

ANNEX I – TERMS OF REFERENCE

National or International consultant: National Consultant

Description of the assignment (Title of consultancy): Upgrade/Amendment of the Refrigeration and Air Conditioning vocational/technical education curriculum (BT courses) in Lebanon

Project Title: Kigali Cooling Efficiency Programme (KCEP- Windows 1) – Project ID 00110507

Period of assignment/services: A total of 45 days spread over a period of 3 months from the date of contract signature.

Is this a LTA (yes/no): No

1. Background / Project Description

The Montreal Protocol on Substances that Deplete the Ozone Layer has the objective to phase-out the ozone depleting substances (ODSs) that are released to the atmosphere. Contrary to the Multilateral Environmental Agreements (MEAs) that pursue reductions in the emissions of greenhouse gases (GHG), the Montreal Protocol focuses on the elimination of the sources of these ODS: their production and consumption (imports).

Under the Montreal Protocol, the A-5 countries are eligible to receive financial support to comply with the phase-out ODS consumption by deploying a series of technical assistance and industrial conversion projects, at country level, so producing and consuming sectors can abandon the use of these substances.

Furthermore, in order to further protect the climate and the ozone layer, in October of 2016, during the 28th Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer held in Rwanda, more than 170 countries agreed to amend the Protocol through what was called the “Kigali Amendment”.

The Kigali Agreement establishes specific targets and timetables to phase-down the production and consumption of HFCs, and carries an agreement by developed countries to help finance the transition of developing countries to climate-friendly substances, through a global commitment that will avoid more than 80 billion metric tons of carbon dioxide equivalent emissions by 2050.

In addition, countries also agreed to begin examining opportunities to enhance the energy efficiency of the appliances and equipment to achieve additional GHGs mitigation, while also delivering additional sustainable development benefits such as better air quality, improved public health, improved energy access and energy security. It is important to note that the efforts made by countries to phase-down the HFCs can be part of their Nationally Determined Contributions (NDCs), under the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC).

Under this scenario, 17 foundations and individuals have pledged a contribution of USD \$51 million to support developing nations in the transition to more energy-efficient cooling solutions through a separate funding mechanism called the Kigali Cooling Efficiency Programme (K-CEP), with the goal to “significantly increase and accelerate the climate and development benefits of the Montreal Protocol refrigerant transition by maximizing a simultaneous improvement in the energy efficiency of cooling.”

Lebanon, through the United Nations Development Programme (UNDP), has received financial assistance from the K-CEP in the form of three technical assistance projects to improve energy efficiency capacities, in the cooling sector, in the country and to achieve the K-CEP goals under its windows 1 and 2.

2. Scope of work, responsibilities and description of the proposed analytical work

The purpose of this consultancy is to provide an upgrade of the refrigeration and air-conditioning vocational/technical education curriculum for the BT courses in Lebanon, under the direct supervision of the UNDP National Ozone Unit Project Manager and in coordination with the Ministry of Education and Higher Education (MEHE)/ Directorate General of Technical and Vocational Education (DGTVE) and UNICEF (TVET programme).

The Consultant should perform a comprehensive assessment of the current BT courses offered related to refrigeration and air conditioning curriculum at the Directorate General of technical and vocational education at the Ministry of Education and higher education, and propose curriculum upgrades to include the alternative refrigerants to the ODSs as well to include energy efficiency in the teaching process under the guidelines of the Montreal Protocol and its amendments.

3. Expected Outputs and deliverables

The consultancy will be structured into 3 main tasks:

Task 1: General Overview and assessment of RAC teaching in Technical and Vocational Education and Training (TVET) programs

- Revision of the current curriculum and teaching system of the BT levels in public vocational schools, related to the refrigeration and air-conditioning courses;
- Provision of a comparative teaching matrix at all public and private vocational schools in Lebanon;
- Presentation of the different BT curriculums followed, including details on teaching methods;
- Assessment of BT teaching material, learning methods, and courses structure of RAC courses being taught as part of TVET programs;
- Identification of gaps and areas needing further attention related to RAC courses.

Task 2: Proposed curriculum upgrade for RAC courses (BT) offered

- Proposal of upgrades to be applied to the BT teaching curriculum RAC courses;
- Outlining a throughout BT curriculum including objectives, learning outcomes, structure, and teaching methodology;
- Provision of assisting teaching material including PowerPoint presentations and teaching manual.

Task 3: Integration of upgraded RAC courses

- Proposing a clear plan to integrate the BT courses upgrade to TVET curriculum;
- Setting up an integration strategy to promote these upgrades into all public and private vocational schools;
- Delivering a Training of Trainers session on the upgraded curriculum and energy efficiency in RAC technologies.

All deliverables should be handed out as soft copy (word format) and a PDF format for web publishing. Copies of high resolution maps and graphics (if any) should also be handed out to the project management team.

During the fulfilment of the assignment, the consultant shall ensure regular communication with the project team, and will ensure a timely delivery of the expected outputs and will regularly inform the project team of the progress as well as any obstacles that might occur.

The following deliverables are requested:

Deliverables/ Outputs	Estimated Duration to Complete	Target Due Dates	Review and Approvals Required
Deliverable 1 General Overview and assessment of RAC teaching in Technical and Vocational Education and Training (TVET) programs	10 working days	After two weeks from Contract signature	NOU Project Manager
Deliverable 2 Curriculum upgrade for RAC courses (BT) offered	35 working days	After three months from Contract signature	NOU Project Manager

4. Institutional arrangements

The Consultant shall report to the NOU project manager on the tasks mentioned above; however; coordination meetings with UNDP and MoE shall be called for as needed. The Consultant will perform the needed using his/her own property and technology and will hold direct responsibility for the quality of delivered outputs.

5. Methodology

The methodology of work shall consist of desk review of the current curriculum and teaching system of the BT levels in public vocational schools related to the refrigeration and air-conditioning courses at DGVTE, prepare proposal of upgrades to be applied to the BT teaching curriculum RAC courses, learning structure, and teaching methodology and to propose a clear plan to integrate the BT courses upgrade to TVET curriculum under implementation by UNICEF, and to set up an integration strategy to promote these upgrades into all public and private vocational schools in coordination with the DGVTE, with the guidance of the NOU project management team. The report and outputs shall be circulated for comments and the final report should incorporate any received recommendations from the end-users.

6. Duration of work

The assignment will be for 45 working days spread out over a 3-month period from contract signature (estimated in April 2021). The workload might be distributed unequally over time with more and less intense periods of work.

7. Duty station

The assignment requires deskwork, meetings, as well as coordination between the different related entities, mainly located in Beirut.

8. Requirements for experience and qualifications

I. Academic Qualifications:

Bachelor degree in Chemical, Mechanical, Electrical, Industrial Engineering or other related fields.

II. Years of experience:

A minimum of 7 years of experience in working in the refrigeration and air-conditioning sector, Energy Efficiency in cooling.

III. Technical experience:

- Experience in working in the refrigeration and air-conditioning sector and Energy Efficiency in cooling;
- Proven experience in the field of teaching education for vocational education and capacity building;
- Proven experience in the field of RAC teaching or RAC development of RAC curriculum;
- Proven familiarity with knowledge of the Montreal Protocol;
- Experience with UN or international donor project(s).

IV. Competencies:

- Advanced writing and editing skills in French and English.
- Computer literacy for Microsoft Office Package or equivalent.
- Excellent communication and consultation skills.
- Proven analytical skills and capacity in producing quality reports and documents.

9. Scope of Price Proposal and Schedule of Payments

Payment will be made against each deliverable according to the following schedule:

Payment	Deliverables	Potential Dates
25%	Deliverable-1	Two weeks from Contract signature
75%	Deliverable-2	Three months from Contract signature

Payments will be issued upon satisfactory completion and approval of the required deliverables and submission of the certificate of payment.