

REQUEST FOR EXPRESSIONS OF INTEREST CONSULTING SERVICES

Selection #: RG-T3995-P001

Selection Method: Simplified Competitive Selection

Country: Regional

Sector: Energy (ENE)

Funding – TC #: ATN/OC-19040-RG

Project #: RG-T3995

TC name: Regional Integration of the Green Hydrogen Value Chain

Description of Services: Guidelines on Harmonized Green Hydrogen Certification

Link to TC document: <https://www.iadb.org/en/project/RG-T3995>

The Inter-American Development Bank (IDB) is executing the above mentioned operation. For this operation, the IDB intends to contract consulting services described in this Request for Expressions of Interest. Expressions of interest must be delivered using the IDB Portal for Bank Executed Operations (<http://beo-procurement.iadb.org/home>) by: **May 25, 2022, 5:00 P.M.** (Washington D.C. Time).

The consulting services (“the Services”) include to propose the main guidelines for Green Hydrogen (and associated products) certification for LAC at regional level. It should allow the required harmonization at national level. The study must consider national goals and the regulatory and institutional framework of LAC countries. Moreover, it should consider the development of certification requirements internationally (potential applicants for certified products and competitors offering hydrogen).

Eligible consulting firms will be selected in accordance with the procedures set out in the Inter-American Development Bank: [Policy for the Selection and Contracting of Consulting firms for Bank-executed Operational Work](#) - GN-2765-4. All eligible consulting firms, as defined in the Policy may express an interest. If the Consulting Firm is presented in a Consortium, it will designate one of them as a representative, and the latter will be responsible for the communications, the registration in the portal and for submitting the corresponding documents.

The IDB now invites eligible consulting firms to indicate their interest in providing the services described above in the [draft summary](#) of the intended Terms of Reference for the assignment. Interested consulting firms must provide information establishing that they are qualified to perform the Services (brochures, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff, etc.). Eligible consulting firms may associate in a form of a Joint Venture or a sub-consultancy agreement to enhance their qualifications. Such association or Joint Venture shall appoint one of the firms as the representative.

Interested eligible consulting firms may obtain further information during office hours, 09:00 AM to 05:00 PM, (Washington D.C. Time) by sending an email to: michellecar@iadb.org and eboeckdaza@iadb.org

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Guidelines on Harmonized Green Hydrogen Certification

Regional

RG-T3995

ATN/OC-19040-RG

<https://www.iadb.org/en/project/RG-T3995>

Regional Integration of the Green Hydrogen Value Chain

1. Background and Justification

- 1.1.** *The Energy Division (INE/ENE) of the Inter-American Development Bank (IDB) is a functional division of the Infrastructure and Energy Sector (INE/INE), under the Vice Presidency of Sectors and Knowledge (VPS/VPS), which supports and develops knowledge in the energy sector in Latin America and the Caribbean (LAC). INE/ENE is responsible for the development of technical analysis, identification and preparation of programs, projects, technical cooperation, studies, and sectoral notes in the energy sector.*
- 1.2.** *This project aims to support the creation and adoption of low carbon hydrogen certification mechanisms in LAC, be it hydrogen or one of the associated products such as ammonia, e-fuels and other carriers. There is a consensus that the biggest challenge of renewable energy sources is no longer its cost, but its flexibility, that is, the management of generation, the supply, and demand, the consumption. In this scenario, at a time of high generation and low demand, electricity from renewable sources can be used to produce hydrogen, named green hydrogen (GH₂), thus becoming a good energy storage system to be used later in the scenario where demand is lower than generation. In this way, GH₂ can become a key part for the necessary flexibility in the power systems from renewable sources. In addition, hydrogen can be a carrier of renewable source for hard to abate sectors such as energy use in industrial or chemical processes that requires very high temperatures, heating buildings and long-haul transport.*
- 1.3.** *In this context, certification will be an essential step for the development of a low carbon hydrogen markets. If externalities are not considered, zero net emission hydrogen will not be competitive with other fuels, such as blue/grey hydrogen or natural gas. The value and associated remuneration of the low carbon will allow the development of these projects; therefore, certification is essential to identify and to guarantee the hydrogen origin. Attributes commonly measured and tracked within existing schemes include the energy source, location of production, the greenhouse gases (GHG) that the lifecycle contain (it includes GHGs relevant to its production and a lifecycle analysis); and other relevant externalities.*
- 1.4.** *The Energy Division (INE/ENE) of the Inter-American Development Bank (IDB) has already completed a study regarding the state of the art of H₂ certifications worldwide, in the context of the Consultancy RG-T3315-P002, with the product “Standards of Sustainability in the Hydrogen Economy”¹. This work is a sequential assessment and a proposal to impulse the clean hydrogen certification in LAC. The Energy Division (INE/ENE) of the Inter-American Development Bank (IDB) seeks a consultant firm with experience relevant in energy and green hydrogen, specifically in certification of GH₂ and other guarantee of origin certifications to develop Guidelines on Low Carbon Hydrogen Certification in LAC countries.*

2. Objectives

- 2.1.** *The objective of the consultancy is to propose the main guidelines for Green Hydrogen (and associated products) certification for LAC at regional level. It should allow the required harmonization at national level.*

¹ This study has already been completed and is under publication and a preliminary version will be made available to companies selected for the short list.

The study must consider national goals and the regulatory and institutional framework of LAC countries. Moreover, it should consider the development of certification requirements internationally (potential applicants for certified products and competitors offering hydrogen).

3. Scope of Services

3.1. The scope of the services of this consultancy will be:

- a) *Based on the study developed by the bank, international knowledge and best practices about Hydrogen certification, the consultancy should make an assessment of LAC specificities (including the availability of human resources, the economics, and the institutional and regulatory framework) to propose a guideline for LAC certification process.*
- b) *The draft proposal should include the main technical, economical, and institutional characteristics necessary for a harmonized process. It should consider different institutional arrangements and analyses how this could fit with national endowments.*
- c) *Organization of workshops with the countries to debate certifications systems and the possibility of guidelines for LAC certification process. Each of the key activity's topics, see point 4, should be discussed at periodical workshops.*
- d) *Propose a guideline for system of certification origin and exchange of hydrogen, specifically regarding green hydrogen (focus on hydrogen produced from renewable energy generation).*

4. Key Activities

4.1. Key elements for certification

- a) Based on the current hydrogen certification systems, define the main elements that must be part of a certification system.
- b) Define the main characteristics that a regionally adapted certification scheme should consider in LAC, indicating the minimum elements that must include such as location (national x regional), methodological, institutional and governance aspects and among others.
- c) Define the stakeholders, human resources, and institutional resources necessary for the certification process in LAC.
- d) Discuss the feasibility and tradeoffs of the different potential arrangements.
- e) Workshop with main stakeholders (defined by the IDB) with the results of this activity.
- f) Include feedback received in the workshop in the deliverable of this activity.

4.2. LAC certification systems

- a) Analyze existing certification systems in LAC countries on exportable fuels and renewable energies.
- b) Analyze hydrogen certification system in use in LAC countries or related regulation or legislation.
- c) Define the main characteristics of the certification systems analyzed in the previous items (exportable fuels, renewable energies and hydrogen)
- d) Discuss the feasibility and tradeoffs of the different potential arrangements.
- e) Workshop with main stakeholders (defined by the IDB) with the results of this activity.
- f) Include feedback received in the workshop in the deliverable of this activity.

4.3. A Proposal of potential schemes for Harmonized Green Hydrogen Certification

- a) Propose potential frameworks for GH2 origin certification systems in LAC, considering the economic and social characteristics of the region and the suggestions obtained in activities 4.1 and 4.2
- b) The certification mechanism proposal should include the requirements, the methodology, the compliance requirement, and the type of data required for the determination of each attribute to be considered in

the certification. It should also include, how they are going to be handled and what are the verifying mechanisms for compliance. It is also important to discuss what should be carried nationally and regionally.

- c) The certification mechanism proposal should consider and evaluate the different roles that LAC countries expect for GH2, i.e. whether it will be for domestic use, for the international market or both.
- d) Include an assessment of the main barriers for the implementation of the certification systems as determined in the guideline, and recommendations to overcome them considering the existing regulatory tools and the information available in each country of Latin America and Caribbean.
- e) Discuss the feasibility and tradeoffs of the different potential arrangements.
- f) Workshop with main stakeholders (defined by the IDB) with the results of this activity.
- g) Include feedback received in the workshop in the deliverable of this activity.

4.4. Guideline proposal

- a) Based on the potential models discussed in the 4.3, proposal of a framework through a Guideline
- b) Participation and presentation in a workshop with the key players of the region (defined by the IDB) for the dissemination of the findings and results of this activity
- c) Include feedback received in the workshop in the final version of the guideline

4.5. Final Guideline and data base and Final presentation

- a) Final report with the results of the consultancy and main conclusions and recommendations of steps to follow
- b) Database with the mechanisms and institutions for certification and a visualization in a suitable format for the Energy HUB
- c) Workshop for presenting the results and dissemination of the main finding with the key players of the region (defined by the IDB).

5. Expected Outcome and Deliverables

5.1. *Work plan with schedule and details of activities*

5.2. *Study of Key elements for certification and LAC certification systems, which included the activities 4.1 and 4.2*

5.3. *A Proposal of potential schemes for Harmonized Green Hydrogen Certification that included activity 4.3*

5.4. *Guideline proposal included activity 4.4*

5.5. *Final report for the publication of the study and visualizations in the Energy HUB (IDB) which included activity 4.5*

The consultant must hold a presentation workshop for each of the products.

6. Project Schedule and Milestones

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10
Deliverable 1: Work plan										
Deliverable 2: Study of Key elements for certification and LAC certification systems										
Deliverable 3: A Proposal of potential schemes for Harmonized Green Hydrogen										

Certification										
Deliverable 4: Guideline proposal										
Deliverable 5: Final report, which includes all the previous products, approved by the BID after the workshops.										

7. Reporting Requirements

- 7.1. All reports must be submitted in Microsoft Word, in Spanish and English, in an editable file, including annexes, spreadsheets, and other required material.
- 7.2. All deliverables will be accompanied by an internal presentation to the Bank. Presentations will be in Spanish and English.
- 7.3. All reports will be confidential.
- 7.4. The final version of deliverable 5.5 must be in English, Spanish and Portuguese.

8. Acceptance Criteria

- 8.1. The products will be accepted for payment once they have the written approval of the IDB team.
- 8.2. Partial products or products that are not accepted will not be paid

9. Other Requirements

- 9.1. Work Team: The consultancy must present a minimum work team in its proposal, considering the following specialties:
 - a) **Project Manager.** Degree in engineering, economics, or related areas, with specialization, master's or doctorate in related areas. At least 15 years of general experience, 10 years of experience specifies the development of technical and economic feasibility studies for the energy sector, with fluent Spanish language. Relevant experience in the hydrogen sector. Experience in Latin America and the Caribbean is desirable.
 - b) **Specialist in the Energy sector.** Degree in engineering or related areas, with a master's or doctorate in energy planning, energy economics or related subjects. With specific experience of at least eight (8) years in structuring and evaluating projects in the energy, with fluent of Spanish language. Experience in Latin America and the Caribbean is desirable.
 - c) **Specialist in hydrogen sector:** Degree in engineering or related areas, with a master's or doctorate in energy planning, energy economics or related subjects. With specific experience of at least eight (8) years in structuring and evaluating projects in the energy sector with an emphasis on non-conventional renewables and hydrogen, with fluent of Spanish language. Experience in Latin America and the Caribbean is desirable.
 - d) **Senior Economist:** Degree in economics, administration, or finance, with a master's or doctorate in economic or financial disciplines. With specific experience of at least eight (8) years in the development of economic or financial studies for the structuring of infrastructure projects in the energy and hydrogen sector, with fluent Spanish language. Experience in Latin America and the Caribbean is desirable.
 - e) **Expert in Certification Mechanisms in the Energy Sector:** Degree in economics or related areas, with master's or doctorate in economic or related areas. With specific knowledge and experience in

certification projects in the energy sector, desirable fluency in Spanish language. Experience in Latin America and the Caribbean is desirable.

- f) **Regulatory Specialist:** Degree in law or economics or related areas with a master's degree or doctorate in law, economic regulation or in subjects related to the object of the consultancy. General experience in advising the energy sector and specific experience of at least eight (8) years in regulatory advice in the energy sector and in participation in the structuring and implementation of public policies, with fluent of the Spanish language. Experience in Latin America and Caribbean.

9.2. Confidentiality: All information shared with the consultancy will be considered confidential. The consultancy may not disclose to third parties any product of this consultancy, without the express consent of the IDB, in writing.

10. Supervision and Reporting

10.1. The consulting firm will work under the supervision of Michelle Hallack, Economics Senior Specialist (INE/ENE), Cecilia Correa, Energy Specialist (INE/ENE), and Eric Daza, Consultant (INE/ENE)

11. Schedule of Payments

11.1. Payments will be made through the approval of the products listed in section 5, according to the conditions mentioned in section 8.

Payment Schedule	
<i>Deliverable</i>	%
1. Deliverable 1: Work plan	10%
2. Deliverable 2: Study of Key elements for certification and LAC certification systems	20%
3. Deliverable 3: A Proposal of potential schemes for Harmonized Green Hydrogen Certification	20%
4. Deliverable 4: Guideline proposal	20%
5. Deliverable 5: Final report, which includes all the previous products, approved by the BID after the workshops.	30%
TOTAL	100%