



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE (TOR) for

The supply of Tools and Equipment for

Pilot Demonstration Project for Refrigerant Recovery and Reclamation (RRR) Service for Egypt

Date: 31/08/2021

UNIDO ID: 170206

1. Background Information

As a signatory to the Montreal Protocol, Egypt is required by the international agreement, to control the import and use of ozone depleting substances and to phase out the use of these substances over prescribed period of time. A group of such substances includes hydrochlorofluorocarbons (HCFC) refrigerants such as R-22.

The HCFC Phase-out Management Plan (HPMP) Stage II was approved at the 79th meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol in July 2017. Activities of the first Tranche of the HPMP Stage II focus on the foam sector and refrigeration service sectors, as well as policy and enforcement measures for improved control of HCFCs that fall under the several Ministries and industries.

Viability assessment of the market in Egypt includes setting up two competing refrigerant reclamation centers. Proposed refrigerant recovery reward program (RRRP) together with mandatory regulations will be developed and applied to encourage the recovery and reclamation of refrigerants.

To implement the control and phase out of HCFC's, legal provisions will be put in place. This includes e.g. the control of import of HCFC's through a reducing quota system together with the creation of storage of reclaimed refrigerants (R-bank). R-bank will serve as an indicator of demand of the internal Egyptian market.

Once the internal market is saturated with requisite quantities, the surplus of reclaimed product may be sold abroad by the private operators in accordance with actual market price at the time.

Currently Egypt is providing some of the neighboring countries with virgin refrigerants which can be substituted by reclaimed refrigerants thus decreasing the total amount of imported, virgin HCFC's to the African continent.

A pilot demonstration project for refrigerant recovery and reclamation service is to be implemented within the HPMP to demonstrate the feasibility and operability of a successful recover, recycling, and reclamation (RRR) facility. The success in establishing and operating a RRR facility will lead to smoothening of the phase-out of HCFC-22. The main goal is to make recovery and reclamation of refrigerants feasible and eventually mandatory for all refrigeration service operations.

The short terms outputs of the project are expected to be:

- a) The short term objective of the pilot project is to Piloting of one reclamation centre (logistic, business, and technical aspects).
- b) Market validation & proof of concept: 80 tons of refrigerants recovered, reclaimed & rewarded for (56 tons) and stored (within the first 12 months of operations)

2. The scope of Supply

This Terms of Reference is for the provision of the equipment which will be used in the implementation of the pilot project.

The table below provides specifications of supply. The supplier(s)/contractor(s) shall complete it by filling in unit and total prices. The specifications established in this document are the minimum requirements to be accepted. Products furnished to these specifications must meet or exceed all requirements herein. Modifications or additions to basic standard products or less size or capability to meet these requirements will not be accepted. Bidders must include the manufacturer's name, country of origin of each item and the model number in the bid. Please note that in line with the UNIDO Purchase Order, the Supplier shall insure the goods during their shipment and transit to the named place of destination and thereafter until the packing crates are opened in the presence of the Supplier's representative(s), if applicable, against all risks of loss or damage from any cause. Such insurance shall be with a reputable insurance company acceptable to UNIDO and shall be in the names of the Contractor and UNIDO in their respective rights and interests. The insurance shall cover the full price of the goods including freight costs plus ten percent (10%) and shall be in the currency of the Contract Price.

3. Guarantee Requirements

At least 1 year(s) guarantee is required. The supplier shall replace/refurbish (in place or at their facilities outside) without any further costs for the client including shipping for any or all the equipment in case of malfunctioning and/or incapable of achieving the required

accuracy/specification relevant to the tests. The availability for the spare parts should be two years and deviating duration should be indicated.

4. Delivery Period

The equipment should be delivered to the recipient by December 30, 2021.

5. Delivery Terms

The equipment will need to be delivered to 1 location. The offer should indicate Incoterm of an offered transport, DAP.

Receipt:

AgChem

42 Industrial Zone #4

Badr City, Egypt

Coordinates: 30.14937891779146, 31.743108826575842

6. Consignee

UNIDO Egypt Office shall be the designated consignee and will process the customs clearance.

UNIDO Regional Office

Address:

Ministry of Trade and Industry

2 Latin America Street, Garden City, 4th floor, Cairo, Egypt

E-mail: office.egypt@unido.org

Phone number: +2-02-27943477; +2-02-27941993

7. Table for Specification of Supply

The following are the specifications of supply:

UNIDO REQUIREMENTS				TO BE COMPLETED BY THE INVITEE					
Item	Name and required parameters		Specification		Quantity	unit price	total item	Compliance	Remarks
		UNI#				Currency	price	yes/no	
						US\$	Currency US\$		
	I. Equipment, parts, supplies								
1	Distribution cylinder 61 ltr (reclaimed)		EN13322-1/ISO 4706 – 48 bar – single-valve, PRV		50				
2	Goetz Tube assortment		Goetz tube 100 ml (5x), clamp, scale 0.1 gram accuracy		1				
3	High accuracy pressure gauge		Digital, capable of reading 0.1 bar accuracy – range 0 ~ 50 bar	Appion PTC800 Pressure gauge	4				
4	Vacuum pump set up		24 cfm minimum capacity vacuum pump – two stage – with manifold suitable for minimum 4 connections. 3/8” connections		1				
5	Reclaim Unit		Reclaim unit must process refrigerant with results meeting AHRI-700-2016 for CFC, HCFC and HFC refrigerants.		2				

			(e.g. Ekotez JV-90 or equivalent)						
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