, 3. Supply isolation valve 4. Relief valve assembly 5. Two group manifold headers, two group cylinder racks 6. Cylinder Holders (brackets and chains, zinc plated) 7. Flexible tailpipe 8. Pressure switch, 9. Non-return valves 10. Isolation valves 11. Test point (medical gas terminal unit) and a pre-piped exhaust is recommended 12. Any other materials/accessories not mentioned but enable functionality. <p>Electrical:</p> <ul style="list-style-type: none"> • All electrical components shall be located in a separate enclosure to limit dust, water penetration, and simplify electrical connection with alarms. • PCBs shall be linked with plug and socket connectors for easy removal. For added safety the voltage inside the panel shall not exceed 24V D.C. 	
1.3	<p>Automatic Manifold control shall include the following operational features: -</p> <ul style="list-style-type: none"> • Adjustable Manual and automatic working system • Digital pressure indication in both headers and line • Average gas consumption (as a standard feature) • Adjustable high- and low-pressure alarm status • Alarms to be duplicated on a display and embedded membrane panel with LEDs. • Status of oxygen pressure can be monitored by the LEDs on control panel. • The control panel incorporates six colored LED's, 3 for the left, and 3 for the right bank. Green: "bank in use", amber/yellow: "bank ready", red: "bank empty". • New robust solenoid valve • Backup cylinder and delivery pressure indicators • Electronic warning signal to inform the user to perform regular maintenance. • Service Mode to manually override (deactivate) alarms during commissioning and service, as well as allowing manual operation selection of a duty bank. 	
1.4	<p>Display features</p> <ul style="list-style-type: none"> • Minimum 7" touch-screen display, colorful graphical display for easy reading and audio-visual status and system failure display. • The system should incorporate a graphical display to indicate pressure in each bank of cylinders and line pressure. • Pressure displayed in both units: bar or psi • The control system should have a colored active-matrix liquid crystal display (LCD), a driving circuit and a back light system. • The display shall have a 3.5 (4:3) inch diagonally measured active display area with QVGA (320 horizontal by 240 vertical pixels) resolution. • The system should have a "screen saver" function to extend a lifetime of the display to more than 20,000 hours. • The screen shall come to full brightness if any alarm conditions are active and reverts back to ½ brightness 5 minutes after the panel returns to normal. • Visualization of remaining gas volume in cylinders • Display estimated average gas consumption 	

	<ul style="list-style-type: none"> • Digital display should be backed up by mechanical gauge in case of power failure. • The system to have a restricted 'Setup Mode' to allow adjusting alarm / warning levels for line pressure, to select measurement units (bar and psi), to select the type of alarm output (i.e. on-line or 3rd party alarm system). 	
1.5	<p>Testing:</p> <ul style="list-style-type: none"> • The manifold should be suitable to withstand a pressure of 145 Kg/cm². • Two stage regulators that can allow pressure drop lower than 10% on a flow up to 1,750 l/min at 4 bar • The manifold should be tested (hydraulically) to 400 bar pressure and to be supplied along with necessary test certificate. 	
1.6	<p>Regulation and standards</p> <ul style="list-style-type: none"> • Bears CE marking under MDR • Compliance with ISO 10524-2, Pressure regulators for use with medical grade gases 	

Annex A8-3: Flowmeter specification

Spec category	Specification	Meet spec?
Technical	Device suitable for use with medical oxygen	
	Thorpe tube flowmeter type, contains inlet and outlet port, a flow regulator, a valve and a clear measuring tube	
	Flowmeters to measure and regulate flow from an already pressure-reduced and regulated oxygen source to the patient or other medical device	
	Pressure compensated flowmeters, calibrated at 345–380 kPa (3.4–3.8 bar, 50–55 psi) inlet gauge pressure.	
	Max gauge inlet pressure 690 kPa (6.9 bar, 100 psi).	
	Flow adjustment knobs to have rough surface to prevent slipping.	
	Flowmeters calibrated to the following flow range,	
	0-15 L/min, accuracy 10%, dual taper graduations 0.5 L/min (0–5 L/min range) and 1 L/min (5 L/min – maximum range)	
	All minimum flowrates to be zero when fully closed	
	All graduations to be clearly visible for 270 degrees (most breadth for provider vantage points)	
	Inlet and outlet ports to be clearly specified and will in part be determined by use case (suitable for connection to centralized system, cylinders, concentrators, or compressors):	
	Piped source inlet: Connection to a terminal unit / bedside unit from a piped oxygen network to be BS (3/8-inch BSP female, "British Standard")	
	Outlets: DISS (9/16 inch-18) male with "Christmas tree" barbed tubing adaptor	
	Flowmeter material:	
	Column to be transparent, clear, shatter-resistant, medical-grade polymer (polypropylene, polycarbonate)	
	Hardware/valves: Brass/steel/aluminum	
	All materials in contact with oxygen certified for medical use.	
	Internal parts (e.g. valve, inlet filter if present), replaceable by user.	
	Environmental	
	Capable of being stored in ambient temperature of at least 5–50 °C, relative humidity of at least 15–95% non-condensing.	
Suitable for continuous operation in ambient temperature of at least 5–45 °C, relative humidity of at least 15–90% non-condensing.		
Specific requirements for altitude may be required, depending on the installation site.		
Disinfect able with hospital grade detergents.		
Warranty	5 years (min. 2)	
QMS	ISO 13485 (medical device QMS)	
	ISO 14971 (application of risk management)	
Regulatory	CE, or	
	FDA	
Product performance	ISO 32 Gas cylinders for medical use — Marking for identification of content (or ANSI equivalent)	

standards	ISO 5359 Low-pressure hose assemblies for use with medical gases.	
	ISO 15001 Anaesthetic and respiratory equipment – Compatibility with oxygen.	
	ISO 15002 Flow-metering devices for connection to terminal units of medical gas pipeline systems.	
	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements.	
	ISO 18082 Anesthetic and respiratory equipment – Dimensions of non-interchangeable screw-threaded (NIST) low-pressure connectors for medical gases.	
	ISO 18562 Biocompatibility evaluation of breathing gas pathways in healthcare applications.	
Packaging	Name and/or trademark and address of the manufacturer.	
	Product name.	
	Product reference.	
	Type of product and main characteristics.	
	Performance testing information against the mentioned standards.	
	Lot number prefixed by the word "LOT" (or equivalent harmonized symbol).	
	Information for particular storage conditions (temperature, pressure, light, humidity, etc.), as appropriate (or equivalent harmonized symbol), if applicable.	
	Information for handling, if applicable (or equivalent harmonized symbol).	
	If the packaging is not transparent, it must bear a diagram (preferably actual size) showing the essential parts of the product and indicating the position of the product in the packaging.	
	Gross Weight.	
	Cubic Measurement.	
All indicated at least in English.		

Annex A8-4: Humidifier Specification

Spec category	Specification	Meet spec?
Technical	Reusable humidifier for oxygen therapy and ventilation/anesthesia inspiratory lines.	
	Non-heated humidifier - ambient temperature functionality.	
	Bubble-through humidification system.	
	Unbreakable or shatter resistant.	
	Transparent humidification bottle	
	Graduated, graduation shall show minimum and maximum water level.	
	Humidification chamber working volume at least 150 mL, not greater than 500 mL.	
	Detachable metal or rigid durable polymer cap with gas connectors.	
	Pressure relief safety valve, ≥ 14 kPa (0.1 bar, 2 psi) pressure rating.	
	DISS connectors for inlet.	
	6 mm barbed connector for outlet.	
	Flow rate capacity up to 15 L/min.	
	Must be capable of disinfection.	
	Materials, all to be certified for medical use:	
	Cap and connectors made of brass/steel/other biocompatible metal or polymer	
	Bottle and tubes made of polypropylene, polycarbonate or equivalent biocompatible plastic/polymer	
Pressure valve made of brass chromium plated or equivalent metal		
Supplier must define decontamination procedure.		
Warranty	Min. 1 year (ideal 2)	
Standards	ISO 13485 (medical device QMS)	
Regulatory	CE, or	
	FDA	
Product performance standards	ISO 15001 Anesthetic and respiratory equipment – Compatibility with oxygen.	
	ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements.	
	ISO 18562 Biocompatibility evaluation of breathing gas pathways in healthcare applications.	
	ISO 18562-1 Biocompatibility evaluation of breathing gas pathways in healthcare applications – Part 1: Evaluation and testing within a risk management process.	
Packaging	Name and/or trademark and address of the manufacturer.	
	Product name.	
	Product reference.	
	Type of product and main characteristics.	
	Performance testing information against the mentioned standards.	

Lot number prefixed by the word "LOT" (or equivalent harmonized symbol).	
Expiry date by year and month, prefixed by the word "EXP" (or equivalent harmonized symbol).	
Information for particular storage conditions (temperature, pressure, light, humidity, etc.), as appropriate (or equivalent harmonized symbol), if applicable.	
Information for handling, if applicable (or equivalent harmonized symbol).	
If the packaging is not transparent, it must bear a diagram (preferably actual size) showing the essential parts of the product and indicating the position of the product in the packaging.	
Gross Weight.	
Cubic Measurement.	
All indicated at least in English.	

Annex A9: Infrastructure preparation for oxygen PSA plant location

The vendor is expected to make ready the plant location for both containerized and non-containerized solution PSA plants in advance:

we

- Ground concrete leveling based on the Plant size for non-containerized and container size for containerized solution PSA plants.
- Standard shade with strong metal column and metal sheet-which is well ventilated and should protect the plants from direct sunlight and rain exposure for non-containerized solution⁹

⁹ This includes the materials and labour unit cost in which the total amount will be decided based on the exact size of non-containerized plant solution

ANNEX B: SERVICE LEVEL AGREEMENT REQUIREMENTS

Fill table, as appropriate

1	Committed response/resolution time for major problems (e.g. system faults, and errors)	
2	Committed response/resolution time for minor problems (e.g. system warnings)	
3	After care services provided – commitment to Annex B1	
4	Contact information	
5	Capacity for after care services (hours, size of workforce; if multiple, please list separately for each office and function)	Hours: Size of workforce:
6	Location of after care service teams	

Any chances or deviations to the above should be described in detail, in the bid response. Note that the SLA can also be used for repairs outside the maintenance schedule.

Annex B1: Service Agreement that should be met by supplier

Table 8: SLA should be met by supplier

1	Pre-installation requirements	<p>The Bidder must indicate explicitly the following aspects to match infrastructure capabilities within the health facility:</p> <ul style="list-style-type: none"> • acceptable mains capacity (380 volts /50 Hz (3 Phase)); • appropriate connections/adaptors; • compatibility with back-up power supply (e.g. generator); • compatibility with housing for the plant; • infrastructure requirements for operation e.g. roofing, ventilation, air conditioning, room requirements without oil, grease and petroleum-based or other flammable products;
2	Requirements for commissioning	<ul style="list-style-type: none"> • DDP 2020 Incoterms. • Note and report any signs of external or internal damage upon plant delivery. • Verify oxygen concentration, flow and pressure level meets specifications when device is operational. • Verify operation of oxygen analyser and all alarms, including power failure alarms. • Additionally, any other standard manufacturer commissioning protocols • Verify automatic switch to secondary supply when failure, if applicable • Conformity of installation shall be verified by manufacturer's authorised local agent.
3	User and Maintenance training	<p>The Bidder must indicate explicitly the following maintenance routines to match the dedicated staff capabilities within the health facility:</p> <ul style="list-style-type: none"> • Cleaning routines of the PSA plant considering the electrical safety precautions. • Cleaning routines for the filters, if applicable (i.e. reusable). • Testing of alarms. • Testing of operating pressures. • Testing of oxygen concentration. • Frequency of the recommended maintenance routines (e.g., minor service after 150 operating hours, major service after 500 operating hours). • Safety precautions on management of oxygen. • Advanced maintenance tasks required to be carried out by manufacturer's authorized local agent.
4	Maintenance agreement during warranty period	<ul style="list-style-type: none"> • Preventative maintenance parts and kits during warranty period must be included. The bidder must define or establish the costs for preventative and corrective maintenance and spare parts for a period of a least 5 years from date of installation. <p>Bidder must propose the maintenance routines and the predetermined system for procuring spare parts that are brand/model related.</p>
5	Life span – Guarantee of obsolescence	<ul style="list-style-type: none"> • Life span designed for a minimum of 10 years; guaranteed by a letter from the manufacturer (not only from the authorized distributor). • This guarantee ensures that the equipment and spare parts will not be discontinued during the 10 years after procurement.

SECTION 5B: OTHER RELATED REQUIREMENTS

Further to the Schedule of Requirements in the preceding Table, Bidders are requested to take note of the following additional requirements, conditions, and related services pertaining to the fulfillment of the requirements: *[check the condition that applies to this IFB, delete the entire row if condition is not applicable to the goods being procured]*

Delivery Term [INCOTERMS 2020] ¹⁰	DDP
Exact Address of Delivery/Installation Location	
Mode of Transport Preferred	Choose an item.
Preferred Freight Forwarder, if any ¹¹	
Customs, if required, clearing shall be done by:	
Payment Terms	
Conditions for Release of Payment	<input type="checkbox"/> Inspection upon arrival at destination <input type="checkbox"/> Written Acceptance of Goods based on full compliance with ITB requirements
All documentations, including catalogues, instructions and operating manuals, shall be in this language	English

¹⁰ Provide a Packing List with items, weights and dimensions per pallet (as applicable) as well as a Detailed Packing List with aggregate quantities per item, weights and dimensions as well as shipping conditions applicable to the items (i.e. temperature control, special instructions around loading, or hazardous goods declarations) and all batch numbers and quantities. Supplier is required to comply with packaging and shipping instructions related to the INCOTERM.

¹¹ A factor of the Incoterms stipulated in the IFB. The use of CHAI preferred freight forwarder may be considered for purposes of ensuring forwarder's familiarity with procedures and processing of documentary requirements applicable when clearing with customs authority of the country of destination.

SECTION 6: RETURNABLE BIDDING FORMS / CHECKLIST

This form serves as a checklist for preparation of your Bid. Please complete the Returnable Bidding Forms in accordance with the instructions in the forms and return them as part of your Bid submission. No alteration to format of forms shall be permitted and no substitution shall be accepted.

Before submitting your Bid, please ensure compliance with the Bid Submission instructions of the BDS.

Technical Bid:

Have you duly completed all the Returnable Bidding Forms?

- | | |
|--|--------------------------|
| ▪ Form A: Bid Submission Form | <input type="checkbox"/> |
| ▪ Form B: Vendor/Bidder Details Form | <input type="checkbox"/> |
| ▪ Form C: Joint Venture/Consortium/ Association Information Form | <input type="checkbox"/> |
| ▪ Form D: Qualification Form | <input type="checkbox"/> |
| ▪ Form E: Format of Technical Bid/Bill of Quantities | <input type="checkbox"/> |
| ▪ Form G: Form of Bid Security | <input type="checkbox"/> |
| ▪ [Add other forms as necessary] | <input type="checkbox"/> |

Have you provided the required documents to establish compliance with the evaluation criteria in Section 4?

Price Schedule/Financial Proposal:

- | | |
|--|--------------------------|
| ▪ Form F: Price Schedule/Financial Proposal Form | <input type="checkbox"/> |
|--|--------------------------|

FORM A: BID SUBMISSION FORM

Name of Bidder: [Insert Name of Bidder]

Date:

IFB reference: **IFB-ETH-GF-0302-2022: Supply, installation, commissioning and after sales support of Pressure Swing Adsorption (PSA) medical grade oxygen generation plants, manifolds, pipeline systems and power generators in Ethiopia**

We, the undersigned, offer to supply the goods and related services required for [Insert Title of goods and services] in accordance with your Invitation to Bid No. [Insert IFB Reference Number] and our Bid. We hereby submit our Bid, which includes this Technical Bid and Price Schedule.

Our attached Price Schedule is for the sum of [Insert amount in words and figures and indicate currency].

We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/Consortium /Association members or subcontractors or suppliers for any part of the contract:

- a) is not under procurement prohibition by the United Nations, including but not limited to prohibitions derived from the Compendium of United Nations Security Council Sanctions Lists;
- b) have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization;
- c) have no conflict of interest in accordance with Instruction to Bidders Clause 4;
- d) do not employ, or anticipate employing, any person(s) who is, or has been a UN staff member within the last year, if said UN staff member has or had prior professional dealings with our firm in his/her capacity as UN staff member within the last three years of service with the UN (in accordance with UN post-employment restrictions published in ST/SGB/2006/15);
- e) have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against them that could impair their operations in the foreseeable future;
- f) undertake not to engage in proscribed practices, including but not limited to corruption, fraud, coercion, collusion, obstruction, or any other unethical practice, with the UN or any other party, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the UN and we embrace the principles of the United Nations Supplier Code of Conduct and adhere to the principles of the United Nations Global Compact.

We declare that all the information and statements made in this Bid are true and we accept that any misinterpretation or misrepresentation contained in this Bid may lead to our disqualification and/or sanctioning by the CHAI.

We offer to supply the goods and related services in conformity with the Bidding documents, including the GLOBAL FUND General Conditions of Contract and in accordance with the Schedule of Requirements and Technical Specifications.

Our Bid shall be valid and remain binding upon us for the period specified in the Bid Data Sheet.

We understand and recognize that you are not bound to accept any Bid you receive.

I, the undersigned, certify that I am duly authorized by [Insert Name of Bidder] to sign this Bid and bind it should CHAI accept this Bid.

Name: _____

Title: _____

Date: _____

Signature: _____ [Stamp with official stamp of the Bidder]

FORM B: VENDOR/BIDDER DETAILS FORM

Registered Company Name	[Complete]
Company Registration Number	[insert vendor number]
Year of registration	[Complete]
Area of Business <i>(Mark "x" your area of business engagement in the box)</i>	<input type="checkbox"/> Manufacturer <input type="checkbox"/> Distributor <input type="checkbox"/> Other: [insert Area of business]
Local address (HQ)	[Complete]
Phone	Telephone number: [Complete]
Contact person that CHAI may contact for requests for clarifications during Bid evaluation	Name and Position: [Complete] Telephone numbers: [Complete] Email: [Complete]
Bidder's Authorized Representative Information	Name and Title: [Complete] Telephone numbers: [Complete] Email: [Complete]
Years in Business	[Complete]
Quality Assurance Certification (e.g., ISO 9000 or Equivalent) <i>(If yes, provide a Copy of the valid Certificate):</i>	[Complete]
Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? <i>(If yes, provide a Copy of the valid Certificate):</i>	[Complete]
Countries of Operation: <i>Previous export experience to target countries (please describe and list any relevant registrations, qualifications, licenses, attaching copies of each to IFB)</i>	[Complete]
No. of trained and certified employees for plant installation <i>(Plant installation is to be completed by trained and certified employee/contractors)</i>	[Complete]
Client Portfolio	[complete]
Tax Identification Number	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, [insert tax identification number]

Local Agent formally Registered in Ethiopia	<input type="checkbox"/> Yes <input type="checkbox"/> No Telephone numbers: [Complete] Email: [Complete]
Bid Security 2%, in Ethiopian Birr ¹²	[complete]
Please attach the following documents:	<ul style="list-style-type: none"> ▪ Company Profile, which should <u>not</u> exceed fifteen (15) pages, including printed brochures and product catalogues relevant to the goods and/or services being procured ▪ Business Registration ▪ Tax Registration evidencing that the Bidder is updated with its tax payment obligations ▪ Trade name registration papers, if applicable ▪ Quality Certificate (e.g., ISO, etc.) and/or other similar certificates, accreditations, awards and citations received by the Bidder, if any ▪ Patent Registration Certificates, if any of technologies submitted in the Bid is patented by the Bidder ▪ Certification or authorization to act as Agent on behalf of the Manufacturer, or Power of Attorney. ▪ Export Licenses, if applicable ▪ Official Letter of Appointment as local representative, if Bidder is submitting a Bid on behalf of an entity located outside the country

¹² Birr is accepted only for CPO

FORM C: JOINT VENTURE/CONSORTIUM/ASSOCIATION INFORMATION FORM

If the SLA is to be managed or provided by 3rd party, describe nature of partnership, and provide details for all partners involved

Name of Bidder:	[Insert Registered Company Name of Bidder]	Date:	Select date
IFB reference:	[Insert IFB Reference Number]		

To be completed and returned with your Bid if the Bid is submitted as a Joint Venture/Consortium/Association.

No	Name of Partner and contact information (address, telephone numbers, fax numbers, e-mail address)	Proposed proportion of responsibilities (in %) and type of goods and/or services to be performed
1	Name of Partner: [Complete] Address: [Complete] Telephone numbers: [Complete] Fax numbers: [Complete] Email: [Complete]	[Complete]
2	Name of Partner: [Complete] Address: [Complete] Telephone numbers: [Complete] Fax numbers: [Complete] Email: [Complete]	[Complete]
3	Name of Partner: [Complete] Address: [Complete] Telephone numbers: [Complete] Fax numbers: [Complete] Email: [Complete]	[Complete]

Name of Leading Partner

(with authority to bind the JV, Consortium, Association during the IFB process and, in the event a Contract is awarded, during contract execution) [Complete]

Nature of Partnership [Complete]

Company Registration Number [Complete Company Registration Number]

Contact Person Name and Position: [Complete]
Telephone numbers: [Complete]
Email: [Complete]

Years in Business [Complete]

Quality Assurance Certification (e.g., ISO 9000 or Equivalent) (If yes, provide a Copy of the valid Certificate): [Complete]

Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? (If yes, provide a Copy of the valid Certificate): [Complete]

Countries of Operation: *Previous export experience to target countries (please describe and list any relevant registrations, qualifications, licenses, attaching copies of each to ITB)* [Complete]

No. of trained and certified employees for plant installation (Plant installation is to be completed by trained and certified employee/contractors) [Complete]

Client Portfolio [complete]

We have attached a copy of the below referenced document signed by every partner, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture:

Letter of intent to form a joint venture **OR** JV/Consortium/Association agreement

We hereby confirm that if the contract is awarded, all parties of the Joint Venture/Consortium/Association shall be jointly and severally liable for the fulfillment of the provisions of the Contract.

Name of partner: _____

Name of partner: _____

Signature: _____

Signature: _____

Date: _____

Date: _____

Name of partner: _____

Name of partner: _____

Signature: _____

Signature: _____

Date: _____

Date: _____

re

FORM D: ELIGIBILITY AND QUALIFICATION FORM

Name of Bidder: [Insert Name of Bidder]

Date: Select date

IFB reference: [Insert IFB Reference Number]

If JV/Consortium/Association, to be completed by each partner.

History of Non- Performing Contracts

Non-performing contracts did not occur during the last 3 years

Contract(s) not performed in the last 3 years

Year	Non- performed portion of contract	Contract Identification	Total Contract Amount (current value in US\$)
		Name of Client: Address of Client: Reason(s) for non-performance:	

Litigation History (including pending litigation)

No litigation history for the last 3 years

Litigation History as indicated below

Year of dispute	Amount in dispute (in US\$)	Contract Identification	Total Contract Amount (current value in US\$)
		Name of Client: Address of Client: Matter in dispute: Party who initiated the dispute: Status of dispute: Party awarded if resolved:	

Previous Relevant Experience

Please list only previous similar assignments successfully completed in the last 3 years.

List only those assignments for which the Bidder was legally contracted or sub-contracted by the Client as a company or was one of the Consortium/JV partners. Assignments completed by the Bidder's individual experts working privately or through other firms cannot be claimed as the relevant experience of the Bidder, or that of the Bidder's partners or sub-consultants, but can be claimed by the Experts themselves in their CVs. The Bidder should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested by CHAI.

Project name & Country of Assignment	Client & Reference Contact Details	Contract Value	Period of activity and status	Types of activities undertaken

Bidders may also attach their own Project Data Sheets with more details for assignments above.

Attached are the Statements of Satisfactory Performance from the Top 3 (three) Clients or more.

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Financial Standing

Annual Turnover for the last 3 years	Year 2019	USD
	Year 2020	USD
	Year 2021 (to date)	USD

Latest Credit Rating (if any), indicate the source

Financial information (in US\$ equivalent)	Historic information for the last 3 years		
	Year 1 (2019)	Year 2 (2020)	Year 3 (2021 to date)
	<i>Information from Balance Sheet</i>		
Total Assets (TA)			
Total Liabilities (TL)			
Current Assets (CA)			
Current Liabilities (CL)			
	<i>Information from Income Statement</i>		
Total Gross Revenue (TR)			
Profits Before Taxes (PBT)			
Net Profit			
Current Ratio			

Attached are copies of the audited financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following condition:

- a) Must reflect the financial situation of the Bidder or party to a JV, and not sister or parent companies;
- b) Historic financial statements must be audited by a certified public accountant;
- c) Historic financial statements must correspond to accounting periods already completed and audited. No statements for partial periods shall be accepted.

FORM E: FORMAT OF TECHNICAL BID

Name of Bidder: [Insert Name of Bidder]

Date: Select date

IFB reference: [Insert IFB Reference Number]

The Bidder's Bid should be organized to follow this format of the Technical Bid. Where the bidder is presented with a requirement or asked to use a specific approach, the bidder must not only state its acceptance, but also describe how it intends to comply with the requirements. Where a descriptive response is requested, failure to provide the same will be viewed as non-responsive.

SECTION 1: Bidder's qualification, capacity and expertise

- 1.1 General organizational capability which is likely to affect implementation: management structure, financial stability and project financing capacity, project management controls, extent to which any work would be subcontracted (if so, provide details).
- 1.2 Relevance of specialized knowledge and experience on similar engagements done in the region/country.
- 1.3 Quality assurance procedures and risk mitigation measures.
- 1.4 Organization's commitment to sustainability.

SECTION 2: Scope of Supply, Technical Specifications, and Operational-Related Services

This section should demonstrate the Bidder's responsiveness to the specification by identifying the specific components proposed, addressing the requirements, as specified, point by point; providing a detailed description of the essential performance characteristics proposed; and demonstrating how the proposed bid meets or exceeds the requirements/specifications. All important aspects should be addressed in sufficient detail.

- 2.1 A detailed description of how the Bidder will deliver the required goods and services, keeping in mind the appropriateness to local conditions and project environment. Details how the different service elements shall be organized, controlled and delivered.
- 2.2 Explain whether any work would be subcontracted, to whom, how much percentage of the requirements, the rationale for such, and the roles of the proposed sub-contractors and how everyone will function as a team.
- 2.3 The bid shall also include details of the Bidder's internal technical and quality assurance review mechanisms.
- 2.4 Implementation plan including a Gantt Chart or Project Schedule indicating the detailed sequence of activities that will be undertaken and their corresponding timing.
- 2.5 Demonstrate how you plan to integrate sustainability measures in the execution of the contract.

Goods and services to be Supplied	Technical Specifications	Bidder's Response				
		Compliance with technical specifications		Delivery Date <i>(confirm that you comply or indicate your delivery date)</i>	Quality Certificate/Export Licenses, etc. <i>(indicate all that apply and attach)</i>	Comments
		Yes, we comply	No, we cannot comply <i>(indicate discrepancies)</i>			
Medical Grade PSA Oxygen Plant Technical Specifications (Containerized Solution): 60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	See Annexes A1, A2, A3 & A6					
Medical Grade PSA Oxygen Plant Technical Specifications (Onsite Installation Required): 60 Nm ³ /hr = 2(+/-30 Nm ³ /hr)	See Annexes A4, A5 & A6					
Power Generator Specifications: 175 - 200 kW/ 200 - 250 KVA	See Annex A7					
Specifications for Piped Distribution of Medical Oxygen	See Annex A8					

Other Related services and requirements <i>(based on the information provided in Section 5b)</i>	Compliance with requirements		Details or comments on the related requirements
	Yes, we comply	No, we cannot comply <i>(indicate discrepancies)</i>	
Delivery Terms			
Warranty			
Service Level Agreement Requirements			

SECTION 3: Management Structure and Key Personnel

- 3.1 Describe the overall management approach toward planning and implementing the project. Include an organization chart for the management of the project describing the relationship of key positions and designations. Provide a spreadsheet to show the activities of each personnel and the time allocated for his/her involvement.
- 3.2 Provide CVs for key personnel that will be provided to support the implementation of this project using the format below. CVs should demonstrate qualifications in areas relevant to the scope of goods and/or services.

Format for CV of Proposed Key Personnel

Name of Personnel	[Insert]
Position for this assignment	[Insert]
Nationality	[Insert]
Language proficiency	[Insert]
Education/ Qualifications	<p><i>[Summarize college/university and other specialized education of personnel member, giving names of schools, dates attended, and degrees/qualifications obtained.]</i></p> <p>[Insert]</p> <p><i>[Provide details of professional certifications relevant to the scope of goods and/or services]</i></p>
Professional certifications	<ul style="list-style-type: none"> ▪ Name of institution: [Insert] ▪ Date of certification: [Insert] <p><i>[List all positions held by personnel (starting with present position, list in reverse order), giving dates, names of employing organization, title of position held and location of employment. For experience in last five years, detail the type of activities performed, degree of responsibilities, location of assignments and any other information or professional experience considered pertinent for this assignment.]</i></p> <p>[Insert]</p>
Employment Record/ Experience	

[Provide names, addresses, phone and email contact information for two (2) references]

References

Reference 1:

[Insert]

Reference 2:

[Insert]

I, the undersigned, certify that to the best of my knowledge and belief, the data provided above correctly describes my qualifications, my experiences, and other relevant information about myself.

Signature of Personnel

Date (Day/Month/Year)

WE

FORM F: PRICE SCHEDULE / FINANCIAL PROPOSAL FORM

Name of Bidder: [Insert Name of Bidder]

Date: Select date

IFB reference: [Insert IFB Reference Number]

The Bidder is required to prepare the Price Schedule following the below format. The Price Schedule/Financial Proposal must include a detailed cost breakdown of all goods and related services to be provided. Separate figures must be provided for each functional grouping or category, if any.

Any estimates for cost-reimbursable items, such as travel of experts and out-of-pocket expenses, should be listed separately.

Currency of the Bid: [Insert Currency]

Price Schedule/Financial Proposal

Financial requirements	
Import/pre-import	Grantee

Facility Name:

No.	Item/Spares list	Manufacturer	Brand	Model	Quantity	Unit Price	Amount (USD) ¹³
1	Lot1: 7 x Medical grade oxygen PSA plant - containerized (please list out key components with unit cost)						
Sub-total 1							
2	Lot 2: 3 x Medical Grade PSA plants, without container (Dubti, Arbaminch and Gode Hospitals)						
Sub-total 2							
2	Lot3: Power Generator (please list the major cost drivers)						
Sub-total 3							
3	Lot4: Manifold and piped distribution of medical oxygen ¹⁴						
Sub-total 4							
4	Cost of delivery to facility (shipping, inland transportation and other till final destination)						
5	Cost of installation, testing, and commissioning at facility						
6	Training						

¹³ All quotes for cost drivers should be given in USD/\$.

¹⁴ The unit cost per terminal/point includes site level assessment for detail drawing works to determine Bill of Quantity for materials and labour cost for installation as a package. However, the vendor supposed to complete the unit cost column of the below table for manifold and pipeline materials.

7	Warranty		
5	After Sales Services		
Sub total			
Total amount before Vat/TOT¹⁵			
Grand total amount including Vat/TOT			

Please complete the following spares table. In addition to the below listed items, all necessary items for continued functionality of the proposed system shall be listed by the vendor as per the winner supplier's standard spare part list. Supplier is responsible for availability of all required items in the local market after warranty period for a minimum of 5 years with reasonable price as declared in the table below.

Table 9: Manifold and pipeline materials list¹⁶

SN	Item Description	Unit	Unit price	Quantity	Amount	Remark
1	Automatic oxygen manifold system	Set		10		
1.1	HTM standard. The unit is supplied as a complete factory tested package.					
1.2	The Manifold includes exhaust, relief valve, pressure switch, supply isolation valve, non-return valve and all accessories to make the system functional.					
1.3	control type- fully automatic					
1.4	No of cylinder connection points- 2X10					
1.5	Compliance with ISO 10524-2, Pressure regulators for use with medical gases — Part 2: Manifold and line pressure regulators					
1.6	Bears CE marking under MDR					
2	MEDICAL GAS TERMINAL UNITS	Pieces		10		
2.1	The unit is supplied as a complete package, fully tested prior to shipping. The unit includes maintenance valve safety nut, check valve, flush box with base block, O-ring, plug -in coupling, internal and external gas identification, release bushing and cover plate.					
2.2	Oxygen terminals, wall mounted, BS type must fulfill HTM 02-01					
2.3	Regulatory & standards: bears CE marking under MDR, ISO 13485, compliance with ISO 9170-1					
3	AREA ALARM UNIT	Pieces		10		
3.1	The unit is supplied as a complete package, fully tested prior to shipping.					
	shall be used for all medical gases specified on the drawing.					
3.2	The module must fulfill HTM 02-01 requirements.					

¹⁵ VAT/TOT should be shown separately i.e., the cost before VAT or if not applicable to the item, it has to be indicated clearly.

¹⁶ The bidder is expected to complete a unit price for materials using the table

4	ZONE SERVICE UNITS/GASES AREA ALARM UNITS WITH DIGITAL ALARM	Pieces		10		
4.2	The unit is supplied as a complete package, fully tested prior to shipping. The unit equipped with stamped gas identification shut-off valve (100% leakage free) The unit shall be used for all medical gases specified on the drawing.					
4.3	The module must fulfill HTM 02-01 requirements.					
5	OXYGEN FLOW METER W/HUMIDIFIER	Pieces		100		
5.1	Supply of medical oxygen gas flow meter with humidifier compatible with BS type wall terminal units. (See annexed specification for Flowmeter and Humidifier)					
5.2	As per specification in the Annex part, including regulatory & standards: bears CE marking under MDR, ISO 13485					
6	Medical copper pipe (size in mm) Seamless, round copper tubes for medical oxygen.¹⁷					
6.1	Dia. 12mm	Meter				
6.2	Dia. 15mm	Meter				
6.3	Dia. 22mm	Meter				
6.4	Dia. 28mm	Meter				
6.6	Dia. 35 mm	Meter				
7	Support structure					
7.1	Supply and install all the necessary support structure for the medical gas system pile line and Equipment's as per the drawing and HTM standard	Lps (Lamp sum)		10		
8	Pipe trunking					
8.1	Supply and install all the necessary Trunking for the medical gas system pile line and Equipment's as per the drawing and HTM standard	Lps (Lamp sum)		10		
9	The following standards (most recent) should be applied, and certifications should be provided: <ul style="list-style-type: none"> • ISO 7396-1 • BS EN 1057: Copper and copper alloys. Seamless, round copper tubes for water and gas in sanitary and heating applications or equivalent • BS EN 13348: Copper and copper alloys. Seamless, round copper tubes for medical gases or vacuum or equivalent Manufacturer's test certificates for both chemical composition and physical properties. 3 rd party certification may be required.					

¹⁷ The items should meet the ISO standard or equivalent stated under #9 in the table and facility specific size of the copper pipe will be calculated based on the unit price given here, vendor expected to complete the unit price part using the above table

Table 10: List of Spare Parts and Accessories¹⁸

Expected Spares required after warranty period					
No.	Description	Part No.	PRICE (USD)	Unit	Brand/model (if applicable)
1	Molecular sieve / zeolites			Kg	
2	Exhaust			Unit	
3	Air filter, feed-air compressor			Unit	
5	Cabin filter, feed-air compressor			Unit	
6	Particulate filter, (>5 microns), housing			Unit	
7	Particulate filter, (>5 microns), line filter			Unit	
8	Coalescing filter (0.01 micron), housing			Unit	
9	Coalescing filter (0.01 micron), line filter			Unit	
10	Activated carbon / coal tower filter, tower			Unit	
11	Activated carbon / coal tower filter, active carbon			KG	
12	Bacteria (sterile) filter, product filter			Unit	
13	Liquid waste filter, waste valve			Unit	
14	Oxygen analyzer (specify type)			Unit	
15	Oxygen sensor replacement (specify type)			Unit	
16	Oxygen sensor calibration			Unit	
17	Electrical adaptor, oxygen generator			Unit	
18	Valve, 1/2", oxygen generator			Unit	
19	Valve, 3/4", oxygen generator			Unit	
20	Valve, 1", oxygen generator			Unit	
21	Valve, 1-1/4", oxygen generator			Unit	
22	Valve, 1-1/2", oxygen generator			Unit	
23	Valve, 2", oxygen generator			Unit	
24	Valve "O-ring" set, oxygen generator			Set	
25	Air intake regulator, oxygen generator			Unit	
26	Oxygen outlet regulator, oxygen generator			Unit	
27	Programme Logic Controller electronic card, oxygen generator			Unit	
28	Pneumatic valve block, oxygen generator			Unit	

¹⁸ The items should meet the ISO standard or equivalent stated under #9 in the table and facility specific size of the copper pipe will be calculated based on the unit price given here, vendor expected to complete the unit price part using the above table. This template should be completed which include the unit price in USD with additional required items which were missed from the list. The spares table with all necessary items for continued functionality of the proposed system shall be listed by the vendor as per the winner supplier's standard spare part list. Supplier is responsible for availability of all required items in the local market after warranty period for a minimum of 5 years with reasonable price as declared in the table.

29	Rubber hose, air intake, oxygen generator			Meter	
30	Pressure gauge, analogue			Unit	
31	Pressure sensor, digital			Unit	
32	Oxygen analyzer, hand-held (specify type)			Unit	
33	Touch screen display			Unit	
34	System control panel			Unit	

Name of Bidder: _____

Authorised signature: _____

Name of authorised signatory: _____

Functional Title: _____

FORM G: FORM OF BID SECURITY

Bid Security must be issued using the official letterhead of the Issuing Bank.
Except for indicated fields, no changes may be made on this template.

To: CHAI

[Insert contact information as provided in Data Sheet]

WHEREAS [Name and address of Bidder] (hereinafter called "the Bidder") has submitted a Bid to CHAI dated [Click here to enter a date](#), to execute goods and/or services [Insert Title of Goods and/or Services] (hereinafter called "the Bid"):

AND WHEREAS it has been stipulated by you that the Bidder shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security if the Bidder:

- a) Fails to sign the Contract after CHAI has awarded it;
- b) Withdraws its Bid after the date of the opening of the Bids;
- c) Fails to comply with CHAI's variation of requirement, as per ITB instructions; or
- d) Fails to furnish Performance Security, insurances, or other documents that CHAI may require as a condition to rendering the contract effective.

AND WHEREAS we have agreed to give the Bidder such Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Bidder, up to a total of [amount of guarantee] [in words and numbers], such sum being payable in the types and proportions of currencies in which the Price Bid is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of [amount of guarantee as aforesaid] without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

This guarantee shall be valid up to 30 days after the final date of validity of bids.

SIGNATURE AND SEAL OF THE GUARANTOR BANK

Signature: _____

Name: _____

Title: _____

Date: _____

Name of Bank _____

Address _____

[Stamp with official stamp of the Bank]