REQUEST FOR PROPOSAL (RFP)

Consultancy for determining typical local emissions profile of on-site waste to energy incinerators in Cambodian garment factories
(Process 13849)

Dear Sir / Madam:

We kindly request you to submit your Proposal for **Consultancy for determining typical local emissions profile of on-site waste to energy incinerators in Cambodian garment factories .**

Please be guided by the form attached hereto as Annex 2 and 3, in preparing your Proposal.

Proposals, **comprising of a Technical and Financial Proposal, in separate sealed envelopes**, must be submitted on or before **no later than 25 April 2019 by 12:00 pm, Cambodia time** address below. **Late submission shall be rejected. Submission by email will not be accepted.**

UNDP Cambodia, Registry Office (Building No. 5)
No. 53, Pasteur Street, Boeung Keng Kang I
PO Box 877, Phnom Penh, Cambodia
Attn: Procurement Analyst, Procurement Unit

Your Proposal must be expressed in the English Language, and valid for a minimum period of 120 days.

In the course of preparing your Proposal, it shall remain your responsibility to ensure that it reaches the address above on or before the deadline. Proposals that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your Proposal by email, kindly ensure that they are signed and in the .pdf format, and free from any virus or corrupted files.

Services proposed shall be reviewed and evaluated based on completeness and compliance of the Proposal and responsiveness with the requirements of the RFP and all other annexes providing details of UNDP requirements.

The Proposal that complies with all of the requirements, meets all the evaluation criteria and offers the best value for money shall be selected and awarded the contract. Any offer that does not meet the requirements shall be rejected.

Any discrepancy between the unit price and the total price shall be re-computed by UNDP, and the unit price shall prevail and the total price shall be corrected. If the Service Provider does not accept the final price based on UNDP's re-computation and correction of errors, its Proposal will be rejected.

No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the Proposal. At the time of Award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

Any Contract or Purchase Order that will be issued as a result of this RFP shall be subject to the General Terms and Conditions indicated herein. The mere act of submission of a Proposal implies that the Service Provider accepts without question the General Terms and Conditions of UNDP in this link: http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html

Please be advised that UNDP is not bound to accept any Proposal, nor award a contract or Purchase Order, nor be responsible for any costs associated with a Service Providers preparation and submission of a Proposal, regardless of the outcome or the manner of conducting the selection process.

UNDP's vendor protest procedure is intended to afford an opportunity to appeal for persons or firms not awarded a Purchase Order or Contract in a competitive procurement process. In the event that you believe you have not been fairly treated, you can find detailed information about vendor protest procedures in the following link:
http://www.undp.org/content/undp/en/home/operations/procurement/protestandsanctions/

UNDP encourages every prospective Service Provider to prevent and avoid conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, cost estimates, and other information used in this RFP.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to preventing, identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its Service Providers to adhere to the UN Supplier Code of Conduct found in this link : http://www.un.org/depts/ptd/pdf/conduct_english.pdf

Thank you and we look forward to receiving your Proposal.

Sincerely yours,

Aphikovith Phin
Procurement Analyst O.I.C
09 April 2019

Annex A

Description of Requirements

Context of the Requirement	Consultancy for determining typical local emissions profile of on-site waste to energy incinerators in Cambodian garment factories
Implementing Partner of UNDP	UNDP
Brief Description of the Required Services	As per Term of Reference
List and Description of Expected Outputs to be Delivered	1. Scoping report and proposal of measured emissions list 2. Installation of CEMS, data collection, monitoring and consolidation 3. Draft Report 4. Final Report
Person to Supervise the Work/Performance of the Service Provider	TBD
Frequency of Reporting	Refer to attached ToR
Progress Reporting Requirements	Refer to attached ToR
Location of work	Homebased and Phnom Penh, Cambodia
Expected duration of work	35 person days (Over 25 weeks)
Target start date	In May 2019 (as soon as possible after the contract signed)
Travels Expected	on-site visits to 3 garment factories in Phnom Penh Cambodia
Special Security Requirements	N/A
Facilities to be Provided by UNDP (i.e., must be excluded from Price Proposal)	N/A
Implementation Schedule indicating breakdown and timing of activities/sub-activities	☒ Not Required

Names and curriculum vitae of individuals who will be involved in completing the services	☒ Required
Currency of Proposal	☒ United States Dollars
Value Added Tax on Price Proposal	☒ Must be exclusive of VAT and other applicable indirect taxes
Validity Period of Proposals *(Counting for the last day of submission of quotes)*	☒ 120 days In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal.
Partial Quotes	☒ Not permitted
Payment Terms[1]	<table><tr><th>No</th><th>Deliverables/Outputs</th><th>Payment amount</th></tr><tr><td>1</td><td>Upon satisfactory completion and submission of output 1: **First task: Scoping report**</td><td>10%</td></tr><tr><td>2</td><td>Upon satisfactory completion and submission of output 2: **Second task: Data collection and report**</td><td>25%</td></tr><tr><td>3</td><td>Upon satisfactory completion and submission of output 3: **Third task: Draft final Report**</td><td>25%</td></tr><tr><td>4</td><td>Upon satisfactory completion and submission of output 4: **Fourth task: Final report**</td><td>40%</td></tr></table>
Person(s) to review/inspect/ approve outputs/completed services and authorize the disbursement of payment	TBD
Preliminary Examination	UNDP shall examine the Proposals to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, whether or not the Proposer is in the UN Security Council 1267/1989 Committee's list of terrorists and terrorist financiers, and in UNDP's list of suspended and removed vendors, and

[1] *UNDP preference is not to pay any amount in advance upon signing of contract. If the Service Provider strictly requires payment in advance, it will be limited only up to 20% of the total price quoted. For any higher percentage, or any amount advanced exceeding $30,000, UNDP shall require the Service Provider to submit a bank guarantee or bank cheque payable to UNDP, in the same amount as the payment advanced by UNDP to the Service Provider.*

	whether the Proposals are generally in order, among other indicators that may be used at this stage.
Criteria for Contract Award	☒ Highest Combined Score (based on the 70% technical offer and 30% price weight distribution) The total score for each proposal will be calculated independently by the following formula: Rating the Technical Proposal (TP): **TP Rating** = (Total Score Obtained by the Offer / Max. Obtainable Score for TP) x 100 Rating the Financial Proposal (FP): **FP Rating** = (Lowest Priced Offer / Price of the Offer Being Reviewed) x 100 Total Combined Score: (TP Rating) x Weight of TP (70%) + (FP Rating) x Weight of FP (30%) **Total Combined and Final Rating of the Proposal** ☒ Full acceptance of the UNDP Contract General Terms and Conditions (GTC). This is a mandatory criteria and cannot be deleted regardless of the nature of services required. Non acceptance of the GTC may be grounds for the rejection of the Proposal.
Criteria for the Assessment of Proposal	**Technical Proposal (70%)** The Technical Proposal of the offerors will be evaluated based on the following criteria: The total number of points allocated for the technical proposal is 1000. The technical proposal of the offeror is evaluated based on following criteria:

No.	Summary of Technical Proposal Evaluation Forms	Points Obtainable
1	Expertise of organization	250
2	Proposed Approach and methodology	300
3	Proposed Personnel	450
	Total	1000

No.	Technical Proposal Evaluation Form 1: Expertise of organization	Points Obtainable
1	Reputation of Organization and Staff / Size of the Organization/Credibility / Reliability / Financial stability Along with list of clients within the last 3 years	100
2	Access to, and provision for the use of Continuous Emissions Monitoring Systems equipment for the scope of the assignment is essential. Access to the use of statistical analytical software is necessary	50
3	• At least 5 years' professional experience in emissions and energy -related testing in particular the use of Continuous Emission Monitoring System. • Experience working with industries to assess industrial air quality emissions is a preference • Experience with air quality assessment including the use of CEMS, data collection, including quantitative and statistical analyses, high quality report writing	100
	Total:	**250**

No.	Proposed Approach	Points Obtainable
1	To what degree does the Offeror understand the task? Have the important aspects of the task been addressed in sufficient detail?	100
2	Is the scope of task well defined and does it correspond to the TOR? Is the presentation clear and is the sequence of activities and the planning logical, realistic and promise efficient implementation to the project?	100
3	Does the offeror provide necessary access to the use of Continuous Emissions Monitoring Systems equipment over the duration of the assignment?	100
	Total	**300**

No.	Proposed personnel	Points Obtainable
1	**Team Leader (1 person)** • Master's degree, in engineering (environmental or chemical), energy, environmental science, or related specialized field. (PhD is an asset). **(30 points)**	250

		• At least 7 years' experience as a professional in emissions testing, and air quality assessments using CEMs along with technical knowledge and proven research skills related to air quality assessments using CEMs and interpretation of results of emissions testing to relative profiles of international standards and other examples **(120 Points)** • Experience conducting quantitative research, including data collection, hypothesis testing, statistical analysis and high-quality reporting **(50 points)** • Ability to write and present in high quality reports in English to both policy and technical audience assessed by Strong Publication record/ policy and/ or technical reputation **(50 points)**	
	2	**Analyst (1 person)** • Master's degree, in engineering, energy, environmental studies, statistics, or other related field. ***20 points*** • At least 5 years' in-country experience in emissions testing in preferably in south east asia countries, energy, and environmental impact assessments. ***100 points*** • Knowledge about emissions testing and previous energy related work in garment factories is a strong asset. ***30 points*** • Technical knowledge and proven research skills related to emissions testing, statistical analysis, energy. ***50 points***	200
		Total	**450**
	The minimum score required to pass the evaluation of technical proposal is 70% of the total obtainable score of 1,000 points. **Financial Proposal (30%)** To be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP.		
Post Qualification Review	UNDP reserves the right to undertake a post-qualification exercise aimed at determining, to its satisfaction the validity of the information provided by the Proposer. Such post-qualification shall be fully documented and, among		

	those that may be listed in the Terms of Reference, may include, but need not be limited to, all or any combination of the following: a) Verification of accuracy, correctness and authenticity of information provided by the Proposer on the legal, technical and financial documents submitted; b) Validation of extent of compliance to the RFP requirements and evaluation criteria based on what has so far been found by the evaluation team; c) Inquiry and reference checking with other previous clients on the quality of performance on ongoing or previous contracts completed; d) Physical inspection of the Proposer's offices, branches or other places where business transpires, with or without notice to the Proposer; and Other means that UNDP may deem appropriate, at any stage within the selection process, prior to awarding the contract.
UNDP will award the contract to:	☒ One Service Provider
Type of Contract to be Signed	☒ Purchase Order ☒ Contract Face Sheet (Goods and-or Services) UNDP (this template is also utilised for Long-Term Agreement[2] and *if LTA will be signed, specify the document that will trigger the call-off. E.g., PO, etc.)*
Contract General Terms and Conditions[3]	☒ General Terms and Conditions for contracts (services only) Applicable Terms and Conditions are available at: http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
Annexes to this RFP[4]	☒ Form for Submission of Proposal (Annex 2) ☒ Form for Submission of Financial Proposal (Annex 3) ☒ Detailed TOR ☒ Others[5] (General Terms and Conditions)

[2] *Minimum of one (1) year period and may be extended up to a maximum of three (3) years subject to satisfactory performance evaluation*
[3] *Service Providers are alerted that non-acceptance of the terms of the General Terms and Conditions (GTC) may be grounds for disqualification from this procurement process.*
[4] *Where the information is available in the web, a URL for the information may simply be provided.*
[5] *A more detailed Terms of Reference in addition to the contents of this RFP may be attached hereto.*

Contact Person for Inquiries (Written inquiries only)[6]	*Pheara Lek* *Procurement Assistant* *Pheara.lek@undp.org; and cc: procuremet.kh@undp.org* Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.
Other Information: Required Documents for Submission	☒ **Technical Proposal:** Form for Submitting Service Provider's Technical Proposal is duly completed and signed as per **Annex-2** *(the form would allow bidders to confirm its conformity with the requirements defined in the Request for Proposal and all its attachments, as well as the provision of UNDP General Contract Terms and Conditions required under this process) and complete the information and supporting document for Qualification of Service Provider, Proposed Methodology for Completion of Service, and Qualification of Key Personnel.* ☒ **Financial Proposal**: Form for Submitting Service Provider's Financial Proposal is duly completed and signed **(Annex-3)** **Technical and Financial Proposals are submitted in separate sealed envelopes.** No. of copies of Proposal that must be submitted: Original : 1 Copies : 1 1 CD ROM or USB drive containing of technical proposal should be submitted in the technical proposal envelop

[6] *This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.*

Annex 2

FORM FOR SUBMITTING SERVICE PROVIDER'S PROPOSAL[7]

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery[8])

[insert: *Location*].
[insert: *Date*]

To: [*insert: Name and Address of UNDP focal point*]

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP in conformity with the requirements defined in the RFP dated **4/9/2019** , and all of its attachments, as well as the provisions of the UNDP General Contract Terms and Conditions.

[Name of the Organization submitting Proposal].....
[Signature Authorized Person and Stamp] .....
[Name of Authorized Person].....
[Title of Authorized Person].....
[Date].....

[7] *This serves as a guide to the Service Provider in preparing the Proposal.*
[8] *Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes*

A. Qualifications of the Service Provider

The Service Provider must describe and explain how and why they are the best entity that can deliver the requirements of UNDP by indicating the following:

a) Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations;
b) Business Licenses – Registration Papers, Tax Payment Certification, etc.
c) Latest Audited Financial Statement – income statement and balance sheet to indicate its financial stability, liquidity, credit standing, and market reputation, etc. ;
d) Track Record – list of clients for similar services as those required by UNDP, indicating description of contract scope, contract duration, contract value, contact references;
e) Certificates and Accreditation – including Quality Certificates, Patent Registrations, Environmental Sustainability Certificates, etc.
f) Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List.

B. Proposed Methodology for the Completion of Services

The Service Provider must describe how it will address/deliver the demands of the RFP; providing a detailed description of the essential performance characteristics, reporting conditions and quality assurance mechanisms that will be put in place, while demonstrating that the proposed methodology will be appropriate to the local conditions and context of the work.

C. Qualifications of Key Personnel

If required by the RFP, the Service Provider must provide:

a) Names and qualifications of the key personnel that will perform the services indicating who is Team Leader and Analyst, who are supporting, etc.;
b) CVs demonstrating qualifications must be submitted if required by the RFP; and
c) Written confirmation from each personnel that they are available for the entire duration of the contract.

Annex 3

FORM FOR SUBMITTING SERVICE PROVIDER'S FINANCIAL PROPOSAL[9]

(This Form must be submitted using the Service Provider's Official Letterhead[10])

[insert: Location]
[insert: Date]

To: [insert: Name and Address of UNDP focal point]

The Financial Proposal must provide a detailed cost breakdown. Provide separate figures for each functional grouping or category.

Cost Breakdown per Deliverable*

	Deliverables ***[list them as referred to in the RFP]***	**Percentage of Total Price** ***(Weight for payment)***	**Price** ***(Lump Sum, All Inclusive)***
1	Deliverable 1		
2	Deliverable 2		
3	....		
	Total	100%	

**This shall be the basis of the payment tranches*

Cost Breakdown by Cost Component ***[This is only an Example]*:**

Description of Activity	**Remuneration per Unit of Time**	**Total Period of Engagement**	**No. of Personnel**	**Total Rate**
I. Personnel Services				
1. Services from Home Office				
a. Expertise 1				
b. Expertise 2				
2. Services from Field Offices				
a . Expertise 1				
b. Expertise 2				
3. Services from Overseas				
a. Expertise 1				
b. Expertise 2				

[9] *This serves as a template to the Service Provider in submitting the Financial Proposal.*
[10] *Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes*

II. Out of Pocket Expenses				
1. Travel Costs				
2. Daily Allowance				
3. Communications				
4. Reproduction				
5. Equipment Lease				
6. Others				
III. Other Related Costs				

[Name and Signature of the Service Provider's Authorized Person]
[Designation]
[Date

TERMS OF REFERENCE
Professional Service

1. Assignment Information

Assignment Title:	Consultancy for determining typical local emissions profile of on-site waste to energy incinerators in Cambodian garment factories
Post Level:	Consultancy Firm
Contract Type:	Professional Service
Duty Station:	Home-based and Phnom Penh Cambodia
Contract Duration:	35 work days over the period of 25 weeks

2. Project Description

Cambodia's garment industry faces environmental challenges that stem from the use of unsustainable biomass (wood) as a primary source of thermal energy generation and the disposal of mounting volumes of textile waste in local industrial landfills. New clean technologies have recently emerged as potential solutions to tackle these environmental challenges for the garment industry in Cambodia. Commonly referred to as 'on-site-incinerators', this technology enables garment factories to burn their textile waste as an alternative to biomass for thermal energy generation. There has been a recent uptake of garment factories in Cambodia purchasing this equipment from international suppliers, which have thus far reported positive results with a short-term payback period on investment.

These results are very promising. However, the full environmental implications, specifically with regards to the local emissions (and particulates) content remain unknown. While the incineration technology companies typically provide a guide recommending what textile composition is safe to burn at specified temperatures, it is ultimately up to the discretion of the factories to determine what composition of waste is incinerated. Factories also changing their textile composition according to deliver on impending orders, a practice that can result in significant month-to-month variance in qualities of waste feedstock.

From these factors emerge the need to determine the profile of a typical local emissions for this technology. The results will inform the development of regulatory framework in Cambodia for the adoption of waste-to-energy incineration technology, which are currently approved on a case-by-case basis by the Ministry of Environment.

3. Scope of Work

The scope of the consultancy is to temporarily install a Continuous Emissions Monitoring System (CEMS)[11] to record, assess, and evaluate a typical emissions profile of on-site waste incineration from 3 factories using this technology in Cambodia.

[11] CEMS are a tool to monitor emissions and particulates, including: sulfur dioxide, nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen chloride, airborne particulate matter, mercury, volatile organic

As the textile composition for each factory changes month-to-month, this consultancy will be over a 3-month duration to capture fluctuations in local particulates and operating temperatures. The output of the consultancy will be a report on the typical emissions profile of on-site textile incineration technology in Cambodia, including specific outputs detailed in task 3. The service provider will perform the following four tasks:

Task 1: Scoping report and proposal of measured emissions list

- Visit the 3 garment factories and collect information on the on-site incinerator equipment, observed textile waste composition and methods of sorting/burning, including inputs such as operating temperatures and types of waste stock feeding the incinerator.
- Establish a null-hypothesis on emissions based on a typical emissions profile of textile waste incineration from leading international examples. Include rationale for why international example was chosen as case for comparison.
- Engage in a sensitivity analysis to account for any external factors that might influence the results of the emissions testing
- Schedule the testing (and visiting) period with each of the factories
- The service provider must propose a comprehensive list of emissions and particulates to the project supervisor, including a rationale for each one chosen. **It should include (but is not limited to) all listed emissions in Annex A of these terms of reference. The final list is subject to the approval of project supervisor.**

Task 2: Installation of CEMS, data collection, monitoring and consolidation

- Upon approval of scoping report and measured emissions list in Task 1, the service provider is to install a Continuous Emission Monitoring System (CEMS) on the designated incinerator in each of the three factories subject of this study. **The CEMS equipment installed must have the capacity to measure all emissions on the final list approved in task 1.**
- Over the period of 12 weeks monitor and collect data.
- A mid-term progress report must be provided to the project supervisor at 6 weeks.
- On-site visit to each factory (scheduled in Task 1, once per month) for a total of 3 times to observe textile waste composition, incineration temperatures, and collect all other relevant information
- Log and organize all data collected in a .csv file

Task 3: Draft Report

The Service provider is to produce a Draft Report that must include the following:

1. Executive summary
2. Background, context and rationale
3. Summary of scoping report, list of measured emissions (with a rationale for each one), methodology and null-hypothesis

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compounds, and oxygen. Facilities employ the use of CEMS to continuously collect, record and report the required emissions data. The standard CEM system consists of a sample probe, filter, sample line (umbilical), gas conditioning system, calibration gas system, and a series of gas analyzers which reflect the parameters being monitored.

4. Detail a typical emissions profile of onsite incineration technology in Cambodia's garment industry.
    - This must be done by conducting descriptive statistical analysis on data collected in tasks 1 and 2
5. Comparison of #4 above to each of the following emissions profiles:
    A. Pre-study null hypothesis from scoping report.
    B. Traditional wood-fired water tube boiler (most common type of boiler in Cambodia's Garment industry), including additional values of carbon sequestration
    C. Decomposing textile waste in landfill.
    D. United States EPA New Performance Standards and Guidelines for Commercial and Industrial Solid waste Incineration Units.
    E. EU Industrial Emissions Directive
6. Inferential statistics on results, including:
    - Identification all causal factors of detected hazardous emissions.
    - Recommended solutions (both hardware and software) to eliminate each source of hazardous emissions identified
    - Policy recommendations on public instruments and regulatory framework design elements for the adoption of this technology in Cambodia's garment industry

Task 4: Final Report

- Incorporate feedback and comments from project supervisor and reviewers
- Conduct quality control on formatting, language use and identified errors
- Include all collected data in Annex of final report and attached .CSV file

4. Expected Outputs and Deliverables

N	Deliverables/Outputs	Estimated Duration (person working days)	Target Due Dates	Project supervisor *(Indicate designation of person who will review outputs and confirm acceptance)*
1.	**First task: Scoping report**	5	*2 weeks after signature*	TBD
2.	**Second task: Data collection and report**	15	*16 weeks after signature*	TBD
3.	**Third task: Draft final Report**	12	*22 weeks after signature*	TBD
4.	**Fourth task: Final report**	3	*25 weeks after signature*	TBD
	Total	35 days		

5. Institutional Arrangement, Duration of work and Duty station

This assignment will be tendered as an RFP based on a lump sum fee to the service provider, which will work under the supervision and guidance of an assigned supervisor. The total duration of the assignment is 35 working days over 25 weeks. During the assignment the service provider is expected to carry out a total of 12 on-site visits to 3 garment factories in Cambodia (1 scoping visit+ 3 monthly

monitoring visits per factory) over the 25-week total duration of this study.

The service provider is expected and required to temporarily supply, install and remove upon completion, the necessary CEMS equipment for this assignment. The CEMS used must have the capacity to monitor all emissions agreed upon in Task 1. All associated costs for the use of CEMS should be priced in with tender submissions.

The assignment should be carried out in combination of home based and in-country assignments (at least a total of 10 days in Cambodia). All costs (along with the total fees) should be priced within tender submissions.

6. Qualifications of the Service Provider:

Reputation:	Strong reputation of organization and staff (accounting for size, credibility, reliability, and financial stability)
Experience:	At least 5 years' professional experience in emissions-related testing in particular the use of Continuous Emission Monitoring System. Experience working with industries to assess industrial air quality emissions is a preference Experience of similar assignments is a further advantage.
Competencies:	Proficient with air quality assessments including the use of CEMS. Knowledge of waste-to-energy technology. Capable of conducting research, collecting data and providing quantitative and statistical analyses. Excellent writing skills.
Equipment:	Access to, and provision for the use of Continuous Emissions Monitoring Systems equipment for the scope of the assignment is essential. Access to the use of statistical analytical software is necessary.
Contextual:	Experience working in developing country context is necessary – working in the country or region as well as the garment industry is a strong asset.

7. Qualifications of Key personnel:

A consultant team composition of at least two members, one team lead and one analyst.

Qualifications of the International Consultant (Team Lead)

Education	Master's degree, in engineering (environmental or chemical), energy, environmental science, or related specialized field. (PhD is an asset).
Experience	At least 7 years' experience as a professional engineer, including specific experience in emissions testing, and air quality assessments using CEMs. Experience conducting quantitative research, including data collection, hypothesis testing, statistical analysis and high-quality reporting

Competencies	Technical knowledge and proven research skills related to emissions testing, and air quality assessments using CEMs and to interpret results of emissions testing to relative profiles of international standards and other examples as necessary
Language Requirement	Ability to write and present in high quality reports in English to both policy and technical audiences.
Other Requirements (if any)	Fulfilment of similar assignments and/ or knowledge of the Cambodian/ South-East Asian development context. Strong publication record/ policy and/ or technical reputation

Qualifications of the International Consultant (Analyst)

Education	Master's degree, in engineering, energy, environmental studies, statistics, or another related field
Experience	At least 5 years' experience as an analyst, including specific in-country experience preferably in south east Asia countries in emissions testing, energy, and environmental impact assessments. Knowledge about emissions testing and previous energy related work in garment factories is a strong asset
Competencies	Technical knowledge and proven research skills related to emissions testing, statistical analysis, energy
Language Requirement	Strong ability to write and present in both English and Khmer to both policy and technical audiences.
Other Requirements (if any)	Fulfilment of similar assignments and/ or knowledge of the South-East Asian development context.

Note: offeror reserves the rights to request bidders to replace team members prior to awarding the contract.

8. Criteria for Evaluation of Proposal

Stage 1: Technical Proposal Evaluation (70%)

The Technical Proposal of the offerors will be evaluated based on the following criteria:

The total number of points allocated for the technical proposal is 1000. The technical proposal of the offeror is evaluated based on following criteria:

No.	Summary of Technical Proposal Evaluation Forms	Points Obtainable
1	Expertise of organization	250
2	Proposed Approach and methodology	300
3	Proposed Personnel	450

	Total	1000

Expertise of organization

No.	**Technical Proposal Evaluation** **Form 1: Expertise of organization**	**Points Obtainable**
1	Reputation of Organization and Staff / Size of the Organization/Credibility / Reliability / Financial stability Along with list of clients within the last 3 years	100
2	Access to, and provision for the use of Continuous Emissions Monitoring Systems equipment for the scope of the assignment is essential. Access to the use of statistical analytical software is necessary	50
3	At least 5 years' professional experience in emissions and energy -related testing in particular the use of Continuous Emission Monitoring System. Experience working with industries to assess industrial air quality emissions is a preference Experience with air quality assessment including the use of CEMS, data collection, including quantitative and statistical analyses, high quality report writing	100
	Total	**250**

Proposed approach and methodology

No.	**Proposed Approach**	**Points Obtainable**
1	To what degree does the Offeror understand the task? Have the important aspects of the task been addressed in sufficient detail?	100
2	Is the scope of task well defined and does it correspond to the TOR? Is the presentation clear and is the sequence of activities and the planning logical, realistic and promise efficient implementation to the project?	100
3	Does the offeror provide necessary access to the use of Continuous Emissions Monitoring Systems equipment over the duration of the assignment?	100
	Total	**300**

Proposed Personnel

No.	**Proposed personnel**	**Points Obtainable**
1	Team Leader (1 person) • Master's degree, in engineering (environmental or chemical), energy, environmental science, or related specialized field. (PhD is an asset). **(30 points)** • At least 7 years' experience as a professional in emissions testing, and air quality assessments using CEMs along with technical knowledge and proven research skills related to air quality assessments using CEMs and interpretation of results of emissions testing to relative profiles of international standards and other examples **(120 Points)**	250

	• Experience conducting quantitative research, including data collection, hypothesis testing, statistical analysis and high-quality reporting **(50 points)** • Ability to write and present in high quality reports in English to both policy and technical audience assessed by Strong Publication record/ policy and/ or technical reputation **(50 points)**	
	Analyst (1 person) • Master's degree, in engineering, energy, environmental studies, statistics, or other related field. ***20 points*** • At least 5 years' in-country experience in emissions testing in preferably in south east asia countries, energy, and environmental impact assessments. ***100 points*** • Knowledge about emissions testing and previous energy related work in garment factories is a strong asset. ***30 points*** • Technical knowledge and proven research skills related to emissions testing, statistical analysis, energy. ***50 points***	200
	Total	**450**

9. Payment Milestones

The service provider will be paid on a lump sum basis under the following installments.

N	Deliverables/Outputs	Target Due Dates	Payment Amount
1.	**First task: Scoping report**	*3 weeks after signature*	10%
2.	**Second task: Data collection and report**	*16 weeks after signature*	25%
3.	**Third task: Draft Report**	*22 weeks after signature*	25%
4.	**Fourth task: Final Report**	*25 weeks after signature*	40%

ANNEX A

	EU	US	Factory 1	Factory 2	Factory 3
Particulate Matter (PM) 2.5	10ppm	34mg/dscm			
Particulate Matter (PM) 10					
SO2	50ppm	55ppm			
NO2 (ppm)					
NO (ppm)					
HCI (ppm)	10ppm	77ppm			
HF					
CO (ppm)	50ppm	40ppm			
CO2 (ppm)					
Cd (cadmium)					
Pb (mg/Sm 3) (lead)	0.05ug/dscm	0.07ug/dscm			
Hg (Mercury)	0.05ppm	0.55ppm			
TOC	10ppm	12ppm			
Dioxins and Furans (Ng, TEX/M3)	0.1ppm	0.2ppm			
Load					
Flue gas temp					
Boiler temp					
Fums (do)					
Dust (mg/sm3)					
Dust (total suspended particulate)					
Ozone					
H2S					
VOCs (Volatile Organic Compounds)					
NH3 (ammonia)					
Chlorine					
Chlorine dioxide					