

Terms of Reference for Local Consultancy

Services/Work Description: Local consultancy to conduct technical field assessments, refrigerant and energy-use baseline studies, stakeholder consultations, and provide technical inputs for the preparation of the full pilot project proposal for Saint Vincent and the Grenadines (SVG), under Decision 91/65.

Project/Programme Title: “Preparation for a Pilot Project for the Commercial Sector Cold Rooms, with Potential Replication in the Public Sector: Hotels and Fisheries Complexes in Saint Vincent and the Grenadines.”

Consultancy Title: National Consultant – Commercial Refrigeration & Energy Efficiency

Duty Station: Saint Vincent and the Grenadines (with field travel to hotels, fisheries complexes, and other identified facilities)

Duration: 30 working days

Expected start date: December 1st. 2026

NOTE: Hiring offices are encouraged to ensure that gender equality principles are systematically integrated into the Terms of Reference (TORs), with a view to mainstream gender considerations across all activities, ensuring alignment with corporate gender strategies and frameworks.

1. BACKGROUND

In 2024, SVG consumed 20.58 MT of HFCs, of which 3.92 MT corresponded to R-404A. Despite being less than 20% of total volume, R-404A represents 33.4% of the country’s climate impact due to its GWP of 3,921.6.

Cold rooms in hotels, fisheries complexes, supermarkets, and food-service establishments are among the highest energy consumers in SVG’s refrigeration sector. Many operate with aging R-404A systems, high leakage rates, deteriorated insulation, and limited energy-efficiency optimization.

SVG’s electricity matrix is 95% dependent on imported petroleum products, resulting in some of the highest electricity tariffs in the Caribbean. This creates a strong incentive for energy-efficiency interventions and integration of solar PV systems.

The PRP aims to prepare a full pilot project demonstrating high-efficiency, low-GWP cooling systems (CO₂, R-290, ammonia) with potential integration of solar PV, focusing initially on the hospitality sector and fisheries complexes.

2. SCOPE OF WORK, RESPONSIBILITIES AND DESCRIPTION OF THE PROPOSED WORK

Under the supervision of UNDP and the International Consultant, the National Consultant will:

Baseline Technical Report - deliverable 1:

1. Project Inception and Coordination

- Participate in the formal kick-off with the National Ozone Unit (NOU).
- Confirm institutional partners (hotels, fisheries complexes, supermarkets).
- Support development of the fieldwork schedule and logistics.

2. Collection of Background Information

- Compile national policies, energy tariffs, and regulatory frameworks.
- Gather existing inventories, maintenance logs, and equipment lists from targeted facilities.

- Identify previous donor interventions related to refrigeration or energy efficiency.

3. Conduct Field Assessments and Technical Data Gathering

Conduct site visits to selected hotels and fisheries complexes to:

- Document cold-room equipment, refrigerant type, charge size, age, and operational status.
- Assess insulation condition, piping, compressors, evaporators, and control systems.
- Collect electricity bills and estimate cold-room energy consumption.
- Identify operational patterns affecting cooling loads.
- Evaluate safety and compliance issues related to current refrigerants.
- Assess readiness for transition to natural refrigerants and solar PV integration.

Stakeholder Consultation report - deliverable 2:

4. Facilitate Stakeholder Consultations and Needs Assessment

- Conduct interviews with facility managers, technicians, and procurement officers.
- Identify operational challenges and capacity gaps.
- Validate preliminary findings with each institution.
- Conduct a **gender-responsive needs assessment** of roles and impacts of women within poultry facilities.

Full Project Document (Pilot Proposal) – deliverable 3:

5. Technical Options Analysis and Preliminary System Design

- Evaluate feasible refrigerant alternatives (CO₂, R-290, ammonia).
- Support preliminary sizing of replacement systems based on measured loads.
- Identify energy-efficiency opportunities (insulation upgrades, VSDs, advanced controls).
- Assess infrastructure constraints for solar PV integration.
- Provide preliminary cost ranges for equipment and installation.

6. Contribution to Full Project Concept

- Provide all local data required for drafting the full pilot project document.
- Support estimation of energy savings and emission reductions.
- Contribute to the intervention logic, justification, and implementation plan.
- Validate assumptions and local cost structures.

7. Support During MLF Secretariat Review

- Provide clarifications and additional data requested by the Secretariat between Feb. 15 and Mar. 15, 2027.

3. Expected Outputs and deliverables

Deliverable	Deliverable Date	Percentage of Payment
1. A Baseline Technical Report containing: • Refrigerant inventory • Cold-room technical assessment • Energy consumption baseline • Safety and compliance review	Jan 10 th 2027	30%
2. A Stakeholder Consultation Report, containing:	Jan 31 st 2027	40%

• Summary of interviews • Needs assessment • Capacity gaps • Gender-responsive needs assessment • Validation of preliminary findings		
3. Full Project Document, containing: • Technical options analysis • Preliminary engineering design • Costing and financial structure • Expected energy and emissions reductions • Implementation plan • Monitoring and verification approach	Feb 15 th 2027	30%

4. Institutional arrangements/reporting lines

The consultant will report directly to the **National Ozone Office**, in close coordination with the **UNDP regional office** and the **International Consultants**.

5. Experience and qualifications

Academic Qualifications

- University degree in Mechanical/Electrical Engineering, Energy Systems, Environmental Science, or related field.

Professional Experience

- Minimum **5 years** of experience in commercial refrigeration, cold-room systems, or energy efficiency.
- Demonstrated experience conducting technical inventories and field assessments.
- Familiarity with SVG's commercial refrigeration sector (hotels, fisheries, supermarkets and cold storage of perishables).

Competencies

- Strong technical proficiency in RAC systems.
- Ability to conduct systematic field surveys and data collection.
- Excellent interpersonal and communication skills.
- Strong problem-solving and organizational abilities.

Language

- Excellent communication and report-writing skills in English.

6. Payment Modality

Payment to the individual contractor will be made based on the deliverables accepted and upon certification of satisfactory completion by UNDP management and NOU Saint Vincent and the Grenadines.