Feasibility Study of the Sustainable Energy Solution Business Initiatives in Georgia Request for Proposal

CENN – one of the leading environmental NGOs in Georgia – requests proposals on provision of services for "Detailed Feasibility Study of Sustainable Energy Solutions in Selected Rural Communities" in the scope of the project – *Promoting Sustainable Forest Management for Climate Resilient Rural Development in Georgia (SFMRD)*. The project is being implemented with financial assistance provided by the *Austrian Development Cooperation*.

The details of the assignment along with the description of requirements and the criteria for the selection process are provided in the following chapters and annexes.

The proposals for Provision of Services for "Feasibility Study of the Sustainable Energy Solution Business Initiatives in Georgia" should be submitted electronically to <u>rezo.getiashvili@cenn.org</u> and <u>vacancy@cenn.org</u> no later than **February 17, 2020.**

The proposal that complies with all of the requirements, meets all of the evaluation criteria and offers the best value for money shall be selected and awarded the contract. Any offer that does not meet the requirements will be rejected.



Photo: Matani Village, Kakheti region, Georgia





Description of Requirements

Background and Context	 Georgian forests are severely degraded due to increased human pressure and unsustainable extraction of resources and require shared efforts to enforce improved and climate resilient forest management practices. The SFMRD project works at the national and local levels and will tackle concerns faced by state and non-state actors and rural communities related to forest management and rural development. One of the expected outputs of the SFMRD project states the following: a <i>regulatory framework and state programs to introduce sustainable energy solutions is prepared and related incentives are created and tested</i>. In order to achieve the output, the project aims to promote sustainable energy solutions in rural areas to reduce human pressure on forests: Encouraging Public Private Partnerships (PPPs) and Public-Private Community Partnership (PPCPs) development and introduction of incentives promoting sustainable energy solutions (including biomass production and use, and energy efficiency measures, such as advancing the supply quality of existing heating energy, improving access to raw materials for future renewable resource production by collecting unused biomass, development and replication of private energy plantations practices, energy efficient stoves, heating systems, hybrid heaters and other energy-efficient technologies promoting demand / market and delivery / production); Lobbying for regulatory changes and increased state financing by utilizing existing financial instruments (produce in Georgia under Ministry of Economy and Sustainable Development (MESD), rural development programs, etc.), as well as developing new mechanisms (preferential loans, instalment systems, new obligations and arrangements for waste management, illegal employment and black market legalisation in the firewood industry) to support implementation of
	 Piloting rural sustainable energy plans and solutions; Raising awareness and developing the capacity of community institutions to
	create technology transfer readiness.
Context of the Requirements	 Initially, contributing to the aforementioned outcome, the SFMRD project has conducted active discussions with the forestry and energy stakeholders. As a result, ten rural energy solutions have been identified by the private sector (independent business partners). All alternatives listed below already exist and could be a subject of further investments by SFMRD project (according to the feasibility study recommendations) in order to create sustainable energy solutions in rural areas¹ and decrease the anthropogenic pressure on forests. The goal of the assignment is to conduct a comprehensive feasibility study (including quantitative and qualitative (CBA, multi-criteria) analysis, economical / value chain analysis) on sustainable energy solutions for rural areas, listed below: Development of a poplar tree energy plantation (Abasha village, Samegrelo-Zemo Svaneti).
	trees) yielding energy crop farming in the villages of Orulu-Ergeta and

¹ Equally accessible to both men and women in rural areas.

	Ganmukhuri (Samegrelo-Zemo Svaneti region).				
	3. Wood charcoal and chips production from woody biomass accumulated in				
	the forest or wood debris accumulated by rivers in a selected community in				
	Mestia, Samegrelo-Zemo Svaneti region.				
	4. Brownfield remediation ² for solid biomass cultivation, collection, fuel				
	conversion and heat utilization in the Mtskheta-Mtianeti region.				
	5. Charcoal production from deadwood accumulated in the forests of				
	Sagarejo. Kakheti region.				
	6. Bullerian stove production in Zugdidi. Samegrelo-Zemo Svaneti.				
	7. <i>Kuruka</i> stove production (operates with tree/branch cuttings and twigs) for				
	the Mtskheta Mtjaneti region				
	8 Substituting firewood stoves with gas stoves in greenhouse farms (Kabali				
	Village Kakheti region)				
	9 Crupto mining as a renewable energy generator in the Mtskheta-Mtianeti				
	5. Crypto mining as a renewable energy generator in the Miskneta-Milanet				
	10. Establishing a hybrid energy station in a densaly non-ylated village in the				
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	Mtskheta-Mtianeti region.				
	The details are provided in the Terms of Reference (Annex 2).				
	Ine expected outcome of the proposed assignment is to identify all the feasible				
	financially by the SEMRD project or state stakeholders and therefore provide rural				
	populations with an accessible, sustainable eneray source.				
	Also, the goal is to provide the private companies working on rural energy				
	solutions in Georgia with recommendations regarding their products/services.				
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² In the given context, brownfield remediation involves the recreational areas that yield solid biomass (no significant conversion technologies are required). The goal of the activity is to study only degraded areas that are of no use for population or the environment and find ways to transform those areas into green areas (recreational parks) with potential of harvesting solid (woody) biomass. ³ The workshop costs will be covered by CENN and should not be presented in the financial proposal of the applicant.

	 recommendations in the English language for review and feedback of project stakeholders. 4. Presentation of the study's preliminary results at the workshop for the stakeholders to review and provide feedback 5. Final feasibility study report on rural energy solution alternatives listed above in the English language. 6. PPT on the final results of the feasibility study. 		
	ror jurther details, please rejer to the rerns of Reference (Annex 2).		
Supervisor in			
Charge of	Project Manager, Mr. Rezo Getiashvili.		
Overseeing the			
Service Provider			
Frequency of Reporting	The service provider should prepare brief monthly progress reports reflecting the schedule of activities, progress achieved as well as challenges encountered in the implementation process. The service provider is requested to organize presentations of draft survey reports to stakeholders in order to review the results and receive timely feedback.		
Location of Work	From the office of the firm; at least 25-30% of the man days from Tbilisi (Capital of Georgia) and possibly in the regions of Samegrlo-Zemo Svaneti, Mtskheta-Mtianeti and Kakheti.		
Target Start Date	24 February, 2020		
Target End Date	15 May, 2020		
Implementation schedule indicating breakdown and timing of activities/sub- activities	⊠ Required		
Names and curriculum vitae of individuals who will be involved in	⊠ Required		
completing the	For further details please refer to the Terms of Reference.		
Currency of Proposal			
Value Added Tax on Price Proposal	□ Must exclude VAT and other applicable indirect taxes		

	Outputs	Percentage	Condition for Payment Release	
Payment Terms	1. Detailed work-plan and methodology to be used for the feasibility study	30%		
	 Draft feasibility report-Analyses and recommendations on energy solution initiatives Presentation of the draft report for the broad selection of the forestry sector stakeholders 	30%	 Within five (5) days from the date of meeting the following conditions: a) CENN's written confirmation of the quality of the outputs; b) Receipt of invoice from the Service Provider. 	
	 Finalized feasibility studies' report 	40%		
Criteria for the Assessment of the Proposal	 Technical Proposal (60%) Maximum Obtainable Points - 60 ☑ Expertise of the Firm - 25% ☑ Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan - 25% ☑ Management Structure and Qualification of Key Personnel - 10% Financial Proposal (40%) Maximum Obtainable Points - 40 To be computed as a ratio of the Proposal's offer at the lowest price amongst the proposals received by CENN. For further details please refer to the Technical Proposal Evaluation Form (Annex 3). The technical proposal is evaluated on the basis of its responsiveness to the Term of Reference (TOR) and scoring is allocated in accordance with Annex 3. If the offer does not meet any of the minimum technical qualification criteria/requirements given in 			
Annexes to the proposal	 Form for Submission of Proposal (Annex 1) Detailed TOR (Annex 2) Technical Proposal Evaluation Form (Annex 3) 			
Contact Person for Inquiries (written inquiries only)	Rezo Getiashvili – rezo.getiashvili@cenn.org (CC: nino.bregadze@cenn.org)			

FORM FOR SUBMITTING THE SERVICE PROVIDER'S PROPOSAL⁴

[insert: Location]. [insert: Date]

To:

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to CENN in conformity with the requirements defined in the RFP dated [specify date], and all of its attachments, as well as the provisions included the CENN General Contract Terms and Conditions:

A. Qualifications of the Service Provider

The Service Provider must have:

• At least 3 years of experience in business evaluation and operational analysis / financial analysis / business consulting in finance and operations (*min. requirement*)

• At least 3 years of work experience in the energy sector / energy efficiency / sustainable or renewable energy, climate mitigation and adaptation (*min. requirement*)

• Environmental management, management of natural resources and environmental assessment (**min.** requirement)

The Service Provider must describe and explain how and why they are the best entity that can deliver the requirements of CENN by indicating the following:

• Profile – describing the nature of business, field of expertise;

• Company/experts Qualification record (Track Record) – indicating description of contract scope, contract duration, contract value, contact references proving at least 3 years' experience in required fields and sectors (**min. requirement**);

• CVs demonstrating qualifications of personnel;

• Written confirmation from each involved person that they are available for the duration of the contract.

B. Proposed Methodology for the Completion of Services

The Service Provider must describe how it will address/deliver the demands of the RFP; providing description of the essential performance characteristics, reporting conditions and quality assurance mechanisms that will be put in place, while demonstrating that the proposed methodology will be appropriate to the local conditions and context of the work.

⁴ This serves as a guide to the Service Provider in preparing the proposal.

C. Qualifications of Key Personnel

Service Provider must provide:

a) Names and qualifications of key personnel:

At a minimum:

(1) Team Leader with minimum of 3 years' experience and knowledge in the required fields and experience in compiling data and research (**min. requirement**)

(2) Two experts with min 3 years of experience in required fields (one in business/economy/finance and one in energy with sound knowledge in climate change and environment (*min. requirement*)
(4) Another professional team to fulfill the requirements as depicted in this RFP, if deemed appropriate by the contractor.

b) CVs demonstrating qualifications must be submitted;

D. Cost Breakdown by Cost Component [This is only an example]:

Description of Activity	Remuneration per	Total Period of	No. of Personnel	Total Rate
I. Personnel Services	uuy	Lingugerient		
1. Team Leader				
2. Expert				
3. Expert				
4. Other team member				
II. Out of Pocket Expenses				
1. Travel Costs				
2. Cost for Laboratory Analysis				
3. Others				
III. Other Related Costs				

Terms of Reference

Provision of Services for "Detailed Feasibility Study of Sustainable Energy Solutions in Selected Rural Communities of Georgia"

Background:

Georgian forests are severely degraded due to increased human pressure and unsustainable extraction of resources and require shared efforts to enforce improved and climate resilient forest management practices. The SFMRD project works at the national and local levels and will tackle concerns faced by state and non-state actors and rural communities related to forest management and rural development.

It is noteworthy, that in 2017, Georgia ratified the Paris Agreement on climate change including a nationally determined contribution (NDC) to reduce greenhouse gas (GHG) emissions. As part of the NDC, Georgia has submitted to the UNFCCC several NAMA (Nationally Appropriate Mitigation Action) including in forestry and rural energy sectors, which the project is intended to support.

One of the expected outputs of the SFMRD project states the following: a regulatory framework and state programs to introduce sustainable energy solutions is prepared and related incentives are created and tested.

In order to achieve the output, the project aims to promote sustainable energy solutions in rural areas to reduce human pressure on forests:

- Encouraging Public Private Partnerships (PPPs) and Public-Private Community Partnership (PPCPs) development and introduction of incentives promoting sustainable energy solutions (including biomass production and use, and energy efficiency measures, such as advancing the supply quality of existing heating energy, improving access to raw materials for future renewable resource production by collecting unused biomass, development and replication of private energy plantations practices, energy efficient stoves, heating systems, hybrid heaters and other energy-efficient technologies promoting demand / market and delivery / production);
- Lobbying for regulatory changes and increased state financing by utilizing existing financial instruments (produce in Georgia under Ministry of Economy and Sustainable Development (MESD), rural development programs, etc.), as well as developing new mechanisms (preferential loans, instalment systems, new obligations and arrangements for waste management, illegal employment and black market legalisation in the firewood industry) to support implementation of region-specific rural sustainable energy plans and sustainable energy solutions;
- Piloting rural sustainable energy plans and solutions;
- Raising awareness and developing the capacity of community institutions to create technology transfer readiness.

Scope of Services, Expected Outputs and Target Completion:

The selected organization/entity is expected to conduct:

- (1) Comprehensive feasibility assessment (including quantitative and qualitative (CBA, multicriteria) analysis)) of the energy solution alternatives proposed by business companies in Georgia (focusing on technical, organizational and financial structure, analyze costs and revenues to yield an acceptable return on investment, potential consumer and market analysis, assessment of implementation barriers and tools for overcoming such barriers, environmental impact, etc.) for the following rural energy solution projects listed below:
 - 1. Development of a poplar tree energy plantation (Abasha village, Samegrelo-Zemo Svaneti).

- 2. Development of family-owned and operated solid (woody) biomass (*Alnus* trees) yielding energy crop farming in the villages of Orulu-Ergeta and Ganmukhuri (Samegrelo-Zemo Svaneti region).
- 3. Wood charcoal and chips production from woody biomass accumulated in the forest or wood debris accumulated by rivers in a selected community in Mestia, Samegrelo-Zemo Svaneti region.
- 4. Brownfield remediation⁵ for solid biomass cultivation, collection, fuel conversion and heat utilization in the Mtskheta-Mtianeti region.
- 5. Charcoal production from deadwood accumulated in the forests of Sagarejo, Kakheti region.
- 6. Bullerjan stove production in Zugdidi, Samegrelo-Zemo Svaneti.
- 7. *Kuruka* stove production (operates with tree/branch cuttings and twigs) for the Mtskheta Mtianeti region.
- 8. Substituting firewood stoves with gas stoves in greenhouse farms (Kabali Village, Kakheti region).
- 9. Crypto mining as a renewable energy generator in the Mtskheta-Mtianeti region⁶.
- 10. Establishing a hybrid energy station in a densely populated village in the Mtskheta-Mtianeti region.⁷

For this reason, an organization/team of experts is expected to design an appropriate methodology of research, organize the work, and collect and analyze data. The research mechanism shall be developed by an organization in close cooperation with CENN.

The assessment for each alternative should be conducted according to, but not limited to, the criteria listed below:

 Technical feasibility – Evaluation of the technical system of the proposed rural energy solution (efficiencies, power, performance, etc.). What are the main strengths and weaknesses of the final product of the energy solution? What are the main benefits to the rural population (beneficiaries)?

What resources/ Raw materials are required in order to produce the product? Can the business company proposing the rural energy solution acquire the resources needed for production? What are the current regulations for the product? Are there any success stories in the country or internationally for successfully using the product under similar circumstances?

2. **Market feasibility** – Who are the main consumers of the products? Are the consumers ready to pay proposed price for the product? How is/will the product/service be positioned at the market?

Are there any other producers of the similar product/service currently on the market? What are the main strengths and weaknesses of the already existing alternative product/service?

3. **Commercial feasibility** – What are the strengths and weaknesses of the business? What are the potential sale volumes of the product/service? What is the Return on Investment (ROI)? What is the long run sustainability of the projects?

⁵ In the given context, brownfield remediation involves the recreational areas that yield solid biomass (no significant conversion technologies are required). The goal of the activity is to study only degraded areas that are of no use for population or the environment and find ways to transform those areas into green areas (recreational parks) with potential of harvesting solid (woody) biomass.

⁶ The continuity of power supply at the Mining Center is ensured by the synchronization of hydrogen and solar generators. The residual heat generated by the processes is directed to the hot water supply.

⁷ The following sources of renewable energy are used: residual biomass, solar collectors and photovoltaics, heat pump, hydrogen generation.

- 4. **Overall risk assessment** Identication of the major risks for the project and the recommended mitigation measures for these risks.
- 5. Environmental impact analysis Evaluate the effect on global warming and effects on the local environment from emissions from the proposed system. Does the proposed energy solution have a potential to decrease human pressure on local forests? The environmental impact assessment shall be conducted in accordance with the ADA guideline on Environmental, Gender and Social Impact Management document.⁸
- 6. Gender, social, cultural and health impact analysis Is the product of the energy solution equally accessible to women and men? Does the proposed energy solution have a potential to serve as an affordable, sustainable energy source for the target group (rural population of the area)? Is there any risk to the health of the product consumer? Are there any mitigation measures to be considered in order to mitigate health risks of the consumer? Can the production potentially harm cultural heritage of any kind?

The recommendations should be part of the final report of the feasibility assessment. If production is not feasible, determine what economic, legal, or other conditions should be introduced to make production feasible. A feasibility analysis should be based on real business environment information and include detailed calculations that will also be available for further analysis. Scenario analysis for most probable or desirable options should be provided.

- (2) **The workshop** for review and feedback of project stakeholders aimed at selecting 4 energy solutions (in 4 communities) for feasibility study.
- (3) Final Feasibility Study Report of the Sustainable Energy Solution Business Initiatives in Georgia.

Institutional Arrangement:

The service provider will be directly supervised by CENN through its Project: "*Promoting Sustainable Forest Management for Climate Resilient Rural Development in Georgia.*"

The service provider should prepare monthly progress reports reflecting the schedule of activities, progress achieved as well as challenges encountered in the implementation process.

The service provider is requested to present the draft survey reports for stakeholders in order to review the results and receive timely feedback.

Upon completion of the subtasks, the contractor shall submit a brief report to the Project Manager upon completion of the assignment, comments on main conclusions and suggestions made.

1. Duration of Work:

The expected duration of the required services is up to three months starting by **February 24, 2020** and ending on May 15, 2020.

2. Deliverables:

The contractor will work under the general guidance and supervision of CENN through the Project Manager and should provide CENN with:

1) Detailed work-plan and methodology of feasibility study of the Sustainable Energy Solution Business Initiatives in Georgia (content, parameters, etc.) for each alternative, cleared and approved by CENN in the English language.

⁸https://www.entwicklung.at/fileadmin/user_upload/Dokumente/Publikationen/Handbuecher/Environmental_and_Social_Impact_Manag ement/EGSIM_Manual_Juni2018.pdf.

- 2) Brief progress reports reflecting the schedule of activities, progress achieved as well as challenges encountered in the implementation process.
- 3) Draft feasibility assessment report on energy solution alternatives listed above covering product/service analysis, cost and benefit calculations, environmental impact analysis, market and potential beneficiaries and recommendations in the English language for review and feedback of project stakeholders.
- 4) Presentation of the study's preliminary results at the workshop for the stakeholders to review and provide feedback
- 5) Final feasibility study report on rural energy solution alternatives listed above in the English language.
- 6) *PPT on the final results of the feasibility study.*

3. Qualifications and Experience

The Service Provider should be experienced in business or financial analysis, business plan development, and the energy sector. More specifically, the Offeror should be in compliance with the following criteria:

- At least 3 years of experience in business evaluation and operational analysis / financial analysis / business plan development / business consulting in finance and operations (*min. requirement*).
- At least 3 years of work experience in the energy sector / energy efficiency / sustainable or renewable energy (*min. requirement*).
- Experience in environmental management, management of natural resources and environmental impact assessment.
- Qualified and experienced team consisting of, at a minimum: (1) Team Leader with minimum of 3 years' experience and knowledge of the required fields and experience in organizing studies; (*min. requirement*) (2) Two experts with a minimum of 3 years of experience in required fields (one in business/economy/finance and one in energy; (*min. requirement*) (3) Another professional team, if deemed appropriate by the contractor, to fulfill the requirements as depicted in this RFP.

4. Documents to be submitted:

- Profile describing the nature of business, field of expertise;
- Company/Team of Experts Qualification record (Track Record) indicating description of contract scope, contract duration, contract value, contact references proving at least 3 years' experience in required fields and sectors;
- CVs demonstrating qualifications of personnel;
- **Implementation schedule** indicating breakdown and timing of activities/sub-activities for the proposed assighment.

5. Payment Modality and Schedule:

The winning company will be paid in three installments upon satisfactory accomplishment of each of the above-mentioned phases and according to the following scheme:

First installment: 30% of total contract value upon submission to and acceptance by CENN of detailed work-plans and methodologies.

Second installment: 30% of total contract value upon submission to and acceptance by CENN of draft Feasibility Assessment report.

Third installment: 40% of total contract value upon submission to and acceptance by CENN of the Finalized Feasibility studies.

6. Criteria for Selecting the Best Offer

The Proposal that complies with all of the requirements, meets all of the evaluation criteria and offers the best value for money will be selected and awarded the contract. Any offer that does not meet the minimum requirements will be rejected. Selection of candidates will be based on the Cumulative Analysis methodology:

Technical (60 points) and Financial (40 points) criteria.

Annex 3 Technical Proposal Evaluation Form

Technical Proposal	60%	Max Points
Expertise of the Firm		
At least 3 years of experience in business evaluation and operational analysis, financial analysis, business plan development or business consulting in finance and operations <i>(min. requirement)</i>		9
At least 3 years of work experience in the energy sector, energy efficiency or sustainable/renewable energy (<i>min. requirement</i>)		9
Environmental management, management of natural resources and environmental impact assessment (<i>min. requirement</i>)		7
No experience - 1		
Experience - 70		
Total:	25%	25
Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan		
Does the Offeror fully understand the task? Is the scope of the task well defined and does it correspond to the TOR?	10%	10
Full Understanding - 100		
Fair Understanding (min. requirement) - 20		
Appropriateness of the methodology in terms of the condition	10%	10
Comprehensive and systematic methodology - 100		
Fairly appropriate methodology (min. requirement) - 20		
Timeliness of the implementation plan	5%	5
Completely appropriate - 50		
Fairly appropriate (min. requirement) - 10		
Total:	25%	25
Management Structure and Qualification of Key Personnel		
Team Leader with a minimum of 3 years of experience and knowledge in the required fields and experience in organizing surveys/studies (<i>min. requirement</i>)	5%	5
Expert with a minimum of 3 years of experience in business evaluation and operational analysis, financial analysis, business plan development or business consulting in finance and operations <i>(min. requirement)</i>	2%	2
Expert with a minimum of 3 years of experience in the energy sector, energy efficiency or sustainable/renewable energy (<i>min. requirement</i>)		2
Another professional team, if deemed appropriate by the contractor, to fulfill the requirements as depicted in this RFP		1
No other professional team - 1		
Other professional team - 20		
Total:		10
Maximum Technical Total		60
Financial Proposal		
Budget Proposals (to be computed as a ratio of the Proposal's Offer to the lowest price amongst the proposals received by CENN)		40
Maximum Financial Total		40
Total:	100%	100