
TERM OF REFERENCE (ToR) FOR THE RECRUITMENT OF INDIVIDUAL CONTRACTOR (IC)

GENERAL INFORMATION

Services/Work Description:	Technical studies on the energy consumption baseline for existing AC appliances and opportunities for a rebate scheme implementation.
Project/Program Title:	Efficient Air-Conditioning Programme in Ghana (Under Kigali Cooling Efficiency Programme (KCEP))
Post Title:	National Consultant: Refrigeration and Air Condition Efficiency Specialist
Consultant Level:	Principal Consultant
Duty Station:	Home-based with some days of travel for data collection
Expected Places of Travel:	Field for data collection in the northern, southern and middle belts.
Duration:	80 working days from 5 December to 30 May 2019.
Expected Start Date:	5 December 2018

I. BACKGROUND / PROJECT DESCRIPTION

Ghana has ratified the Montreal Protocol and all its amendments, except for the Kigali Amendment that is currently in the process of being ratified and has played a very constructive role in the negotiations that led to the approval of the Kigali Amendment.

Ghana is also strongly committed to cooling energy efficiency, and it is a founder member of the Climate and Clean Air Coalition (CCAC), but in common with Article 5 countries Ghana faces significant barriers to the implementation of energy efficiency projects for the transformation of the cooling systems market, such as absence of minimum energy performance standards and labelling.

Against this background, UNDP in partnership with the Environmental Protection Agency and the Energy Commission have started the implementation of a project that is aligned with the Kigali Cooling Efficiency Programme Window 2, "Policies, Standards and Programs", is expected to support the Government of Ghana to achieve the Outcome 1 on Policy, Standards and Programs and the Outcome 2: "High-efficiency technology increases its market penetration in target markets" of the K-CEP Strategic Plan.

The project aims to address the following barriers:

- (a) Lack of financial incentives to promote a large-scale rebate/replacement/early retirement programme for inefficient AC equipment;
- (b) Limited awareness of energy efficiency in the cooling sector.

The project will do so by adopting the model of the new EU Eco-design Directive which prescribes mandatory minimum energy performance levels and labelling levels to inform/define policies and standards to be applied in the AC sector in order to boost a wider “swap-out” programme.

This swap out/rebate scheme is envisaged to be used as a catalyst to phase out non-energy efficient AC appliances on Ghanaian market and promote the sale and use of energy efficient AC appliances. In 2012, a similar exercise was undertaken by the Energy Commission to improve energy efficiency in the refrigeration sector. This scheme was largely successful and has created a market for energy efficient refrigerators in Ghana. It has also raised awareness among the Ghanaian populace on energy efficiency, its financial and environmental benefits, and the associated choices individuals can make on the market.

Building on that success, this project is seeking to undertake initial technical studies to understand the feasibility and requirements for a similar rebate scheme for the AC sector. This is with the objective of facilitating a market transformation to influence the energy efficiency standards in the AC sector in Ghana.

II. SCOPE OF WORK AND EXPECTED DELIVERABLES

This consultancy shall undertake studies to determine the energy consumption baseline of existing AC appliances in Ghana. It shall also assess the feasibility of introducing a rebate scheme for the AC sector and make recommendations on implementation modality and potential co-funding sources. These tasks will be undertaken in close coordination with responsible project officers in UNDP, EPA National Ozone Unit (NOU) and the Energy Commission of Ghana.

Roles and Responsibilities

Activity I: Determine the energy consumption baseline for the AC sector in Ghana

- Collect information on energy consumption of Air Conditioning appliances in Ghana both in use and on the market (suggested sample: 100 appliances in the northern, middle and southern belts of Ghana)
- Assess international product definitions, test protocols, rating schemes, performance level definitions, certification procedures etc.
- Conduct technical analyses and identify data sources for use as a baseline in development of S&L policy for the selected product categories.
- Collect additional market data and baseline usage and performance data for the selected product category, as necessary to inform a decision on efficiency performance levels, for instance through field surveys (e.g. end-use metering studies) and laboratory testing.

Activity II: Assess the feasibility of a rebate scheme for the AC sector and provide recommendations on implementation modality and potential co-funding source.

- Assess the institutional, technical and financial requirements for the rebate scheme.
- If a rebate is feasible, make recommendations on the approach and the implementation structure to be employed.
- Identify potential co-funding sources that to future implementation of the rebate scheme.
- Estimate total CO2 equivalent impact reduction to be achieved through the rebate scheme.

Activity III: Capacity building for enforcement of energy efficiency in AC sector.

- Develop a manual to train officers in identified institutions (e.g. Customs, retailers, technicians) on energy efficiency in the AC sector; this should be based on information/manuals already available globally and only be adapted to the Ghanaian sector.
- Develop a training plan.

Activity IV: Presentation of findings to national stakeholders

- Make a presentation of findings to national stakeholders for feedback.
- Prepare a meeting report of the stakeholders' meeting to review the Technical studies (Activity I, II, and III) report submitted.

Deliverables:

No.	Deliverables / Outputs	Estimated deadline	Review and Approvals Required
1	An inception report, including inter alia a detailed methodology for the development of the baseline	20 December 2018	UNDP/EPA NOU/Energy Commission
2	A draft report on the following: <ul style="list-style-type: none">• Energy consumption baseline of existing AC appliances (Activity I);• The rebate scheme assessment (Activity II);• Capacity building for the enforcement of energy efficiency in AC sector (Activity III)	15 March 2019	UNDP/EPA NOU/Energy Commission
3	Final report on the stakeholder review	15 April 2019	UNDP/EPA NOU/Energy Commission
4	Final report on the following: <ul style="list-style-type: none">• Energy consumption baseline of existing AC appliances (Activity I);• The rebate scheme assessment (Activity II);• Capacity building for enforcement of energy efficiency in AC sector (Activity III).	30 May 2019	UNDP/EPA NOU/Energy Commission

III. INSTITUTIONAL ARRANGEMENT / REPORTING RELATIONSHIPS

- Duty station: Home based with estimated 15 days of travel for data collection
- The consultant will report to the UNDP Ghana's Programme Specialist on Sustainable Development; the Head of Energy Commission's Renewable Energy, Energy Efficiency and Climate Change Unit; and the Head of EPA's National Ozone Unit (NOU).
- Payments will be made upon satisfactory delivery of outputs, and acceptance and confirmation from UNDP and EPA NOU on outputs delivered.

IV. LOGISTICS AND ADMINISTRATIVE SUPPORT TO PROSPECTIVE IC

- The Consultant will be given access to relevant information necessary for execution of the tasks under this assignment;
- The Consultant will be responsible for providing her/his own working station (i.e. laptop, internet, phone, scanner/printer, etc.) and must have access to reliable internet connection;

V. DURATION OF THE WORK

- The Principal consultant is expected to work 80 working days from 5 December 2018 to 30 May 2019. The Junior Consultant would not be expected to work for more than 30 working days and to travel to the field.

VI. REQUIRED QUALIFICATIONS OF THE IC

A. Principal Consultant (70% of Technical Evaluation)

Education:

- Master's degree or higher in a relevant field, such as Mechanical Engineering with specialization in Cooling systems and environmental management.

Experience:

- Minimum 7 years of demonstrable experience in the technical area of mechanical engineering in cooling systems or related fields
- Previous experience of working in the energy efficiency of refrigeration and air conditioning systems thematic area will be an asset
- Demonstrated knowledge of institutional, regulatory and legal framework related to the cooling sector;
- Previous experience related to conducting research (e.g. baselines etc.) in refrigeration and air conditioning systems
- Previous proven experience in supporting the preparation, implementation of evaluation of Montreal Protocol and environment related UNDP projects is an asset

Language:

- Fluency in English is required

Functional Competencies:

- Excellent oral and written communication skills, with analytic capacity and demonstrated ability to synthesize complex information in high quality papers/reports and in effective presentations to different audiences;
- Skills in facilitating meetings effectively and efficiently;
- Ability to develop and maintain partnerships/relationships, including with clients, focusing on results for the client/partner and responding positively to feedback.
- Excellent oral and written communication skills, with analytic capacity and demonstrated ability to synthesize complex information in high quality papers/reports and in effective presentations to different audiences;
- Skills in facilitating meetings effectively and efficiently;
- Ability to develop and maintain partnerships/relationships, including with clients, focusing on results for the client/partner and responding positively to feedback
- Excellent analytical and organizational skills;
- Exercise the highest level of responsibility and be able to handle confidential and politically sensitive issues in a responsible and mature manner.

Core Competencies:

- Demonstrates integrity by modeling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Treats all people fairly without favoritism;
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment

B. Junior Supporting Consultant (30% of Technical Evaluation)

Education:

- Bachelor's degree or higher in Economics, Finance or any relevant field.

Experience:

- Minimum 5 years of demonstrable experience in conducting financial research and analysis
- Previous experience of working in environmental management including in the refrigeration sector

Language:

- Fluency in English is required

Functional Competencies:

- Excellent oral and written communication skills, with analytic capacity and demonstrated ability to synthesize complex information in high quality papers/reports and in effective presentations to different audiences;
- Skills in facilitating meetings effectively and efficiently;
- Ability to develop and maintain partnerships/relationships, including with clients, focusing on results for the client/partner and responding positively to feedback.
- Excellent oral and written communication skills, with analytic capacity and demonstrated ability to synthesize complex information in high quality papers/reports and in effective presentations to different audiences;
- Skills in facilitating meetings effectively and efficiently;
- Ability to develop and maintain partnerships/relationships, including with clients, focusing on results for the client/partner and responding positively to feedback
- Excellent analytical and organizational skills;
- Exercise the highest level of responsibility and be able to handle confidential and politically sensitive issues in a responsible and mature manner.

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- Treats all people fairly without favoritism;
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment

VIII. EVALUATION CRITERIA

The individual consultant will be evaluated based on a cumulative analysis taking into consideration the combination of the qualifications, experience, technical and financial proposal.

The award of the contract shall be made to the individual consultant after the offer has been evaluated and determined as:

- Responsive/compliant/acceptable; and
- Having received a high score out of a pre-determined set of weighted technical (desk reviews based on CV) and financial criteria specific to the solicitation.
- Technical Criteria - 70% of total evaluation; Financial Criteria - 30% of total evaluation

- Out of the 70% to be allocated in the overall technical evaluation, 70% shall allocated to the Principal Consultant and 30% to the Junior Supporting Consultant.

Technical criteria

A. Principal Consultant (70%)

Education: 10%

Experience: 45%

- Minimum 7 years of demonstrable experience in the technical area of mechanical engineering in cooling systems or related fields: 12%
- Previous experience of working in the energy efficiency of refrigeration and air conditioning systems thematic area will be an asset: 12%
- Demonstrated knowledge of institutional, regulatory and legal framework related to the cooling sector: 10%
- Previous experience related to conducting research (e.g. baselines etc.) in refrigeration and air conditioning systems: 6%
- Previous proven experience in supporting the preparation, implementation of evaluation of Montreal Protocol and environment related UNDP projects is an asset: 5%

Methodology: 15%

B. Junior Supporting Consultant (30%)

Education: 10%

Experience: 60%

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- Minimum 5 years of demonstrable experience in conducting financial research and analysis: 40%
- Previous experience of working in environmental management including in the refrigeration sector: 20%

Criteria	Weight	Max. Point
Technical Competence (based on CV, Proposal and interview (if required))	70%	70
Principal Consultant		70
Junior Supporting Consultant (30%)		30
Financial (Lower Offer/ Offer*100)	30%	30
Total Score	Technical Score * 70% + Financial Score * 30%	

IX. PAYMENT MILESTONES AND AUTHORITY

The consultant shall receive his/her lump sum service fees upon certification of the completed tasks satisfactorily, as per the following payment schedules:

Installment of Payment/ Period	Deliverables or Documents to be Delivered	Approval should be obtained	Percentage of Payment
1 st Installment	Submission of an accepted inception report	Yes	10%
2 nd Installment	Submission of an accepted draft report on the following: <ul style="list-style-type: none"> • Energy consumption baseline of existing AC appliances (Activity I); • The rebate scheme assessment (Activity II); • Capacity building for the enforcement of energy efficiency in AC sector (Activity III) 	Yes	30%
3 rd Installment	Submission of an accepted final report on the stakeholder review	Yes	20%
4 th Installment	Submission of an accepted final report on the following: <ul style="list-style-type: none"> • Energy consumption baseline of existing AC appliances (Activity I); • The rebate scheme assessment (Activity II); • Capacity building for the enforcement of energy efficiency in AC sector (Activity III) 	Yes	40%

X. CONFIDENTIALITY AND PROPRIETARY INTERESTS

The Individual Consultant shall not either during the term or after termination of the assignment, disclose any proprietary or confidential information related to the consultancy service without prior written consent. Proprietary interests on all materials and documents prepared by the consultants under the assignment shall become and remain properties of UNDP.

This TOR is approved by:

Name: Paolo Dalla Stella

Designation: Programme Specialist (Sustainable Development)

Signature: _____

Date Signed: _____