

REQUEST FOR PROPOSAL (RFP)

Solicitation Title:	Oxygen supply system Vacuum insulated evaporator or PSA plant to supply oxygen to health facilities
RFQ Release Date:	27 October 2021
Questions Due Date:	5pm 3 Nov 2021
Submit Questions to:	tquy@fhi360.org with a copy to cuong@fhi360.org
Proposal Due Date:	4pm 4 Nov 2021
Submit Proposal to:	ProcurementVietnam@fhi360.org
Anticipated Contract Start Date:	12/20/2021
Contract End Date:	To be determined

Background

FHI 360 is a non-profit human development organization dedicated to improving lives in lasting ways by advancing integrated, locally driven solutions. Our staff includes experts in health, education, nutrition, environment, economic development, civil society, gender, youth, research and technology; creating a unique mix of capabilities to address today's interrelated development challenges. FHI 360 serves more than 60 countries, all 50 U.S. states and all U.S. territories.

The Meeting Targets and Maintaining Epidemic Control (EpiC) is a five-year, global project funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the United States Agency for International Development (USAID). EpiC Vietnam's goal is to deliver efficient, affordable, results-based technical assistance and direct services while closing remaining gaps in Vietnam's efforts to meet HIV epidemic control targets and address the COVID-19 pandemic.

We are seeking **qualified vendors to provide full equipment, installation, user training, operation guidance and warranty of liquid oxygen systems [either vacuum insulated evaporator (VIE) systems or pressure swing adsorption (PSA) plants] including tanks, vaporizers, and pressure regulators for installation in hospitals and health centers in Dong Nai and possibly extend to neighboring provinces as Long An, Tay Ninh, Binh Duong, and the North or Central of Vietnam.**

Scope of Work

The qualified vendor is expected to provide between one and six liquid oxygen systems to sites in provinces experiencing a COVID-19 surge including Dong Nai. The systems are expected to supply **high quality, medical-grade oxygen** to health facilities with a bed capacity of 500 to 1,000. Final sites will be determined through the contracting process.

Vendors are invited to consider using either VIE system or PSA plan to supply oxygen. The final decision will be made upon site assessment and agreement with the facility. Equivalent liquid oxygen solutions can also be considered.

Vacuum Insulated Evaporator (estimated capacity of 10 and/or 20m3)

If the vendor opts to use a system using VIE, it should include a cryogenic storage tank, pump, vaporizer, pressure adjustment equipment, foundation and other key accessories (pressure gauges; ball valves; temperature gauges; safety valves, etc.) to equip each hospital to operate a centralized system to supply bedside liquid oxygen.

The below specifications are provided to orient the vendor on the required technical solution. Vendors can propose other but similar technical specifications if needed.

Parameter	Expected specifications
1. Liquid oxygen Tank	Taylor Wharton –USA or equivalent
Maximum allowable working pressure (MAWP)	250 (1.72)
Net Capacity (liquid)	10m3 - 20m3 capacity
Liquid oxygen purity	≥ 99.5%
Type of storage tank	<ul style="list-style-type: none"> Vertical-type skid mounted LOX tank constructed of stainless-steel inner vessel contained within a carbon/stainless steel outer vessel complying to ISO 13485 Stainless steel pallet
2. Vaporizer	NIKKISO-Japan or equivalent
3. Regulator	Rotarex-France or equivalent
Flow rate	≥300 Nm3/h
4. Foundation and Fence	<ul style="list-style-type: none"> Foundation: Follow to International Gas Manufacturers' foundation design for the oxygen supply station Fence: stainless steel 304
5. The first supply Liquid Oxygen	Purging, cooling down the system
6. Accessories	<p>Safety valve, shut-off valve, pressure gauge, temperature gauge; Shelf Supporting by INOX 304</p> <p>All valves and regulators should be certified in accordance to the applicable national/international regulations.</p>

The vendor is also requested to provide:

- A complete central pipeline distribution system set with vaporizers, along with ancillary shut-off valves, pressure-reducing and safety valves, and pressure flow regulators and outlet accessories. The cost for the facility piping system will be estimated specifically for each implementing site by the vendor based on the actual conditions/needs of the facility.
- A cylinder manifold connected to the piping system as a back-up for the specified LOX tank system.

VIE under consideration should adhere to ISO 21029 or equivalent requirements addressing the design, fabrication, inspection, and testing of VIEs. Quality management protocols should adhere to ISO 9001/2000

to ensure consistency and applicable regulatory requirements. Vendors will be requested to provide documentation of compliance with relevant standards.

PSA Plants

If the vendor opts to supply one or more PSA plants, plants must be fully equipped for sites to operate them autonomously. They should comply with WHO Technical Specifications (or equivalent standards). [https://pmnch.who.int/resources/publications/i/item/technical-specifications-for-pressure-swing-adsorption\(psa\)-oxygen-plants](https://pmnch.who.int/resources/publications/i/item/technical-specifications-for-pressure-swing-adsorption(psa)-oxygen-plants)

PSA plants should also be equipped to enable on-site oxygen cylinder filling.

PSA plants under consideration should have European Certification (CE marking) or other stringent regulatory authority approval. Relevant guidelines include ISO 7396-1 and/or US/European Union pharmacopeia compliance standards for oxygen at 93% production purity.

Installation

The selected vendor is expected to be able to fully install/provide the selected system with minimal support needed from installation sites. Costs in response to this RFQ must include transportation of equipment, associated fees for engineers and technicians, and other relevant/residual costs.

If structural changes are needed to install and operate these systems, vendors will be requested to document these explicitly and their costs, and clearly define which modifications fall under the responsibility of the client and which fall under the responsibility of the vendor.

Warranty, maintenance and support of systems beyond installation

- Vendors are requested to provide a minimum of a three-year comprehensive warranty and a five-year vacuum warranty for the installed system after official handover. During the warranty period, vendors must ensure planned preventive maintenance along with corrective/breakdown maintenance whenever required.
- Vendors must guarantee the availability of spare parts for 10 years from the date of installation.
- Vendors must provide on-site training for relevant staff of each implementing sites on operation and preventive maintenance of the system.

Selection Process

Given the requirement to tailor the selected solution to the needs of individual facilities the following process is proposed.

- Vendors submit an Expression of Interest outlining the **estimated costs for 1 unit (VIE OR PSA plants)**. Upon request, FHI 360 will facilitate communication between the vendor and implementing sites to obtain more information on the specific needs to determine the estimated cost.
- The expression of interest (together with estimated cost) should include:
 - Brief technical specifications
 - Draft blueprint of system
 - Documentation on compliance with relevant technical and safety standards

- Initial price offering and timeline for delivery
- Based on the expression of interest FHI will shortlist interested vendors and requests vendors to undertake site visits. The site visits will provide an opportunity for the vendor to further refine the offer.
- Vendors are then requested to submit a full, detailed, quotation and proposal.
 - Full technical specifications
 - Detailed blueprint of system
 - Documentation on compliance with relevant technical and safety standards
 - Detailed price offering and detailed timeline for delivery.

Timetable and Address for Submission

Proposals are due to no later than **4pm 4 Nov 2021**. Required documentation listed below must be e-mailed to ProcurementVietnam@fhi360.org.

Any questions or requests for clarification can be submitted in writing to tquy@fhi360.org with a copy to cuong@fhi360.org by 5pm 3 Nov 2021. No telephone inquiries will be answered.

Required Documentation

The initial expression of interest must include the following items:

- A brief description of the organization, its capabilities, and its ability to provide the required supplies including country of origin and maintenance specifications.
 - Brief technical specifications
 - Draft blueprint of system
 - Documentation on compliance with relevant technical and safety standards
- Documentation of legal registration.
- A sample of contract with specific payment terms
- Initial detailed price offer and timeline for delivery (including VAT if applicable) in Vietnam Dong (VND)

FHI 360 Disclaimers

- FHI 360 may perform a background check on any selected vendor.
- FHI 360 may cancel the solicitation and not award.
- FHI 360 may reject any or all responses received.
- Issuance of the solicitation does not constitute an award commitment by FHI 360.
- FHI 360 reserves the right to disqualify any offer based on failure of the offeror to follow solicitation instructions.
- FHI 360 will not compensate any offeror for responding to solicitation.
- FHI 360 reserves the right to issue an award based on initial evaluation of offers without further discussion.
- FHI 360 may choose to award only part of the activities in the solicitation, or issue multiple awards based on the solicitation activities.
- FHI 360 has the right to issue amendments to the RFQ at any time.