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TERMS OF REFERENCE (TOR)

National Certification Scheme for Energy Auditors in Pakistan

CTCN request ref: 2017000005

1 BACKGROUND INFORMATION

The Climate Technology Centre and Network (CTCN) is the operational arm of the United Nations Framework Convention on Climate Change (UNFCCC) Technology Mechanism and co-hosted by the United Nations Environment (UNEP) in collaboration with the United Nations Industrial Development Organization (UNIDO) and supported by 11 partner institutions with expertise in climate technologies. The mission of the CTCN is to promote accelerated development and transfer of climate technologies at the request of developing countries for energy-efficient, low-carbon and climate-resilient development.

These requests for Technical Assistance (TA) are being submitted to the CTCN by the National Designated Entity (NDE) of the respective country. Eligible requests are processed by a group of selected experts who develop a Response Plan. The scope of services under these Terms of Reference shall be executed based on a restricted solicitation process where only accepted Members of the CTCN Network, are eligible to submit proposals.

In case you are not a CTCN network member yet, you may bid for implementation of the technical assistance, subject to the condition that you submit your completed application for CTCN Network membership before the last date of the bid closure and the same is acknowledged by the CTCN. Furthermore, the contract award – should your bid be selected – is conditional to your network membership application having been successfully approved by the Director of CTCN. The requirement to join the CTCN network is only relevant to the main bidder and no sub-contractors.

The maximum estimated budget for this contract is USD 106,400.

2 PROJECT CONTEXT

There is vast potential of energy conservation and efficient use of energy in Pakistan supported by the National Energy Efficiency and Conservation Act 2016. This legislation has provided a legal basis to enforce necessary measures for efficient use and conservation of energy in the country in all sectors of the economy, in coordination with the relevant Provincial Departments.

As per the act, the National Energy Efficiency and Conservation Agency (NEECA) is mandated to carry out energy audits either by itself or by directing any person to conduct energy audit by any certified or designated energy auditor for of the designated consumers. In this context, NEECA, as the CTCN request proponent, had requested CTCN support for developing the national certification scheme for energy auditors and managers including the preparation of draft rules and regulations required for making the certification scheme effective.



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Once the proposed CTCN technical assistance is provided and the national certification scheme is developed, NEECA will carry out the certification examination. Subsequently, the selected energy auditor and managers will be certified and designated by NEECA and then these designated auditors

The implementation of the certification scheme will contribute in overall reduction in CO₂ emission from highly energy consuming sectors and The adoption of the national certification scheme will potentially lead to market transformation in the energy efficiency and conservation sector.

The technical assistance is also aligned well with the NDC, Pakistan Vision document 2025 and other relevant national documents.

3 AIM OF THE CONTRACT

The overall objective of this technical assistance is to support the Government of Pakistan, through the NEECA, to implement a sustainable system for training and certifying energy auditors as a contribution to the implementation of the National Energy Efficiency and Conservation Act, 2016. The focus of the certification scheme is on energy intensive industries and buildings which are to be defined as a first activity within the assistance.

Specific activities to be covered under this contract include:

1. Notification of designated consumers based on the identification, definition and engagement of energy user classes for industries;
2. Guidelines on the eligibility and accreditation process;
3. Revision and finalization of draft guidelines, syllabus, and course modules including the development of model question banks for examination processes;
4. Organization and delivery of a two weeks training of Trainer (ToT) programme; and
5. Review and finalization of draft regulations to support implementation roles as defined in National Certification Scheme.

The activities under this technical assistance will facilitate the creation of a **robust and self-sustaining system to for implementing the provisions of the National Energy Efficiency and Conservation Act 2016 effectively.** It will also develop national capacities and will raise the professional standards of those engaged in energy auditing and improve the practice of energy auditors.

Within the framework of this Contract, which shall be concluded within 12 months, the Contractor will produce the following five main outputs:

Output 1: List of designated consumers to be notified

Output 2: Guidelines for accreditation and the appointment of evaluators and professionals

Output 3: Syllabus, course material, guidebooks, and question banks for the accreditation

Output 4: Detailed report on Training of Trainer, containing the training materials, agenda, detailed presentations, list of resource persons, list of participants etc.



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Output 5: Draft regulations on the appointment of energy managers, the frequency and manner of energy audits and the accreditation and review of energy audit firms

To get a better understanding of the objectives of the request for technical assistance, the work elaborated beforehand by CTCN, as well as the necessary collaboration with the request proponent and National Designated Entity, it is recommended that the bidder refer to the complete Response Plan **2017000005** attached to this tender although it should be noted that the tender differs slightly from the signed response plan as some of the original activities have already been completed in draft form. As such, the bidder should also review the draft training and certification material provided.

The tender includes the following Outputs, Activities and Deliverables:

Output 1: Development of implementation planning and communication documents.

The contractor must undertake the following activities at the beginning and at the end of the CTCN technical assistance.

Activity 1.1: Prepare a detailed work plan of all activities, deliveries, outputs, deadlines and responsible persons/organizations and detailed budget to implement the Response Plan. The detailed work plan and budget must be based directly on this Response Plan;

Activity 1.2: Based on the work plan, prepare a monitoring and evaluation plan with specific, measurable, achievable, relevant, and time-bound indicators used to monitor and evaluate the timeliness and appropriateness of the implementation. The monitoring and evaluation plan should apply selected indicators from the Closure and Data Collection report template and enable the lead implementer to complete the CTCN Closure and Data collection report at the end of the assignment (please refer to item iv below and section 14 in the Response Plan);

Activity 1.3: Prepare two-page CTCN impact description formulated in the beginning of the technical assistance and update/revised once the technical assistance is fully delivered (a template will be provided);

Activity 1.4: Complete a closure and data collection report at the end of the technical assistance (a template will be provided).

Deliverables 1:	Delivery date
Deliverable 1.1: Detailed work plan	1 month after signing contract
Deliverable 1.2: Monitoring and evaluation plan	1 month after signing contract
Deliverable 1.3: CTCN impact description	1 month after signing contract



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Deliverable 1.4: Closure and data collection report	12 months after signing contract
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Output 2: Notification of Designated Consumers

Activity 2.1: Finalizing the methodology for defining the energy user class for industries - A methodology for defining the energy user classes for industries (based on secondary energy consumption data, economic data etc.) will be prepared by the implementer based on best practices adopted by other countries and the guidelines developed by UN Environment. The adapted methodology will be finalized in consultation with the request proponent (NEECA) and other relevant national stakeholders and the bid should include a small travel budget to facilitate consultations.

Activity 2.2: Preparation of questionnaire for survey and carry-out of actual survey - This activity will involve the preparation of a questionnaire (in English) for carrying out a survey in various energy users classes. Once the questionnaire is prepared by the request proponent and the energy user class is defined, the survey will be conducted by NEECA through the provincial governments. The Survey may be conducted through E-Filing online where the identified industries shall fill the questionnaire, enabling ease of collection, availability and analysis of data.

Activity 2.3: Analysis of data obtained through questionnaire survey - The data collected through the survey will be consolidated in soft copy (in English) by the request proponent and will be made available to the implementer for further analysis. The implementer along with the request proponent will analyze the data in terms of the energy consumption, economic data, etc. to identify the energy intensive industries and buildings who will form the target group for the training and certification process.

Activity 2.4: The designated consumers for each section of energy user class will be identified on account of their minimum annual energy consumption, their share in total energy use in Pakistan, their contribution to the national gross domestic product (GDP) etc.

Activity 2.5: Notification of designated consumers for each user class - Once the designated consumers are identified, the process will be followed by the implementer and request proponent to notify the designated consumers through an awareness raising and stakeholder engagement meeting. To support this, the bidder should budget for travel and subsistence costs for a meeting of 20 designated consumers and NEECA representatives.

Deliverables 2:	Delivery date
Deliverable 2.1: Methodology for defining the energy user class and questionnaire for carrying out the survey	2 months after signing contract
Deliverable 2.2: Consolidated surveyed data	4 months after signing contract
Deliverable 2.3: List of designated consumer to be notified	6 months after signing contract

Output 3: Guidelines for accreditation and the appointment of evaluators and professionals



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Activity 3.1: Guideline(s) for the accreditation of Energy Auditors and Managers – A draft of the guidelines for the accreditation of the energy auditors and managers has been prepared, including the roles and responsibilities, validity of the accreditation, rules and regulations etc. The guidelines also involve the fee structure, manner and frequency of accreditation for Energy Auditor and Energy Managers. The implementer must engage with stakeholders at the national and provincial level to finalize the guidelines based on local needs and circumstances.

Activity 3.2: Guideline(s) on eligibility criteria for the energy auditors and managers – A draft document containing the prerequisites to qualify for the energy auditor and manager certification process has been prepared including minimum education, work experience etc to take into account the possible diversity of education and practical experience an individual may require. The implementer must engage with stakeholders at the national and provincial level to finalize the guidelines based on local needs and circumstances.

Activity 3.3: Guideline(s) for appointment of evaluators and professionals for assessment of EA/EM examinations – Guidelines for the appointment of evaluators (such as their qualification, roles and responsibilities, remunerations, validity of appointment etc.) for assessment of Energy Auditor and Energy Manager Examination will be prepared by the request implementer.

Deliverables 3:	Delivery date
Deliverable 3.1: Report of the consultative meeting to agree on guidelines	3 months after signing contract
Deliverable 3.2: Guidelines for accreditation of Energy Auditors and Managers and eligibility criteria for the energy auditors and managers	4 months after signing contract
Deliverable 3.3: Guideline(s) for appointment of evaluators and professionals for assessment of EA/EM examinations	8 months after signing contract

Output 4: Syllabus, course material, guidebooks, and question banks for the accreditation

Activity 4.1: Design of syllabus for conduct of examinations - The request implementer will draft and finalize, with national and provincial stakeholders, the syllabus (for example: number of papers, topics and subtopics of each paper etc) for conducting the first examination. The implementer should use the material available through UN Environment as a starting point for the development of the required material which should be industry specific, covering the five industries identified in Output 2, and include water as an integral component of the training.

Activity 4.2: Design of course material, guide books, model question banks - The course material and the guidebooks will be designed by the request implementer as per the syllabus developed in activity 4.1.



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Besides it, the implementer will also develop the model question banks for the examinations as well as a mechanism for grading exams. The implementer should use the material available through UN Environment as a starting point for the development of the required material. The question bank should provide sufficient material for 3 examination processes over a 3 year period.

Deliverables 4:	Delivery date
Deliverable 4.1: Syllabus for conduct of examinations, course material, guide books, model question banks	10 months after signing contract

Output 5: Training of Relevant Professionals

Activity 5.1: Developing relevant training material based on the course material and guide books – The implementer will prepare a curriculum for a two week training of the trainer programme in order to ensure that there is sufficient national capacity to deliver the accreditation material. The training will focus on the content of the course as well as pedagogical approaches to delivering material and issuing the accreditation exams.

Activity 5.2 Conducting a Training of the Trainer (2 week programme) – Based on the nomination of participants by NEECA the implementer will deliver a two week on-site training programme and provide virtual consultations during the first iteration of the examination process. The costs of travel and daily subsistence for up to 20 participants should be included in the tender.

Deliverables 5:	Delivery date
Deliverable 5.1: Detailed report on Training of Trainer, containing the training materials, agenda, detailed presentations, list of resource persons, list of participants etc.	11 months after signing contract

Output 6: Draft Regulations to Support Implementation Roles as defined in National Certification Scheme

Activity 6.1: Development of draft regulations on appointment of Energy Managers by Designated Consumers – A draft regulation is already available and, as such, the implementer will be responsible for finalizing the regulation based on consultations with national and provincial stakeholders.

Activity 6.2: Development of draft regulations on frequency, manner, conduct and reporting of energy audits by Designated Consumers - A draft regulation is already available and, as such, the implementer will be responsible for finalizing the regulation based on consultations with national and provincial stakeholders.

Activity 6.3: Development of draft regulation on accreditation and review of Energy Audit firms - A draft regulation is already available and, as such, the implementer will be responsible for finalizing the regulation based on consultations with national and provincial stakeholders.



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Deliverables 6:	Delivery date
Deliverable 6.1: Draft regulations on appointment of Energy Managers by Designated Consumers	11 months after signing contract
Deliverable 6.2: Draft regulations on frequency, manner, conduct and reporting of energy audits by Designated Consumers	11 months after signing contract
Deliverable 6.3: Draft regulation on accreditation and review of Energy Audit firms	11 months after signing contract

4 GENERAL TIME SCHEDULE

The activities under this contract should follow the timeline presented for each deliverable and must be completed within a period of twelve (12) months from signing the contract.

5 EVALUATION CRITERIA AND PERSONNEL IN THE FIELD (PROFESSIONAL EXPERIENCE AND QUALIFICATIONS)

The bidder shall as a minimum present the following qualifications of the team. Please note the requirement to have national experts in the team. Additional qualifications and experts may be added to the proposal.

Experts required	Brief description of required profile
Energy efficiency international and national experts	<p>Experience (2 years) as a technical expert or implementer on energy audit processes.</p> <p>Knowledge and practical experiences in assessing energy use intensity and defining energy use classes.</p> <p>Excellent skills in policy and technical writing.</p> <p>Experience with multi-cultural teams.</p> <p>Excellent communications skills.</p> <p>Excellent desk research and analytical skills.</p> <p>Experience in capacity building and trainings on energy auditor accreditation processes.</p> <p>Fluent English.</p>
Testing and certification international and	Experience (2 years) in technical assessments and certification standards for energy audits in the region



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national experts	<p>Excellent skills in policy and technical writing.</p> <p>Experience with multi-cultural teams.</p> <p>Excellent communications skills.</p> <p>Excellent desk research and analytical skills</p> <p>Experience in capacity building and trainings</p> <p>Fluent English.</p>
Gender international and national experts	Experience (1 year) in gender assessments and recommendations in the region

The CVs of the respective experts assigned to this project by the Contractor must be provided.

6 LANGUAGE REQUIREMENTS

The working language for the purposes of this project is English, thus an excellent command of English is required of the proposed personnel. The final deliverables must be submitted in English. The technical and financial proposal under this tender must also be submitted in English.

All delivered documents must be of such a quality that no further editing will be required.

7 DELIVERABLES SCHEDULE

The table below details the indicative schedule for this assistance.

Deliverables	Delivery date
Deliverable 1.1: Detailed work plan	1 month after signing contract
Deliverable 1.2: Monitoring and evaluation plan	1 month after signing contract
Deliverable 1.3: CTCN impact description	1 month after signing contract
Deliverable 1.4: Closure and data collection report	12 months after signing contract
Deliverable 2.1: Methodology for defining the energy user class and questionnaire for carrying out the survey	2 months after signing contract
Deliverable 2.2: Consolidated surveyed data	4 months after signing contract
Deliverable 2.3: List of designated consumer to be notified	6 months after signing contract
Deliverable 3.1: Guidelines for accreditation of Energy Auditors and Managers and eligibility criteria for the energy auditors and managers	4 months after signing contract
Deliverable 3.2: Guideline(s) for appointment of evaluators	8 months after signing contract



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and professionals for assessment of EA/EM examinations	
Deliverable 4.1: Syllabus for conduct of examinations, course material, guide books, model question banks	10 months after signing contract
Deliverable 5.1: Detailed report on Training of Trainer, containing the training materials, agenda, detailed presentations, list of resource persons, list of participants etc.	11 months after signing contract
Deliverable 6.1: Draft regulations on appointment of Energy Managers by Designated Consumers	11 months after signing contract
Deliverable 6.2: Draft regulations on frequency, manner, conduct and reporting of energy audits by Designated Consumers	11 months after signing contract
Deliverable 6.3: Draft regulation on accreditation and review of Energy Audit firms	11 months after signing contract