

Terms of reference (ToR) for the procurement of services below the EU threshold

CONFIDENTIAL

STUDY ON GREEN AMMONIA USE IN SMALL-SCALE AGRICULTURAL BUSINESSES IN GEORGIA

**Project number/
cost centre:
21.9025.4-003.00**

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0. List of abbreviations

AG	Commissioning party
AN	Contractor
AVB	General Terms and Conditions of Contract for supplying services and work
FK	Expert
FKT	Expert days
KZFK	Short-term expert
PROGRESS	The regional programme “Promoting Green Deal Readiness in the Eastern Partnership Countries”
ToRs	Terms of reference

1. Context

The regional programme “Promoting Green Deal Readiness in the Eastern Partnership Countries” (PROGRESS) is funded by the International Climate Initiative (IKI) of the German Federal Government, commissioned by the Federal Ministry for the Environment, Natural Conservation, Nuclear Safety and Consumer Protection (BMUV) and is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, in partnership with the Organisation for Economic Co-operation and Development (OECD), the Regional Environmental Centre for the Caucasus (REC), the European Business Association (EBA) Moldova and the Institute of Economics and Forecasting of the National Academy of Sciences of Ukraine (IEF).

The project supports the countries of the Eastern Partnership in their transition to climate-oriented, resilient, and green economic development. More concretely, PROGRESS supports the introduction of more sustainable production patterns in various agricultural value chains in the partner countries through the improvement of institutional framework conditions as well as measures in the related agro industrial and financial sectors. The value chain of fruits, berries (including processed products, such as dried fruit, canned fruit, juice, and others), and nuts in agriculture and resource-efficiency of the respective agro-industrial value chain (such as input industry (e.g., fertilizers, saplings), transport, logistics, processing, packaging, storage, cooling), have been selected based on the missions and recommendations of partners in EaP countries.

A significant challenge in Georgia's agriculture sector is the dominance of small-scale family farms and agricultural holdings, resulting in inefficient farm structures and substantial land fragmentation. As per the 2014 agricultural census, 97% of farms are smaller than 3 hectares, with over three-quarters (77.1%) operating on less than 1 hectare. The average agricultural landholding size is 1.4 hectares, with households averaging 1.2 hectares and legal entities averaging 49.2 hectares. Agricultural development presents substantial investment opportunities and is vital for the overall development of the country, particularly in terms of employment, economic growth, poverty reduction, and food security

The project conducted an assessment considering various economic, environmental, and social criteria, aligning with Georgia's strategies for green and climate-resilient agriculture, which identified the blueberry and almond value chains as most suitable for climate-oriented, resilient, and green economic development. These industries have experienced significant growth in recent years, but the cultivation of both commodities requires frequent fertilization.

The application of mineral fertilizers in Georgia has seen a notable decline which is partly due to the high costs associated with fertilizers, which pose a significant financial burden on small-scale farmers. Access to reliable energy sources in rural Georgia remains a challenge, impacting agricultural operations, including irrigation, processing, and storage. There is urgent need to provide farmers with the tools and knowledge to optimize renewable energy resource use.

The use of ammonia in agriculture has had tremendous impact by providing additional nitrogen to the soil, which leads to more cost-effective agricultural production supporting a larger population and economic gains for farmers. While current production of ammonia is employed by generally fossil-fuel powered Haber-Bosch process, there are emerging new technologies offering a plethora of benefits to farmers and society at large. Green ammonia production technologies hold the potential as an alternative to conventional fossil fuel derived fertilizers, including through supporting the decentralized production on-site.

2. Tasks to be performed by the contractor

The contractor will assess the feasibility, benefits, challenges, and potential adoption of green ammonia (including hydrogen) for small-scale agricultural businesses¹, particularly in the *blueberry and almond* sub-sectors in Georgia and is responsible for providing the following services (including the considerations and answers to the listed questions):

Task 1. Assessing the feasibility and adoption potential of decentralized green ammonia production

- Would farmers be willing to shift from conventional fertilizers to green ammonia if it saves money and improves soil quality?
- What technical, financial, and infrastructural requirements would be necessary?
- How does green ammonia compare with existing fertilizer solutions in terms of cost, effectiveness, and ease of use?

Task 2. Reviewing economic and social benefits of green ammonia use

- Can green ammonia lower fertilizer costs for blueberry and almond farmers in Georgia?
- Could small-scale farmers make extra income by selling surplus green ammonia to neighbors or cooperatives?
- Beyond farming, could green ammonia help create jobs, improve energy access, or support rural businesses?

Task 3. Identifying Environmental & Sustainability Impact of green ammonia use

- What are some of the environmental and sustainability concerns regarding implementation of green ammonia in Georgia?
- Would inputs needed to manufacture and support green ammonia infrastructure and its distribution to farmers be sustainable long term?
- Does the implementation of green ammonia for Georgian farmers lead to lower carbon emissions than comparable to Haber Bosch Nitrogen?

Task 4. Assessing farmers' needs and challenges for the transition²

- What are farmers' perceptions of green technologies and their willingness to adopt new solutions?
- What are the technical and economic feasibility factors for small-scale farmers in Georgia to adopt on-site hydrogen and green ammonia production using renewable energy?

¹ The consultant is required to define the term "small-scale agricultural business" within the context of the blueberry and almond sub-sectors in Georgia. This definition shall be developed in consultation with GIZ and based on appropriate criteria - such as, for example, landholding size, labour structure, or economic output - to ensure alignment with existing classifications used by the FAO and the Ministry of Environmental Protection and Agriculture of Georgia. The final definition will serve as the baseline for analytical components of the study.

² As part of this task, at least two field visits will be conducted in different agricultural regions of Georgia to engage directly with small-scale farmers, cooperatives, and local stakeholders.

- What basic training, advisory support, or minimal infrastructure enhancements might facilitate the adoption of on-site green ammonia solutions by small-scale farmers??

Task 5. Reviewing support schemes and policy considerations

- Are there existing cooperative models that could support small-scale adoption?
- How can farmers be connected to international initiatives for sustainable agriculture?
- What financial support (grants, subsidies, green financing) is available or needed to encourage farmers to invest in green ammonia technology?

Task 6. Preparing the presentation and presenting the study to PROGRESS team and partners

The contractor reports regularly to GIZ in accordance with the current AVB of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

All the documents shall be delivered electronically in English language to GIZ, using the official the reporting format, which will be provided by GIZ.

Certain milestones, as laid out in the table below, are to be achieved during the contract term:

Milestones/process steps/partial services	Deadline/place/person responsible	Deliverable/format
Inception report	15.06.2025	Report in word and pdf
Draft outline of the study	15.07.2025	Draft outline in word
Draft study	15.09.2025	Draft study in word
Presentation	10.10.2025	Slides in ppt/online event
Final study	30.10.2025	Final study in word and pdf

The assignment foresees site visits to the regions of primary production of selected value chains to gather information from farmers.

Period of assignment: from 30.05.2025 until 15.12.2025.

Total expert days: 75 WDs

3. Concept

In the tender, the tenderer is required to show *how* the objectives defined in Chapter 2 (Tasks to be performed) are to be achieved, if applicable under consideration of further method-related requirements (technical-methodological concept). In addition, the tenderer must describe the project management system for service provision.

Note: The numbers in parentheses correspond to the lines of the technical assessment grid.

Technical-methodological concept

Strategy (1.1): The tenderer is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 1 Context) (1.1.1). Following

this, the tenderer presents and justifies the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 2 Tasks to be performed) (1.1.2).

The tenderer is required to present the actors relevant for the services for which it is responsible and describe the **cooperation (1.2)** with them.

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule (1.4.1) that describes how the services according to Chapter 2 (Tasks to be performed by the contractor) are to be provided.

Project management of the contractor (1.6)

The tenderer is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the tender; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

The tenderer is required to describe its backstopping concept. The following services are part of the standard backstopping package, which (like ancillary personnel costs) must be factored into the fee schedules of the staff listed in the tender in accordance with Section 3.3.1 of the GIZ AVB:

- Service-delivery control
- Managing adaptations to changing conditions
- Ensuring the flow of information between the tenderer and GIZ
- Assuming personnel responsibility for the contractor's experts
- Process-oriented steering for implementation of the commission
- Securing the administrative conclusion of the project

4. Personnel concept

The tenderer is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

Team leader

Tasks of the team leader

- Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- Coordinating and ensuring communication with GIZ, partners and others involved in the project
- Personnel management, in particular, identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting local and international short-term experts
- Regular reporting in accordance with deadlines

Qualifications of the team leader

- Education/training (2.1.1): university degree (German 'Diplom'/Master) in Renewable Energy, Environmental Science, Public Administration, Law or related.
- Language (2.1.2): C1-level language proficiency in English
- General professional experience (2.1.3): 10 years of professional experience in the Energy, Climate, Sustainable Agriculture or related sector
- Specific professional experience (2.1.4): 5 years in Renewable Energy, Fertilizer Use, Hydrogen or related.
- Leadership/management experience (2.1.5): 5 years of management/leadership experience as project team leader or manager in a company with preferably project management acknowledgement certificate or diploma
- Development cooperation (DC) experience (2.1.7): 5 years of experience in DC projects

Key expert 1

Tasks of key expert 1

- Environmental, economic and social analysis (including Cost benefit analysis)
- Energy and efficiency analysis
- Integration of energy transition and economic feasibility perspectives
- Infrastructure analysis
- Stakeholder mapping

Qualifications of key expert 1

- Education/training (2.2.1): Economics, Renewable Energy, Environmental Policy, Sustainable Development or similar
- Language (2.2.2): C1 -level language proficiency in English
- General professional experience (2.2.3): 10 years of experience in economic analysis, energy transition, and macroeconomic policy
- Specific professional experience (2.2.4): 10 years of experience in energy sector reform, hydrogen and gas markets
- Regional experience (2.2.6): Proven working experience in the Caucasus region, particularly in Georgia.
- Development Cooperation (DC) experience (2.2.7): 3 years of experience in development cooperation projects, preferably in the context of energy reform.

Key expert 2

Tasks of key expert 2

- Liaise with local stakeholders and ensure smooth communication flows
- Organise and maintain digital records, correspondence, and documentation
- Provide support for the final presentation, including materials and setup
- Support the preparation and submission of reports in line with GIZ requirements

Qualifications of key expert 2

- Education/training (2.3.1): A bachelor's degree in business administration, law, public administration, or a related field plus 10 years of experience in the related field. Master's degree in business administration, law, public administration, or a related field will be an asset. Certified training in project management is considered a strong advantage.
- General professional experience (2.3.3): 10 years of professional experience in project coordination, administration, or management, preferably in the energy or public sector. Demonstrated experience with administrative oversight, internal organisation, and support functions in international or national projects.
- Specific professional experience (2.3.4): 5 years of experience supporting the implementation of projects funded by International Financial Institutions (IFIs) or donors. Experience in stakeholder coordination, monitoring and reporting.
- Regional experience (2.3.6): Proven working experience in the Caucasus region, particularly in Georgia. Familiarity with the administrative, regulatory, and energy policy environment of the region is an advantage.

Key expert 3

Tasks of key expert 3

- Evaluate potential economic and social benefits for farmers and rural communities.
- Analyse environmental and sustainability impacts, including emissions and input requirements.
- Identify adoption barriers and farmer support needs (training, infrastructure, advice).
- Review existing support schemes and financing options for green ammonia uptake.

Qualifications of key expert 3

- Education/training (2.4.1): Bachelor's degree in engineering, energy economics, energy management, or a related field plus 10 years of experience in the related field. A Master's degree or equivalent in energy sector operation, management, or economics is considered an asset.
- General professional experience (2.4.3): 10 years of professional experience in the energy sector, including roles in system operations, electricity markets, regulatory frameworks, or sector governance. Preferably demonstrated experience working with TSOs, wholesale markets, and public energy entities.
- Specific professional experience (2.4.4): 10 years of specific experience in renewable energy support mechanisms.
- Regional experience (2.4.6): Proven working experience in the Caucasus region, particularly in Georgia.

International expert

Tasks of international expert

- Assess technical feasibility of decentralized green ammonia systems for smallholder use in Georgian agriculture.

- Recommend scalable, low-cost system designs for on-site hydrogen and ammonia production using renewable energy.
- Support scenario modeling and cost-benefit analysis for individual and cooperative green ammonia adoption models.
- Contribute technical insights to the final report, including practical recommendations and international best practices.

Qualifications of international expert

- Education/training (2.5.1): Master's degree in environmental science, Agriculture, Engineering or related
- Language (2.5.2): C1 -level language proficiency in English language
- General professional experience (2.5.3): 10 years of professional experience in applied physics, agricultural engineering across academic and/or industrial settings.
- Specific professional experience (2.5.4): 8 years in electrolysis, hydrogen generation, energy storage, and decentralized systems.
- Regional experience (2.5.6): Familiar with the EU and/or United States cooperation contexts.

Soft skills of team members

In addition to their specialist qualifications, the following qualifications are required of team members:

- Team skills
- Initiative
- Communication skills
- Socio-cultural skills
- Efficient, partner- and client-focused working methods
- Interdisciplinary thinking

5. Costing requirements

Assignment of personnel and travel expenses

All business travel must be agreed in advance by the officer responsible for the project

NOTE: GIZ is released from VAT payment in Georgia when purchasing different types of services/goods, therefore, budget should be submitted without VAT. However, potential service providers should consider that they will not be released from VAT payment when purchasing goods/services within the frames of the given assignment.

**** indicated fees shall include income tax and pension fund costs.**

NOTE 1: Please, note that while invoicing, the contractor should provide timesheets along with the invoice, it will be later stated in "General Terms and Conditions of Contract".

Sustainability aspects for travel

GIZ has undertaken an obligation to reduce greenhouse gas emissions (CO₂ emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest-emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO₂ efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.

CO₂ emissions caused by air travel must be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The [Development and Climate Alliance \(German only\)](#) has published a [list of standards \(German only\)](#). GIZ recommends using the standards specified there.

Specification of inputs

Fee days	Number of experts	Number of days per expert	Total	Comments
Designation of TL	1	20		
Designation of key expert 1	1	20		
Designation of key expert 2	1	15		
Designation of key expert 3	1	15		
Designation of international expert	1	5		
Transport	Quantity	Number per expert	Total	Comments
Fixed travel budget			1000	<p>A budget is earmarked for travel to the following countries: Georgia.</p> <p>A fixed budget of GEL 1000 is earmarked for settling travel expenses against evidence.</p> <p>You can find further information on the travel expense budget in the 'Price schedule' document. Please use the 'Explanations' column in the price schedule to break down the individual items. Settlement is possible only until the budget is depleted.</p>

Where a flexible remuneration item is contractually agreed, the contractor shall be permitted to exceed the contractually agreed quantities up to the amount of the flexible remuneration item, taking into account the contractually agreed individual rates and bases for invoicing. The flexible remuneration item covers costs only for items listed where these are contractually agreed. Use of the flexible remuneration item must be approved by GIZ in writing before the costs in question are incurred.

6. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToR. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English (language).

The complete tender must not exceed 10 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages each. They must clearly show the position and job the proposed person held in the reference project and for how long. The CVs can also be submitted in Georgian (language).

Please calculate your financial tender based exactly on the parameters specified in Chapter 5 Quantitative requirements. The contractor is not contractually entitled to use up the days, trips, workshops or budgets in full. The number of days, trips and workshops and the budgets will be contractually agreed as maximum limits. The specifications for pricing are defined in the **price schedule** (please, review and fill in both excel sheets: company-service contract and contract for work).