
TERMS OF REFERENCE
(Individual Contractor Agreement)

Title: Consultancy on potential of reduction of carbon emissions in cities
Project: Sustainable Cities GCF Portfolio in Chile SP6
Duty station: Chile
Section/Unit: UNEP Sub-regional Office for the Southern Cone
Contract/Level: LICA 10
Supervisor: Southern Cone Director , Mr. [Jose] [Dallo]

1. General Background

(Brief description of the national, sector-specific or other relevant context in which the individual contractor will operate)

There are approximately 8,000 diesel generator sets operating in the Metropolitan Region of Santiago, which work as a backup to regulate the demand for energy during peak hours. It is estimated that a similar amount exists in the rest of the country.

The replacement of this equipment in industrial and commercial establishments, especially those that operate mainly with diesel oil, by a technology called BESS "Battery Energy Storage Systems", may bring important benefits. Such benefits are due to the displacement of emissions of local impact air pollutants (particulate matter and gases such as nitrogen oxides and sulfur oxides, among others), global air pollutants (greenhouse gases), as well as a series of other additional benefits, such as those of electricity demand side management strategies.

2. Purpose and Scope of Assignment

(Concise and detailed description of activities, tasks and responsibilities to be undertaken, including expected travel, if applicable)

The overall objective of the consultancy is to advance in the design of a project reveals the needs and the benefits of this potential replacement project. The following activities have been identified:

1) Quantitative estimate of the substitution potential of diesel generating groups in terms of displacement of emissions and other associated benefits.

1. Selection of unit emission factors of atmospheric pollutants of local and global impact associated with diesel generator sets.
2. Preliminary estimation of the emission factor of the network for the year to be defined (as a baseline for greenhouse gas emissions).
3. Systematization of information of generators in the country, grouping them by size and characteristics, as well as an estimation of the projected renewal rate and an estimation of the benefits as product of a massive substitution, taking advantage of economies of scale.
4. Identification of the emission displacement potential, recognizing the dimension "unit emissions" and the "effect on the electrical system".

2) Characterization of BESS systems.

1. Description of BESS systems.
2. International references of recognition of complementary services of BESS systems.
3. Identification of barriers for implementation (comparative analysis of advantages and disadvantages with respect to traditional systems).
4. Reference of cases of installation of BESS systems in renewable energy projects.

3) Design of a valued strategy to make possible the development of pilot projects and an implementation or scaling model.

1. Based on the above background, define a case of pilot application based on the use of environmental instruments or other instruments available in the country.
2. Case selection with smaller implementation gaps based on local conditions.
3. Preliminary design of a methodology for the recognition of the displacement of atmospheric emissions of local impact under the scheme of compensation of emissions.
4. Design of replacement pilot including associated costs.
5. Preliminary assessment of scaling up the proposal, considering the recognition of auxiliary services and the potential use of other incentive instruments such as the Green Climate Fund.

The Director for the Sub-regional Office will directly supervise the consultant for the Southern Cone, with the Climate Change Coordinator in the UN Environment Regional Office for Latin America as second supervisor.

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3. Monitoring and Progress Controls

(Clear description of measurable outputs, milestones, key performance indicators and/or reporting requirements, which will enable performance monitoring)

Lumpsum payment modality. There will be a single lumpsum payment issued at the end of the consultancy period, upon confirmation by the supervisor in written of his/her clearance of the below-described deliverables:

- **Deliverable 1:** A document that presents a quantitative estimate of the substitution potential of diesel-generating groups in terms of displacement of emissions and other associated benefits, as presented on Functional Activity 1.
Deadline: 6 months after the signature of the contract
Fee: 33% of the total contract amount.
- **Deliverable 2:** A document that presents a characterization of BESS systems, as described on Functional Activity 2.
Deadline: 6 months after the signature of the contract
Fee: 33% of the total contract amount.
- **Deliverable 3:** A written piece describing the design of a valued strategy to make possible the development of pilot projects and an implementation or scaling model, as described on Functional Activity 3.
Deadline: 6 months after the signature of the contract.
Fee: 34% of the total contract amount.

4. Qualifications and Experience

(List the required education, work experience, expertise and competencies of the individual contractor. The listed education and experience should correspond with the level at which the contract is offered.)

a. Education (Level and area of required and/or preferred education)

- Master's Degree or equivalent is required in environment, sustainable development, environmental law, environmental engineering, environmental economics, or similar.
- A first-level university degree is required plus additional years of experience (+7) may be accepted in lieu of a Master university degree.

b. Work Experience

(List number of years and area of required work experience. Clearly distinguish between required experience and experience, which could be an asset.)

- A minimum of 5 years professional experience in environmental law and management, or related areas of work (7 years with a Bachelor).
- Experience in planning and coordinating multi-country projects.
- Experience in developing climate change products and tools.
- Experience in the Latin American and Caribbean region essential.

c. Language

- Fluency in Spanish is required.
- Fluency in English is required

d. Key Competencies

(Technical knowledge, skills, managerial competencies or other personal competencies relevant to the performance of the assignment. Clearly distinguish between required and desired competencies)

- Proven experience and competence in managerial skills, including management of complex multi-stakeholder projects.
- Excellent written research skills, including the ability to draft and edit reports, studies, and other documents;
- Demonstrated ability to provide technical assistance to governments in Latin America.
- Ability to work effectively with multiple stakeholder groups including national governments.



Develops and implements sustainable business strategies, thinks long term and externally in order to positively shape the organization. Anticipates and perceives the impact and implications of future decisions and activities on other parts of the organization. **(for levels IICA-2, IICA-3, LICA Specialist- 10, LICA Specialist-11, NOC, NOD, P3, P4 and above)**



Treats all individuals with respect; responds sensitively to differences and encourages others to do the same. Upholds organizational and ethical norms. Maintains high standards of trustworthiness. Role model for diversity and inclusion.



Demonstrates understanding of the impact of own role on all partners and always puts the end beneficiary first. Builds and maintains strong external relationships and is a competent partner for others (if relevant to the role).



Efficiently establishes an appropriate course of action for self and/or others to accomplish a goal. Actions lead to total task accomplishment through concern for quality in all areas. Sees opportunities and takes the initiative to act on them. Understands that responsible use of resources maximizes our impact on our beneficiaries.



Open to change and flexible in a fast paced environment. Effectively adapts own approach to suit changing circumstances or requirements. Reflects on experiences and modifies own behavior. Performance is consistent, even under pressure. Always pursues continuous improvements.



Evaluates data and courses of action to reach logical, pragmatic decisions. Takes an unbiased, rational approach with calculated risks. Applies innovation and creativity to problem-solving.



Expresses ideas or facts in a clear, concise and open manner. Communication indicates a consideration for the feelings and needs of others. Actively listens and proactively shares knowledge. Handles conflict effectively, by overcoming differences of opinion and finding common ground.

Project Authority (Name/Title):		Contract holder (Name/Title):	
Signature	Date	Signature	Date

