

## TERMS OF REFERENCE (ToR)

### National Individual Consultants or Contractors

#### 1. Individual Consultant (IC) General Information

<b>Consultant:</b>	National Consultant
<b>Consultant's Task:</b>	Determine HFC consumption and low-GWP alternatives for the 2017-2021 period in Trinidad and Tobago.
<b>Place of destination:</b>	Trinidad & Tobago
<b>Type of contract:</b>	Individual Contract
<b>Contract Term:</b>	4 months

#### 2. Background

Following the outcomes of the 80th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and subsequently Decision 80/50(e), funding was approved for Trinidad and Tobago for *Enabling Activities to prepare for the HFC phase-down* and to assure the early ratification of the Kigali Amendment (KA) which happened on Nov 11, 2017.

Taking into consideration that the Kigali Amendment to the Montreal Protocol came into force on the 1st of January 2019, and that Trinidad and Tobago has updated its reporting mechanism to include HFCs, the country will be able to follow up on the standard reporting obligation under the Kigali Amendment. Trinidad and Tobago have already created an enabling environment for the phasedown of HFCs.

#### 3. Objectives

- i. Update the National Inventory of hydrofluorocarbon (HFC) consumption and use and the alternatives with low Global Warming Potential (GWP). The inventory shall correspond to national consumption of the last 5 years (2017 - 2021). It will serve as input to implement the strategies and projects for the First Phase of the Kigali Amendment Implementation Plan (KIP). The first phase comprises the freeze of HFC consumption in 2024 and 10% reduction in 2029. Specific tasks:
  - Define the methodology to collect information and the national HFC inventory.
  - Determine consumption (imports and exports) of HFC substances and how they were distributed and used by sector in the 2017-2021 period.

Then, project HFC consumption to 2030 (See sector list in the Annex Table).

- Describe the national HFC market and project the future behavior of consumption and use of such substances in Trinidad and Tobago.

#### **4. Tasks and Responsibilities**

The consultant is expected to deliver the following results:

- i. Determine national HFC consumption for the 2017-2021 period and projections to 2030 in Trinidad and Tobago. The calculation of HFC consumption shall incorporate annual imports and exports of HFC substances as listed in Annex F of the MP, in addition to national border control information and the information provided by the importers of the substances (Top-Down Methodology).
- ii. Determine the national inventory of HFC alternatives (ammonia, carbon dioxide, hydrocarbons, amongst others) during the 2017-2021 period in Trinidad and Tobago.
- iii. Characterize the distribution of consumption among the different HFC consumer sectors in the main productive sectors: Refrigeration and Air Conditioning (RAC), fire extinguishing, aerosols for industrial and commercial use, metered dose inhalers used in health, and other applications that may be identified. The RAC sector should include the subsectors in the attached table.
- iv. Characterize HFC end users and the alternatives, identify the corresponding annual consumption of such substances per sector according to the attached table, highlight regional and national consolidated distribution (Bottom-Up Methodology).
- v. Calculate the amount of HFCs currently installed in equipment and systems in Trinidad and Tobago and the annual demand required for maintenance of equipment and systems.
- vi. Needs assessment for the RAC sector: Technicians & academic institutes; needs on capacity, equipment, etc. Incorporate into the KIP report.
- vii. Survey on number of technicians in Trinidad and Tobago and the subsectors covered by them and disaggregate by gender.



## 5. Deliverables and payment schedule

The consultant will be responsible for the following deliverables:

Product	Deliverables	Delivery Date	Payment Percentage
1	Upon acceptance of Proposed methodology to collect information	Within 1 month of contract signing	20%
2	Upon acceptance of Work plan prepared to collect information (including the delivery of the validated survey format and the digital records of the companies that will be surveyed)	Within 2 months of contract signing	30%
3	Upon acceptance of Report on the collected information (surveys, processing and systematization)	Within 3 months of contract signing	30%
4	Upon acceptance of Report on the inventory of national HFC consumption and the low-GWP alternatives in Trinidad and Tobago (2017-2021)	Within 4 months of contract signing	20%

Should there be observations on the reports, they must be resolved within a 5-calendar-day period. Similarly, UNDP will review and submit observations/conformity to the products within a 5-calendar-day period



## ANNEX 1 - SUBSECTORS TO BE INCLUDED IN THE KIP SURVEY

## TOP-DOWN ANALYSIS

Sector	Using sector (HFC distributed in)	HFC and blends used (kind and quantity)	Application
<b>Importers and retailers</b>	Domestic refrigeration		Domestic Refrigeration
	Domestic air conditioning (room AC, mini-splits and multi-splits, etc.)		AC
	Mobile air conditioning		MAC
	Self-contained commercial refrigeration (bottle coolers, chest freezers, etc)		Commercial Refrigeration
	Large commercial refrigeration (RAC systems installed in minimarkets and supermarkets)		Commercial refrigeration
	Commercial air conditioning (roof-top installations, heat-pumps, etc)		Commercial AV
	Cool rooms and other commercial refrigeration installations		Commercial Refrigeration
	Industrial refrigeration (chillers and other applications)		Industrial refrigeration
	Commercial refrigeration used in hotels, restaurants, hospitals and other commercial installations (different to minimarkets, supermarkets and cool rooms)		Commercial refrigeration
	Land transport refrigerated		Transport refrigerated and frozen



Sector	Using sector (HFC distributed in)	HFC and blends used (kind and quantity)	Application
	Commercial vessel refrigeration		Commercial refrigeration
	Touristic vessel refrigeration and AC		Commercial refrigeration and AC
	Foam		Foams
	Solvents		Solvents
	Aerosols		Aerosols
	Fire extinguishers		Fire extinguishers

#### BOTTOM-UP ANALYSIS

Servicing Sectors	Subsector	Subsector/ Areas for Proxy Data	Application
<b>Domestic refrigeration</b>	Domestic refrigeration	Domestic refrigeration	Refrigeration
<b>Domestic Air conditioning</b>	Residential Air Conditioning	Domestic AC (mini-splits and multi-splits)	AC
<b>Mobile (Transportation) Air conditioning</b>	Automobile Sector	Automobiles	AC
<b>Light Commercial Refrigeration</b>	Self-contained commercial Refrigeration Equipment	Commercial refrigeration (bottle coolers, chest freezers, etc)	Refrigeration and Foams



Servicing Sectors	Subsector	Subsector/ Areas for Proxy Data	Application
<b>Large commercial refrigeration and AC</b>	Minimarkets and supermarkets	Minimarkets and supermarkets	Commercial refrigeration
	Cold storage rooms	Groceries distribution centers, fisheries, etc.	Commercial refrigeration
	Shopping centers and department stores	Shopping malls Department stores	Commercial refrigeration and AC
	Hotels & Convention Centers	Hotels Convention centers	Commercial refrigeration and AC
	Restaurants & Food Chains	Restaurants Food chains	Refrigeration and AC
	Banks and Convention Centers	Convention centers, banks	Commercial AC
	Hospitals and Clinics	Hospitals and Clinics	Refrigeration and AC
<b>Refrigerated transport</b>	Food cold chains and other transport refrigerated and AC	Refrigerated transport	Refrigeration
		Frozen transport	
		Commercial vessel refrigeration	
		Touristic vessel refrigeration and AC	
		others	



Servicing Sectors	Subsector	Subsector/ Areas for Proxy Data	Application
Industrial refrigeration	Industrial Processes	Ice cream factories	Industrial refrigeration and chillers
		Ice Factories	
		Dairy Industry	
		Others	
Foams			Foams
Fire extinguishers			Fire extinguishers
Aerosols			Aerosols
Solvents			Solvents

## 6. Deadline

The consultancy ought to be carried out **within 4-month period**, including product submission.

The start date shall be the day following the signing of the contract. Deliveries before the stated deadlines do not entail additional compensation, but they will be assessed favorably.

## 7. Form of Payment

Payments will be made within 15 working days after the products have been received satisfactorily (not simply receiving them), after the electronic bills have been received, and according to the schedule and percentages established herein. Conformity will be stated by UNDP in coordination with the General Directorate of Industry Environmental Affairs of PRODUCE.

Should there be any observations on the submitted products, the payment term will begin when the consultant has resolved the observations.

The consultant shall keep strict confidentiality of all the information he/she may have had access to in the framework of the contract, except for public information.

## 8. Profile

The consultant may not have any conflict of interest with the activities included in the consultancy.

According to UNDP policy, individuals whose father, mother, son, daughter, brother or sister is an employee of UNDP or any United Nations agency in Trinidad and Tobago, under any contract type, may not participate, and the restriction may extend to any other relative.

### **ADDITIONAL REQUIREMENTS FOR THE RECOMMENDED CONTRACTOR**

The recommended Individual contractor below age 65 is required to submit a statement of good health and a copy of his/her medical insurance prior to commencement of services in any offices or premises of UNDP, or before engaging in any travel required by UNDP or connected with the performance of the contract. Medical examination is not required.



The recommended Individual contractor aged 65 and older is required to submit a statement of good health signed by a recognized physician and a copy of his/her medical insurance prior to commencement of services in any offices or premises of UNDP, or before engaging in any travel required by UNDP, or connected with the performance of the contract. The medical examination shall be paid by the consultant.

#### **Academic Background:**

- Minimum BSc. degree in economics, engineering, environmental sciences and/or related fields.
- Training (desirable) in:
  - Environmental topics such as environmental regulations, green certification, Montreal Protocol and related topics.
  - Inventory Management
  - Skills excel, database analysis or statistical software such as STATA or similar.

#### **Professional Experience:**

- At least 4 years' experience in the public or private sectors.
- At least 3 years' experience in data analytics or experience in creating inventories
- Experience in project management.
- Experience in economic and market studies in the manufacturing and trade sectors as well as impact and cost-benefit assessments.
- Experience in collecting primary information through surveys, interviews and focus groups.

### **9. Evaluation Criteria**

Method: Highest total score of weighted desk review and financial criteria: The price proposals of all consultants, who have attained a minimum 70% score at the Desk Review, will be compared. UNDP will award a contract to the individual who receives the highest score out of a predetermined weighted, Desk Review and Financial criteria as follows: 70% Desk Review criteria, 30% Financial criteria.

**Table 1**

Desk Review Criteria		Maximum points*
1	Relevance of Education/ Degree	25
2	Years of Relevant Experience	30
3	Adequacy of Competencies for the Assignment	50
4	Knowledge of the RAC Sector	25

5	Special Skills/Training	20
	<b>Total</b>	<b>150</b>

Once the candidates have attained a score of at least 70% on the desk review, based on the requirements in the Terms of Reference, only then, their financial proposals to be evaluated.

*The final evaluation process is based on a 70:30 weighting, with 30 points being allocated to the financial component.*

The following formula (cumulative analysis) is used to determine the financial scoring:  $p = y (\mu/z)$ ,

Where:

p = points for the financial proposal being evaluated

y = maximum number of points for the financial proposal

$\mu$  = price of the lowest priced proposal

z = price of the proposal being evaluated