



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE (TOR)

“Towards a green economy in Uruguay: stimulating sustainable production practices and low emission technologies in prioritized sectors (#120323)”

Pre-feasibility studies to produce aviation biofuels in Uruguay

Scope of work:

1. Background Information

In the Plan of Action of the Republic of Uruguay for the Reduction of CO₂ Emissions in the activities of Civil Aviation, the **Innovation and Knowledge Programme on Aviation Biofuels**, approved by the "Taskforce on Environment of the National Civil Aviation Board" was included. Its execution is in charge of the Inter-Institutional Follow-up Group led by the National Directorate of Energy (DNE as per its acronym in Spanish) of the Ministry of Industry, Energy and Mining (MIEM as per its acronym in Spanish).

The Innovation and Knowledge Programme on Aviation Biofuels has a short- and mid-term horizon (between 2 and 5 years) and aims to let the country count with relevant information necessary for taking decisions at strategic level on the supply, production, export and import of aviation biofuels.

Through this consultancy, the technical, economic and financial pre-feasibility of producing aviation biofuels through the technologies with greater chances of insertion in Uruguay are sought to be analysed.

2. General Objective

Hiring an international consultancy company to carry out the technical, economic and financial pre-feasibility studies to produce aviation biofuels in Uruguay, through different technologies and considering the existing infrastructures when applicable.

Specific Objectives

Objective 1 - Technical, economic and financial pre-feasibility study of producing aviation biofuels through the technologies with greater chances of insertion in Uruguay.

Activity 1.1 - Recommendation of the technology or technologies most adequate for the conditions of Uruguay based on the access to raw materials and the facilities installed in the country, taking into account the national context, the regional market, the expected demand (to be defined by the parties), the existing infrastructure, the maturity of the different production technologies, among others.

Activity 1.2 - Technical, economic and financial pre-feasibility study of the technology or technologies with greater chances of insertion in Uruguay*, including:

- Analysis of the existing and potential demand, according to projections of aviation biofuels consumption and their co-products, including the potential demand from the region.
- Analysis of the available and potential sources of raw materials, including those coming from countries of the region, with the feasibility to be used for the production of aviation biofuels.
- Identification of barriers and restrictions for the incorporation of the different technologies.
- Potential locations (consider ANCAP facilities as one possible location, among others).

- Optimization of the set of products and channels of commerce.
- Consideration and analysis of mechanisms of compensation of Carbon emissions.

(*) The pre-feasibility study must be carried out for at least 2 technologies, justifying the selection.

Objective 2 - Recommendations of priority actions.

Activity 2.1 - Recommendation report of priority actions to enable the development of the production of aviation biofuels in Uruguay, considering:

- Biomass availability and assurance.
- Production of biofuels.
- Regulatory factors.
- Carbon emissions compensation mechanisms.

Other considerations:

When selecting the mix of raw materials, the possibility of incorporating wastes that may be valued through the different technologies must be taken into consideration.

A final presentation of the work must be carried out. The way in which it will be done, will be defined with the counterpart (the company must include a first proposal in the work plan).

Deliverables and general time Schedule

Deliverable 1: Report/s corresponding to Objective 1, Activity 1.1.

Deliverable 2: Report/s corresponding to Objective 1, Activity 1.2 (Pre-feasibility study of at least 2 technologies).

Deliverable 3: Report/s corresponding to Objective 2, Activity 2.1.

A preliminary proposal on time schedule for the delivery of products is shown below and shall be definitely adjusted together with the consulting team:

	Month 1	Month 2	Month 3	Month 4	Month 5
Deliverable 1	x				
Deliverable 2			x	x	
Deliverable 3				x	x
Presentation					x

In addition to the reports, spreadsheets with the calculations and assumptions made must be delivered for the possible modification of variables in the future.

The information collected must be updated or shall be updated at least to the year 2017, as applicable

3. Personnel in the Field and supervision

The Technical Coordinator must have proven experience (minimum 3 years) related to aviation biofuel technologies and must have participated in projects similar to those required in this call in the last 10 years.

The Consultancy team must count with professionals in the area of engineering and economics (or equivalent qualifications).

The Consultancy team must have experience on:

- Bioenergy.
- Financial analysis of projects related to biofuels, preferably in aviation biofuels.
- Oil refineries.
- Similar studies in related topics in the region.

CVs of the Technical Coordinator as well as the other members of the team shall be presented, specifying the tasks under his/her responsibility and the estimated hours to be devoted to the consultancy.

The Technical Coordinator shall be the one to participate in the missions to Uruguay and at the videoconferences.

The experts will work under the supervision of the Project Manager of UNIDO Regional Office in Uruguay and UNIDO National Project Coordinator in coordination with Project Steering Committee. Regular meetings will be organized with Project Management Unit and UNIDO Regional Office to discuss progress and outstanding issues. Meetings could also be organized upon requirement of Project Steering Committee and Project National Counterparties.

4. Language Requirements

The experts will be required to be fluent in Spanish or English. All written material submitted to UNIDO should be of such quality that no additional technical editing is required.

5. Payment Schedule

Deliverables	% of total amount
1	20%
2	30%
3	30%
Final presentation	20 %

6. Documents to be included in the offer:

1. Institution's background related to:
 - Design, advice, evaluation or document preparation for the activities defined in this call.
 - Similar studies requested in the present call.

2. Methodological proposal: preliminary proposal concerning the procedures and time estimated to carry out the activities and achieve the expected results.
3. Taskforce and its CV.
4. Economic proposal: the economic proposal must be in US dollars, taxes included **and may not be over 60,000 US dollars in order to be considered in this call**. The costs of the air tickets and per diem during stays in Uruguay should not be included in the offer since they will be paid by the Biovalor Project.

7. Selection Committee and Evaluation Criteria

Evaluation criteria

Requirement	Meet/does not meet the requirements	Maximum score
Technical Coordinator (minimum 3 years) related to aviation biofuel technologies.	Mandatory	5
Technical Coordinator must have participated in projects similar to those required in this call in the last 10 years.	Mandatory	5
The Consultancy team must count with professionals in the area of engineering and economics (or equivalent qualifications).	Mandatory	5
The Consultancy team must have experience in: <ul style="list-style-type: none"> - Bioenergy. - Financial analysis of projects related to biofuels, preferably in aviation biofuels. - Oil refineries. - Similar studies in related topics in the region. 	Mandatory	25
The experts will be required to be fluent in Spanish or English.	Mandatory	4
Oral and written fluency in Spanish of at least one team member.	To be assessed	3
Proven experience in international projects in Latin America.	To be assessed	3
Subtotal based on the background of the company		50
Technical proposal: Responsiveness to the terms of reference; Innovativeness of the proposed methodology; Clarity of the concept and outputs.		50
Total based on the technical proposal and background of the company		100

Proposals attaining a minimum of 80 points will be considered technically acceptable.

The technical proposal will be assessed to confirm whether it meets the objective and outputs expected. Specially appreciated will be those proposals that provide a good level of detail while remaining clear and concise, specifically addressing the achievement of the objectives and outcomes desired.