WASCAL
West African Science Service Centre on Climate Change and Adapted Land Use

MINISTÈRE DES MINES, DU PÉTROLE ET DE L'ÉNERGIE

Technical and financial assistance for the development of the Republic of Côte d'Ivoire's National Green Hydrogen Strategy

Terms of reference

Recruitment of an international consultant to develop Côte d'Ivoire's green hydrogen strategy

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Federal Ministry of Research, Technology and Space

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I- CONTEXT AND JUSTIFICATION

With real GDP growth averaging 8.1% over the period 2012–2019, Côte d'Ivoire managed to contain the COVID-19 pandemic and maintain positive growth in 2020 at 0.7%. GDP grew by an average of 6.6% between 2021 and 2023. The country is a sub-regional economic powerhouse, contributing 40% of the WAEMU's GDP. This economic growth has led to an improvement in average per capita income, which rose from 1,269,700 CFA francs (USD 2,208) in 2020 to 1,539,300 CFA francs (equivalent to USD 2,538) in 2023 [19], while the population has grown by an average of 2.8% per year, from 28.6 million to 31 million inhabitants respectively [20].

Côte d'Ivoire has significantly raised its climate ambition in its NDCs with an unconditional target of reducing GHG emissions by 30.41% by 2030 compared to the baseline scenario. To translate this ambition into action in the energy sector, the government is aiming for 45% renewable energy in the electricity mix by 2030 and universal access to electricity, while improving energy efficiency and the resilience of electricity networks.

The results of the H2 Atlas Africa project have shown that Côte d'Ivoire is among the countries with high potential for green hydrogen development, with a discounted cost of hydrogen ranging from €1.5 to €4.5 per kg and from €1.70 to €2.70 per kg, respectively, in 2020 and 2050, respectively. In addition, the country has two autonomous ports in Abidjan and San Pedro, a refinery (Société Ivoirienne de Raffinerie), a very dynamic energy sector and a large industrial sector. Furthermore, the country has ambitious plans to develop renewable energy capacity, as outlined in its Sectoral Policy for the Development of Renewable Energy and Energy Efficiency.

The West African Science Service Centre on Climate Change and Adaptive Land Use (WASCAL), with financial support from the Federal Ministry of Research, Technology and Space (BMFTR) of the Federal Republic of Germany, supported the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) in developing the ECOWAS Green Hydrogen Policy and Strategy Framework and the 2023-2030 and 2031-2050 strategies and action plans, which were adopted and approved in July 2023 and October 2024, respectively.

One of the key points of this strategy is the establishment of a harmonious regulatory framework, capacity building, awareness raising and funding assistance. In the short term (2024-2027), the strategy includes the implementation of policies and strategies, as well as national institutional and regulatory frameworks conducive to the development of green hydrogen technologies. This strategy provides for Member States, including Côte d'Ivoire, to transpose this framework at national level, in particular through the adoption of national green hydrogen strategies.

In line with the objectives of the ECOWAS regional policy and strategy framework on green hydrogen and action plans, WASCAL and MMPE have signed a cooperation agreement for the development of the Republic of Côte d'Ivoire's national green hydrogen strategy.

The overall objective of these terms of reference is to recruit an international consultant to develop the Republic of Côte d'Ivoire's national green hydrogen strategy, in collaboration with national stakeholders and WASCAL.

II- MISSION OBJECTIVES

1. Main Objective

The overall objective of these terms of reference is to recruit an International Consultant responsible for developing the Republic of Côte d'Ivoire's national green hydrogen strategy, in collaboration with national stakeholders and WASCAL.

2. Specific objectives

Specifically, the recruited Consultant will be responsible for, but not limited to:

- Presenting the global context of climate change, energy transition, the role of green hydrogen and opportunities for Côte d'Ivoire.
- Collecting relevant data for the successful completion of the mission, based on a review of the literature and official data, with the support of the national technical committee that will be set up.
- Assessing the current situation in terms of energy, industry, infrastructure, human resources, logistics and any other aspects relevant to green hydrogen technologies.
- Conducting a critical multi-sector analysis of policies, strategies, texts, laws, infrastructure, etc. relating to the development of green hydrogen in Côte d'Ivoire, and making recommendations.
- Assess the potential of green hydrogen in Côte d'Ivoire and propose suitable sites for the establishment of production infrastructure.
- Propose relevant applications for green hydrogen in Côte d'Ivoire, targeting both local market development and export opportunities.
- Conduct economic and financial analyses.
- Develop a roadmap for the deployment of green hydrogen in Côte d'Ivoire.
- Identify and explore financing mechanisms for the strategy, including innovative mechanisms and climate finance.

III- KEY TASKS OF THE CONSULTANT AND EXPECTED DELIVERABLES

1- Key tasks

a) Present the global context of climate change, energy transition, the role of green hydrogen, and opportunities for Côte d'Ivoire.

The Consultant will review climate commitments and international agreements, analyse current and future global trends in energy transition, the role of green hydrogen in this process, as well as the market and trade. He/she will also examine international policies, strategies and best practices related to green hydrogen technologies, while identifying specific opportunities for Côte d'Ivoire (reduction of carbon footprint, job creation, etc.).

b) Collect relevant data for the successful completion of the mission, based on a literature review and official data, with the support of the national technical committee that will be established.

The consultant will be responsible for providing a complete list of the data required to carry out the assignment. He or she will be responsible for collecting scientific data, reports from regional

and international institutions, and any other relevant documents. In addition, he or she will be able to rely on the support of the technical committee for access to certain official data and other national information.

c) ***Assess the current situation in terms of energy, industry, infrastructure, human resources, logistics, and any other aspects relevant to green hydrogen technologies.***

The analysis will focus on the country's current energy situation, including demand, supply, key figures and major infrastructure. It will also take into account the distribution of industries by key sectors, such as agri-food, textiles, metallurgy, cement, petrochemicals, chemicals, transport, etc. The study will also include an inventory of hydrocarbon transport, storage and distribution infrastructures (pipelines, refineries, reservoirs, etc.), as well as export infrastructure, particularly ports and maritime freight. However, particular attention will be paid to water resources, whether underground, surface or maritime, as well as the available treatment infrastructure. Finally, this study will analyse the available human resources.

d) ***Conduct a critical multisectoral analysis of policies, strategies, texts, laws, infrastructure, etc., relating to the development of green hydrogen in Côte d'Ivoire and formulate recommendations.***

The study will take into account current sectoral policies in the areas of energy, agriculture, water, industry, hydrocarbons, the environment, urbanisation, etc. It will also include an inventory of regulatory texts, sectoral strategies, etc. A comprehensive institutional analysis will be carried out, accompanied by a SWOT assessment (strengths, weaknesses, opportunities and threats) of the existing framework in relation to the requirements for green hydrogen production. In addition, the study will examine the infrastructure available for the development of this sector and make recommendations, particularly with regard to tax and financial incentives, etc., as well as any gaps or shortcomings that need to be addressed.

e) ***Assess the potential for green hydrogen in Côte d'Ivoire and propose suitable sites for production infrastructure.***

Based on an analysis of energy potential, existing capacities and future plans, the Consultant will estimate the potential for green hydrogen production in Côte d'Ivoire. It will also propose the most suitable technologies for developing the sector in Côte d'Ivoire and map sites suitable for green hydrogen projects.

f) ***Propose relevant applications for green hydrogen in Côte d'Ivoire, targeting both local market development and export opportunities.***

The study will analyse current uses and demand for hydrogen in Côte d'Ivoire, as well as the potential future demand for green hydrogen. It will identify relevant applications in various sectors, such as agri-food, agriculture, textiles, metallurgy, cement, petrochemicals, chemicals, transport, etc. In addition, the study will analyse opportunities for exporting green hydrogen from Côte d'Ivoire.

g) ***Conduct economic and financial analyses***

The study will include economic and financial analyses aimed at assessing the competitiveness of the green hydrogen produced. It will estimate the costs associated with production, transport and storage, while analysing the profitability of related projects. In addition, it will examine the potential economic benefits of the sector, particularly in terms of financial gains, job creation, impact on the trade balance, etc.

h) Develop a roadmap for the deployment of green hydrogen in Côte d'Ivoire.

At the end of the project, the consultant will be required to draw up a roadmap for the development of green hydrogen in Côte d'Ivoire, setting clear targets for 2030 and 2050. This roadmap will include: the definition of short-, medium- and long-term targets for the country; a timeline for the actions needed to achieve these targets; an estimate of the investment and budget required to implement the strategy. The strategy will also include awareness-raising, communication, capacity building for stakeholders, research and development, and innovation, as well as a proposal for the institutional architecture for its implementation, monitoring and evaluation.

i) Explore financing mechanisms for the strategy

The strategy should propose financing options available for the development of green hydrogen in Côte d'Ivoire, taking into account both traditional and innovative mechanisms.

2- Expected deliverables

The consultant shall produce the following deliverables:

	Deliverables	**Time**
1	Kick-off meeting report	**T0 + 02 weeks**
2	Intermediate technical report on the global context of climate change, energy transition, the role of green hydrogen and opportunities for Côte d'Ivoire	**T0 + 04 weeks**
3	Assessment, situational analysis, potential market, production scenarios, benefits for Côte d'Ivoire	**T0 + 12 weeks**
4	Draft version of the strategy document	**T0 + 20 weeks**
5	The final version of the strategy document	**T0 + 24 weeks**

All reports and documents must be written in French and provided in editable Word format..

IV- DURATION AND TIMETABLE

The consultation period will last six months. The following activities will be planned during the strategy development period.

- Regular online follow-up meetings with WASCAL and MMPE will be organised;
- An in-person kick-off meeting in Abidjan;

- An online meeting to validate the interim technical report on the global context of climate change, energy transition, the role of green hydrogen and opportunities for Côte d'Ivoire
- An online meeting to validate the report on the current situation, situational analysis, potential market, production scenarios, and benefits for Côte d'Ivoire.
- An online meeting for the technical validation of the draft strategy.
- A face-to-face meeting for the strategy validation workshop in Abidjan

The consultant shall report on all meetings. Key experts must be present during the kick-off, feedback and validation workshops. The project manager is required to attend all meetings.

V- COMPOSITION OF THE CONSULTANT TEAM

The Consultant must have international experience in assisting governments with the development of policies or strategies in the field of energy, green hydrogen or related areas. The Consultant must provide the following key expertise:

- **01 Head of Mission**
- **01 Energy and Hydrogen Expert**
- **01 Financial Modelling Specialist**

1- Head of Mission

The Head of Mission will be responsible for the overall coordination of the study and will serve as the Consultant's technical point of contact with WASCAL and the Ministry of Mines, Petroleum and Energy of Côte d'Ivoire.

Diploma: At least a Master's degree or Engineering degree (5 years of higher education) in a relevant field such as renewable energy, green hydrogen, engineering, economics, environmental sciences or related disciplines.

General experience: Minimum 15 years of professional experience in policy and strategy development, infrastructure project development and institutional support.

Specific experience: Proven experience in renewable energy and green hydrogen, management of multidisciplinary teams; experience in sub-Saharan Africa would be an asset.

Languages: French and Fluent in English.

2- Expert in Energy and Green Hydrogen

The Green Energy and Hydrogen Expert will work closely with the Team Leader for technical supervision.

***Diploma*:** At least a Master's degree or Engineering degree (5 years of higher education) in a relevant field (energy, renewable energy, green hydrogen, engineering).

General experience: Minimum 10 years' experience in engineering, modelling and GIS in the fields of energy, hydrocarbons and infrastructure.

Specific experience: Experience in energy systems analysis, infrastructure project development, and the development of energy and hydrogen-related policies, strategies and regulations.

Languages: French and Fluent in English***.***

3- Financial modelling specialist

The financial modelling specialist will work under the supervision of the Team Leader on the economic and financial aspects of the project.

Diploma: At least a Master's degree in Economics or Financial Engineering.

General experience: Minimum 15 years' experience in economics, financial modelling, planning and market research.

Specific experience: Expertise in economic market analysis, financial modelling of energy projects and assessment of the profitability of energy projects.

***Languages*:** French and Fluent in English**.**

VI- TECHNICAL CRITERIA FOR SELECTION

The assessment criteria are summarised in the following table:

	Criteria	Points
1	Consultant's experience in assisting governments with policy or strategy development	20
2	Qualifications and experience of proposed key experts	50
3	Methodological approach for carrying out the mission	30
Total		100

The minimum score required to proceed to the next stage of the process is 70 out of 100.

VII- COMPOSITION OF THE OFFER

The Consultants' application file must consist of a technical proposal and a financial proposal. The technical proposal must clearly highlight the Consultant's experience, detailed CVs of key experts, and a detailed methodology for carrying out the service, as well as a schedule.

The financial offer will be in EUROS excluding tax. For online and face-to-face meetings, WASCAL and MMPE will be responsible for logistics. The Consultant will cover the transport and accommodation costs of its consultants during the face-to-face workshops in Abidjan.

For any questions or clarification, bidders should send an email to: bulgo.j@wascal.org

VIII- Submission of tenders

Bids must be submitted by email only, in a single PDF file, **no later than February 25th 2026**, to the following address: tender@wascal.org