REQUEST FOR PROPOSAL (RFP)
(For Low-Valued Services)

00101058, UNDP-GEF Project the "Derisking Renewable Energy Investment in Kazakhstan" (DREI)	DATE: August 5, 2021
	REFERENCE: RFP-2021-040 Analysis of the potentials of the application of renewable energy technologies in the agricultural sector and rural areas of Kazakhstan

Dear Sir / Madam:

We kindly request you to submit your Proposal for analysis of the potentials of the application of renewable energy technologies in the agricultural sector and rural areas of Kazakhstan.

Please be guided by the form attached hereto as Annex 2a and Annex 2b, in preparing your Proposal.

Proposals (Technical and Financial proposals, where financial proposal must be password protected) should be submitted on or before Monday, August 23, 2021, 16:00 (Nur-Sultan time zone) and via following email: procurement.kz@undp.org

Your Proposal should be expressed in the Russian[1] or English languages, with indication of Request for proposal number and valid for a minimum period of 90 days.

In the course of preparing your Proposal, it shall remain your responsibility to ensure that it reaches the address above on or before the deadline. Proposals that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your Proposal by email, kindly ensure that they are signed and in the .pdf format, and free from any virus or corrupted files.

Services proposed shall be reviewed and evaluated based on completeness and compliance of the Proposal and responsiveness with the requirements of the RFP and all other annexes providing details of UNDP requirements.

The Proposal that complies with all of the requirements, meets all 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 shall be rejected.

[1] Information required by Annex 2a (company's profile, experience record, Methodology and key personnel) and Annex 2b (financial proposal) should be provided in English; other documents and information could be provided in Russian.

Any discrepancy between the unit price and the total price shall be re-computed by UNDP, and the unit price shall prevail, and the total price shall be corrected. If the Service Provider does not accept the final price based on UNDP's re-computation and correction of errors, its Proposal will be rejected.

No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the Proposal. At the time of Award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

Any Contract or Purchase Order that will be issued as a result of this RFP shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a Proposal implies that the Service Provider accepts without question the General Terms and Conditions of UNDP, herein attached as Annex 3.

Please be advised that UNDP is not bound to accept any Proposal, nor award a contract or Purchase Order, nor be responsible for any costs associated with a Service Providers preparation and submission of a Proposal, regardless of the outcome or the manner of conducting the selection process.

UNDP's vendor protest procedure is intended to afford an opportunity to appeal for persons or firms not awarded a Purchase Order or Contract in a competitive procurement process. In the event that you believe you have not been fairly treated, you can find detailed information about vendor protest procedures in the following link: https://www.undp.org/procurement/business/protest-and-sanctions

UNDP encourages every prospective Service Provider to prevent and avoid conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, cost estimates, and other information used in this RFP.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to preventing, identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its Service Providers to adhere to the UN Supplier Code of Conduct found in this link :
https://www.un.org/Depts/ptd/sites/www.un.org.Depts.ptd/files/files/attachment/page/pdf/unscc/conduct_english.pdf

Thank you and we look forward to receiving your Proposal.

Sincerely yours,

Zhanat Tileumuratova

Zhanat Tileumuratova
Procurement Associate
8/5/2021

Vitalie Vremis
Deputy Resident Representative
8/5/2021

Annex 1

Description of Requirements

Context of the Requirement	00101058, UNDP-GEF Project "Derisking Renewable Energy Investment in Kazakhstan" (DREI)
Implementing Partner of UNDP	Ministry of Energy of the Republic of Kazakhstan
Brief Description of the Required Services	Analysis of the potentials of the application of renewable energy technologies in the agricultural sector and rural areas of Kazakhstan
List and Description of Expected Outputs to be Delivered	The detailed outputs and deliverables are given in the Terms of Reference (see Annex 3)
Person to Supervise the Work/Performance of the Service Provider	International Chief Technical Advisor (ICTA) and DREI Project Manager
Frequency of Reporting	According to the Terms of Reference
Progress Reporting Requirements	According to the Terms of Reference
Location of work	☐ Exact Address/es *[pls. specify]* ☒ At Contractor's Location with trips to Kazakhstan
Expected duration of work	8 months
Target start date	September 2021
Latest completion date	April 2022
Travels Expected	Please see Terms of Reference
Special Security Requirements	☒ In connection with the COVID-19 pandemic, the Service Provider undertakes to provide all the necessary protective equipment for its employees and comply with all WHO standards and recommendations for performing work during the epidemic.
Implementation Schedule indicating breakdown and timing of activities/sub-activities	☒ Required
Names and curriculum vitae of individuals who	☒ Required

<table>
<tr><td>will be involved in completing the services</td><td></td></tr>
<tr><td>Currency of Proposal</td><td>☒ Local Currency – KZT for National Suppliers
☒ USD – for foreign Suppliers (non-resident of Kazakhstan)</td></tr>
<tr><td>Value Added Tax on Price Proposal</td><td>☒ must be inclusive of VAT and other applicable indirect taxes for national Suppliers
☒ must be exclusive of VAT and other applicable indirect taxes for foreign Suppliers (non-residents of Kazakhstan)</td></tr>
<tr><td>Validity Period of Proposals (Counting for the last day of submission of quotes)</td><td>☒ 90 days
In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal.</td></tr>
<tr><td>Partial Quotes</td><td>☒ Not permitted</td></tr>
<tr><td>Payment Terms</td><td>
<table>
<tr><th>Outputs</th><th>%</th><th>Timing</th><th>Condition for Payment Release</th></tr>
<tr><td>Works performed under Tasks 1, 2 and 3 of the TOR

The energy consumption (electricity and heat) in energy and monetary units (with a regional breakdown), identified the areas with the highest energy needs including specific energy consumption assessed</td><td>20%</td><td>16 weeks from the date of commencement of works</td><td rowspan="3">Within thirty (30) days from the date of meeting the following conditions:
a) UNDP’s written acceptance (i.e., not mere receipt) of the quality of the outputs; and
b) Receipt of invoice from the Service Provider.</td></tr>
<tr><td>Works performed under Tasks 4, 5 and 6 of the TOR

An initial assessment of the potential for the application of various renewable energy technologies conducted, financial model (tool) developed for feasibility analysis, a detailed analysis on solid biomass potential usage developed</td><td>30%</td><td>20 weeks from the date of commencement of works</td></tr>
<tr><td>Works performed under Tasks 7, 8, 9 and 10 of the TOR

Analysis of the economic efficiency of replacing traditional fuel (coal/diesel fuel / liquefied and natural gas) with biomass developed. Evaluation of the opportunities and potentials for productive uses of renewable energy</td><td>30%</td><td>28 weeks from the date of commencement of works</td></tr>
</table>
</td></tr>
</table>

	(PURE) conducted, detailed resource map developed.			
	Works performed under Tasks 11, 12 and 13 of the TOR *Proposed engineering and financial plans prepared, biomass resources data updated, resource map developed. Presentation of the results developed and presented to the stakeholders.*	20%	32 weeks from the date of commencement of works	

Person(s) to review/inspect/ approve outputs/completed services and authorize the disbursement of payment	*DREI Project Manager and International Chief Technical Adviser (ICTA)*
Type of Contract to be Signed	☒ Contract for Professional Services
Criteria for Contract Award	☒ Highest Combined Score (based on the 70% technical offer and 30% price weight distribution) ☒ Full acceptance of the UNDP Contract General Terms and Conditions (GTC). This is a mandatory criterion and cannot be deleted regardless of the nature of services required. Non-acceptance of the GTC may be grounds for the rejection of the Proposal.
Criteria for the Assessment of Proposal	**<u>Technical Proposal (70%)</u>** ☐ Expertise of the Firm 30% ☐ Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan 25% ☐ Management Structure and Qualification of Key Personnel 45%

	Summary of Technical Proposal evaluation forms	Assessment weight	Max points
1	Assessment of the Company / Organization	30%	210
2	Proposed methodology, strategy, and implementation plan	25%	175
3	Management structure and key personnel	45%	315
	TOTAL		700

	Evaluation of the Technical Proposal	**Max points**
	Expert assessment of the Firm / Organization	
1.1	Have at least 10 years of experience in the development, design, and documentation of scientific and technical solutions in the agriculture sector:	170

	less than 10 years – 0 points; *10 years - 119 points;* *11-13 years - 136 points;* *14 years and above - 170 points.*	
1.2	Availability of material and technical, methodological, regulatory, including special software, for performing design work, including for calculating renewable energy technologies: *Confirmed – 20 points;* *Not confirmed – 0 points.*	20
1.3	At least 5 recommendations from previous clients for similar/analogous services: *5 letters – 20 points;* *less than 5 letters – 0 points.*	20
	TOTAL:	**210**
	Proposed methodology, strategy and implementation plan	
2.1	Understanding of the essence, methodology and expected results of the project corresponds to the terms of reference and is reflected in the proposal	100
2.2	Work schedule (must include the composition of the team and the distribution of responsibilities)	75
	TOTAL:	**175**
	Qualification of key personnel	
3.1	**Project manager**	
3.1.1	Higher education in engineering (preferably agricultural or mechanical) and applied sciences (e.g., economics and/or agriculture): *higher education –11 points;* *Master's degree and above - 15 points.*	15
3.1.2	At least 10 years of experience in research organizations in the field of preparation (development) of design solutions/documentation (feasibility study, business plans) in agriculture: *less than 10 years – 0 point* *10 years - 29 points;* *11 years and above - 41 points.*	41
3.1.3	At least 5 years of experience as a project manager in agriculture: *less than 5 years – 0 point* *5 years - 14 points;* *6 years and above - 20 points.*	20
3.1.4	Experience in analyzing sectors of the economy and economic models and systems, experience in transport and logistics sectors would be an asset: *have experience – 7 points;* *no experience -0 points.*	7
3.1.5	Excellent knowledge of legislative and other regulatory documents in the field of agriculture:	7

		have experience – 7 points; *no experience -0 points.*	
	3.1.6	Work experience in analyzing sectors of the economy, in general, and particularly the agriculture sector, and in the development and use of economic analysis models and systems: *have experience – 7 points;* *no experience -0 points.*	7
		TOTAL:	**97**
	3.2	**Expert 1**	
	3.2.1	Higher education in economics and/or agriculture: *higher education - 11 points;* *Master's degree and above - 15 points.*	15
	3.2.2	At least 7 years of experience in design, research organizations in engineering and technical positions: *less than 7 years – 0 point* *7 years - 21 points;* *8 years and above - 30 points.*	30
	3.2.3	Experience in preparing feasibility studies or business plans in the field of agriculture and organizing business processes, developing business strategies: *have experience – 7 points;* *no experience -0 points.*	7
	3.2.4	Practical experience in the implementation of agricultural projects (business plans, consulting on the construction of various agricultural facilities): *have experience – 7 points;* *no experience -0 points.*	7
	3.2.5	Knowledge of methodological and regulatory documents for the design, construction, and operation of agricultural facilities; technical, economic, environmental, and social requirements for the designed facilities: *have knowledge – 7 points;* *no knowledge -0 points.*	7
		TOTAL:	**66**
	3.3	**Expert 2**	
	3.3.1	Higher technical education, in engineering (preferably agricultural or mechanical) and applied sciences: *higher education - 11 points;* *Master's degree and above - 15 points*	15
	3.3.2	At least 7 years of experience in design, research organizations in engineering and technical positions: *less than 7 years – 0 point* *7 years - 21 points;* *8 years and above - 30 points.*	30
	3.3.3	At least 5 years of work experience in conducting feasibility analyses and developing engineering and financial plans for projects on renewable energy and energy efficiency: *less than 5 years – 0 point*	20

	5 years - 14 points; *6 years and above - 20 points.*	
3.3.4	Knowledge and skills in using tools and other technical guides for the development of construction and engineering installation designs and plans, and in the implementation of the approved plans: *have knowledge – 7 points;* *no knowledge -0 points.*	7
3.3.5	Experience in performing design work and drawing up estimates and financial/technical and economic calculations for agricultural or industrial facilities: *have experience – 7 points;* *no experience -0 points.*	7
3.3.6	Practical experience in determining the cost of repair, installation, and construction work: *have experience – 7 points;* *no experience -0 points.*	7
3.3.7	Experience in organizing logistic schemes, complex project management organizations would be an advantage: *have experience – 7 points;* *no experience -0 points.*	7
	TOTAL:	**93**
3.4	**Expert 3**	
3.4.1	Higher education in economics, or a related field: *higher education - 11 points;* *Master's degree and above - 15 points*	15
3.4.2	At least 7 years of experience in design, research organizations in the specialty: *less than 7 years – 0 point* *7 years - 21 points;* *8 years and above - 30 points.*	30
3.4.3	Practical experience in economic calculations of feasibility studies, fuel and energy resources, feasibility studies or business plans in the field of finance (loans, direct investments, corporate finance): *have experience –7 points;* *no experience -0 points.*	7
3.4.4	Knowledge of methodological, regulatory, and other guiding documentation regarding the development of construction, the implementation of design, and construction works: *have knowledge – 7 points;* *no knowledge -0 points.*	7
	TOTAL:	**59**
	TOTAL	**315**

<u>Financial Proposal (30%)</u>

	To be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP.
List of required documents[2]	Please see Annex 4
UNDP will award the contract to	☒ One and only one Service Provider
Contract General Terms and Conditions[3]	☒ General Terms and Conditions for contracts (goods and/or services) Applicable Terms and Conditions are available at: http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
Annexes to this RFP[4]	☒ Form for Submission of Proposal (Annex 2a and Annex 2b) ☒ Detailed TOR (Annex 3) ☒ Checklist for Suppliers (Annex 4)
Contact Person for Inquiries (Written inquiries only)[5]	*Meruyert Bolyssayeva* *Procurement Specialist* *meruyert.bolyssayeva@undp.org* Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.
The pre-bid conference meeting will take place:	Time: 16:00 (Nur-Sultan time-zone) Date: 13 August 2021 Location: Zoom-call In case of interest in participation at the pre-bid conference, the Suppliers should send participation notification to procurement.kz@undp.org with a copy to meruyert.bolyssayeva@undp.org **not later than 12th August 2021, 18:00** (Nur-Sultan time) UNDP will provide the meeting link with all interested participants one day before the pre-bid meeting.
Deadline for the Submission of Proposal	16:00 (Nur-Sultan time zone) 23 August 2021

[2] The list of required documents is indicated in Annex 4

[3] *Service Providers are alerted that non-acceptance of the terms of the General Terms and Conditions (GTC) may be grounds for disqualification from this procurement process.*

[4] *Where the information is available in the web, a URL for the information may simply be provided.*

[5] *This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.*

Method of Submission	IMPORTANT: Suppliers must submit their offers via electronic mail procurement.kz@undp.org with obligatory indication of the name of the contest RFP-2021-040_UNDP-KAZ in the subject of the letter. The technical and financial parts of the Proposal should be presented in separate files. Financial offer (Annex 2b) should be password protected. The password to the Financial Proposal should not be provided to UNDP until a request has been received from the UNDP Procurement Associate, Zhanat Tileumuratova. Offer submission address: procurement.kz@undp.org ▪ File Format: **PDF** ▪ File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. ▪ All files must be free of viruses and not corrupted**.** It's not recommended to archive documents through RAR and ZIP. ▪ Max. File Size per transmission: **20 Mb** ▪ Mandatory subject of email: **RFP-2021-040_UNDP-KAZ** ▪ Multiple emails must be clearly identified by indicating in the subject line "email no. 1 of 5", and the final "email no. 5 of 5, in case your Offer consists of several e-messages. ▪ It is recommended that the entire Technical offer be consolidated into as few attachments as possible.

Annex 2a

FORM FOR SUBMITTING SERVICE PROVIDER'S TECHNICAL PROPOSAL[6]

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery[7])

[insert: *Location]*.
[insert: *Date]*

To: Zhanat Tileumuratova
Procurement Associate
UNDP in Kazakhstan

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP in conformity with the requirements defined in the RFP-2021-040 dated 8/5/2021, and all of its attachments, as well as the provisions of the UNDP General Contract Terms and Conditions:

A. **Qualifications of the Service Provider**

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

a) Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations; Confirmed experience in the development, design, and documentation of scientific and technical solutions in the agriculture sector for at least 10 years;
b) Business Licenses – Company's state registration certificate; Business license; Company's Charter (if applicable); VAT certificate (if applicable), etc.
c) Financial Stability – Certificate on the absence of debts in tax authorities and the banks; Financial reports for the last 2 years (2019 and 2020);
d) Experience Record – min 3 contracts/projects for similar services (experience in the development, design, and documentation of scientific and technical solutions in the agriculture sector) as those required by UNDP, indicating description of contract scope, contract duration, contract value, contact references;
e) Resources – Availability of material and technical, methodological, regulatory, including special software, for performing design work, including for calculating renewable energy technologies; Availability of key experts with the necessary qualifications and experience as listed in the TOR;
f) Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List;
g) At least 5 (five) letters of recommendation from previous Clients / Partners with whom the applicant collaborated in a project similar to the task of the TK, including the results of cooperation and the role of the applicant.

B. **Proposed Methodology for the Completion of Services**

---

[6] *This serves as a guide to the Service Provider in preparing the Proposal.*
[7] *Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes*

The Service Provider must describe how it will address/deliver the demands of the RFP; providing a detailed description of the essential performance characteristics, number of days for field work, 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.
Also, the Supplier should provide a plan for the implementation of the required services in the format of the Gantt chart.

C. **Qualifications of Key Personnel**

The Service Provider must provide:

a) Names and qualifications of the key personnel that will perform the services indicating who is Project Manager, who are supporting, etc.;
b) CVs demonstrating qualifications and documents confirming the qualifications of key experts - diplomas, certificates, etc.; and
c) Written confirmation from each personnel that they are available for the entire duration of the contract.

D.

Previous relevant experience:				
Name of the contracted person or person with whom UNDP can contact	**Client & Reference Contact Details including e-mail and phone number**	**Contract Value**	**Period of activity**	**Types of activities undertaken**

[Name and Signature of the Service Provider's Authorized Person]
[Designation]
[Date]

Annex 2b

FORM FOR SUBMITTING SERVICE PROVIDER'S FINANCIAL PROPOSAL[8]

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery[9])

[insert: *Location]*.
[insert: *Date]*

To: Zhanat Tileumuratova
Procurement Associate
UNDP in Kazakhstan

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP in conformity with the requirements defined in the RFP-2021-040 dated 8/5/2021, and all of its attachments, as well as the provisions of the UNDP General Contract Terms and Conditions:

E. **Cost Breakdown per Deliverable***

	Deliverables	**Percentage of Total Price**	**Price *(Lump Sum, All Inclusive)***
1	Works performed under Tasks 1, 2 and 3 *The energy consumption (electricity and heat) in energy and monetary units (with a regional breakdown), identified the areas with the highest energy needs including specific energy consumption assessed*	20%	
2	Works performed under Tasks 4, 5 and 6 *An initial assessment of the potential for the application of various renewable energy technologies conducted, financial model (tool) developed for feasibility analysis, a detailed analysis on solid biomass potential usage developed*	30%	
3	Works performed under Tasks 7, 8, 9 and 10 *Analysis of the economic efficiency of replacing traditional fuel (coal/diesel fuel / liquefied and natural gas) with biomass developed. Evaluation of the opportunities and potentials for*	30%	

[8] *This serves as a guide to the Service Provider in preparing the Proposal.*
[9] *Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes*

	productive uses of renewable energy (PURE) conducted, detailed resource map developed.		
4	Works performed under Tasks 11, 12 and 13 *Proposed engineering and financial plans prepared, biomass resources data updated, resource map developed. Presentation of the results developed and presented to the stakeholders.*	20%	
	Total	100%	

**This shall be the basis of the payment tranches*

F. **Cost Breakdown by Cost Component [*This is only an Example*]:**

Description of Activity	Remuneration per Unit of Time	Total Period of Engagement	No. of Personnel	Total Rate
I. Personnel Services				
a. Project Manager				
b. Expert 1				
c. Expert 2				
II. Out of Pocket Expenses				
1. Travel Costs				
2. Daily Allowance				
3. Communications				
4. Others				
III. Other Related Costs				

[Name and Signature of the Service Provider's Authorized Person]
[Designation]
[Date]

Annex 3

Terms of Reference

Required services:	Analysis of the potentials of the application of renewable energy technologies in the agricultural sector and rural areas of Kazakhstan
Place of work:	Home-based, with field visits to Kazakhstan
Contract period:	8 months (September 2021 - April 2022)
Contract type:	Contract for Services (UNDP template)
Project title and number:	UNDP/GEF Project "Derisking Renewable Energy Investment in Kazakhstan" (DREI), #00101058

Project Description

The objective of the DREI Project is to promote private sector investment in renewable energy sources in Kazakhstan to achieve the country's 2030 and 2050 renewable energy targets. The Project targets are both large-scale and small-scale renewable energy sources.

The goal of the DREI Project is to achieve transformation of the energy market in Kazakhstan by significantly increasing the scale of the use of renewable energy sources in electricity production, thereby increasing the share of renewable energy in the country power generation mix from 1.1% in 2017 to 10% by 2030.

To achieve its objective, the DREI Project includes activities to support renewable energy projects that are expected to bring about collective GHG emission reductions of at least 460,000 tonnes of CO2. In addition, by the end of the DREI Project, the Project would have supported the commissioning of 9.5 MW of direct, small-scale renewable energy systems (RES) that will produce about 500 GWh of electrical energy.

The project is comprised of three components:

- Component 1 – Large-Scale Renewable Energy: Policy and Financial Derisking Measures
- Component 2 – Renewable Energy for Life: Policy Derisking
- Component 3 – Renewable Energy for Life: Financial Derisking and Incentives

The required services are part of Activity 3.1.2, under Component 3 - Output 3.1 of the DREI Project.

Objectives

1) Assessment of the potential use of renewable energy technologies in the agro-industrial sector of the Republic of Kazakhstan, considering the impact on the net cost of agricultural products (economic attractiveness of investments in different types of RE devices, identifying most promising niches, e.g., a combination of a specific technology and specific frequent situation).

2) Assessment of the potential uses of renewable energy in the agriculture sector and rural communities in Kazakhstan considering the impact on the sustainability of installed RE-based energy systems, and the country's agriculture and rural sector economies.
3) Assessment of the potential of the agro-industrial sector of Kazakhstan as a producer of clean fuel - biomass, as well as an assessment of the most promising areas of development, bottlenecks, and opportunities.
4) Select a few potentially viable technologies and specific niches for their application for which a deeper study in the future is justified, with the purpose of designing or proposing support programs or instruments.
5) Detailed planning for the combined Government, international institutions, and private sector efforts, programs, and areas of focus for the use of solid biomass as a source of energy, at a large scale, for both small and utility-scale energy sectors.

Scope of Work

1) Assessment of the energy consumption (electricity and heat) in energy and monetary units for the following agricultural activities and activities of the agro-industrial sector enterprises (with a regional breakdown), identifying the areas with the highest energy needs:
   - A crop growing in protected conditions (e.g., greenhouses).
   - Fruit and vegetable growing, including orchards.
   - Animal husbandry and production of livestock products, including pasture cattle breeding and milk production.
   - Agricultural products processing.
   - Dairy industry processes and operations.

2) Assessment of energy consumption (electricity and heat) in energy and monetary units for the following areas of activity of agricultural enterprises, identifying activity areas with the highest energy needs:
   - Primary processing, drying, and storage of agricultural products, including storage of grain, oilseeds, vegetables, and fruits;
   - Primary and downstream processing of agricultural products and the production of end products / semi-finished products, including primary and downstream processing of milk, meat, drying and processing of grain, oilseeds, vegetable oil production, and other agricultural processes and operations that require energy.
   - Agricultural waste processing for the production of materials for energy use (e.g., biomass fuel pellets or briquettes) or other non-energy value-added uses (e.g., biomass as compost or soil enrichment material).

3) Assessment of the specific energy consumption (SEC) of each agricultural finished product (or per unit of cultivated area, if applicable) and all agricultural processes and operations; comparison of the SECs with the world's benchmark SECs (in countries with comparable climatic conditions as Kazakhstan), and identification of the least efficient sectors in terms of energy consumption, with the greatest opportunity to improve energy efficiency.
4) Conduct an initial assessment of the potential for the application of various renewable energy technologies (biomass boiler plants, power plants based on solar PV panels, including autonomous, solar collectors, heat pumps, including heat pumps utilizing low-potential heat from the liquid wastes

of farms and agricultural products processing facilities, wind generators, and a combination of the above technologies) in the agro-industrial sector of the Republic of Kazakhstan, and identification of the most promising niches and technologies for further evaluation. The assessment has to be suitable for further decision-making whether particular niches (technologies applied in specific situations) need to be investigated in a more detailed manner, to determine if the particular niche is large enough for paying attention to the national level by designing a specific support policy or program and if the particular niche is economically sustainable or may become sustainable as a realistic assumption[10].

5) Conduct a detailed assessment of the economic feasibility (using an Excel-based economic feasibility modeling tool) of the possible application of RE-based energy system technologies in various energy-consuming agricultural activities of agricultural enterprises (at least 6 case studies, taking into account the geographical location and various RES technologies), including in rural areas, villages and district centers, for example, the use of biomass boilers / solar collectors, etc., for the niches identified as described above.
6) Assessment of the technical and economic feasibility of using solid agricultural biomass (e.g., straw of grain and oilseeds) to produce heat and/or electricity:
   - estimation of the volume of production in Kazakhstan suitable for transportation and burning of compressed straw in bales, taking into account the gradual introduction of "no-till" technology (desk-top research) and several interviews with the producers of grain to validate the research findings;
   - assessment of the requirements for the logistic chain "from field to boiler house", considering the necessary year-round reserves for reliable production of energy of all types, ensuring dry storage and transportation of straw with minimal costs, including practical testing of the possibility to organize efficient transportation by trucks and by railway (obtaining price quotes and technical requirements for the cargo to be transported and stored);
   - assessment of the possibilities of using modern means of optimizing logistics and the possibility of inexpensive transportation over long distances within the country, by automobile and railway transport, also using artificial intelligence and satellite technologies, if applicable, to identify opportunities of transportation costs reducing that did not exist in the recent past and maybe neglected at present;
   - assessment of the infrastructure needs for the collection and transportation of large volumes of straw, including the probable volumes and possible sources of investment in such infrastructure, e.g. required area of storage and the cost of 1 sq.m of construction of such storage, to expand the geography of use, the variety, and scope of use of this type of biofuel, taking into account the seasonal nature of straw harvesting and a necessity to store a sufficient amount of solid biofuel all year round;
   - assessment of the possibilities of selling straw bales by producers to third-party consumers for the purpose of generating electricity and heat energy in industrial volumes (CHP) and the possibilities of large agricultural holdings to create their own energy capacities (interviews with the decision-makers in private sector grain-producing companies to back up such findings are required);
   - assessment of the possibilities of using straw briquettes/pellets as a substitute for coal in the private sector heating, including examples of such countries as Ukraine, Russia, and Belarus (desktop research);
   - assessment of the possibilities of developing gas generation technology based on straw pyrolysis for the creation of gas power plants with broader economic calculations (theoretically available capacities/investments/cost of electric and thermal energy), and assessment of the perspective of

[10] This task must be coordinated with the related task under the consultancy assignment on the assessment of, and planning for, the feasibility and potential of the application of renewable energy technologies for electrical and thermal energy end uses in different geographic zones of the Republic of Kazakhstan, considering the available indigenous renewable energy resources.

this technology, taking into account an acute need for flexible electric power generation in Kazakhstan.

- assessment of the technical and economic feasibility efficiency of using other available biomass resources (e.g., animal manure, agro-processing, and dairy industry effluents, etc.) to produce heat and/or electricity, particularly biogas production, recovery, treatment, and utilization.

7) Analysis of the economic efficiency of replacing traditional fuel (coal/diesel fuel / liquefied and natural gas) with biomass (pressed straw, in the form in which it is available in the main grain-growing regions of Kazakhstan) in various areas of use: heating - burning bales in boiler houses, heating - briquettes/pellets, cogeneration (heat and electricity production), etc. Comparison of the results obtained with the best foreign practices to substantiate forecasts and recommendations is required. Based on the results of the analysis, it is required to propose a development strategy for this industry, considering the growth potential of fuel production (pressed straw).
8) Additionally, an estimation is needed for the direct and indirect socio-economic benefits from the use of biomass (job creation, development of supply chains, technology transfer, tax revenues for the public, etc.).
9) Evaluation of the opportunities and potentials for productive uses of renewable energy (PURE) to grow the agriculture sector and support rural development in Kazakhstan. This will, among others, involve the: (a) identification and characterization of potential new income-generating activities (i.e., productive uses) that can be created in agricultural and rural areas of the country utilizing the feasible available RE resources in these areas; (2) identification and specification of the support services that will be required for such productive activities; (3) requirements to be complied with, and enabling conditions that have to be in place to support PURE activities (e.g., capacity building, technology transfer, fiscal/financial incentives, etc.); and (4) analysis of the (a) direct and indirect socio-economic benefits of PURE in the agricultural and rural areas; and (b) direct and indirect benefits of PURE in the sustainability and success of RE-based energy systems (e.g., mini-grids) in the agriculture and rural sectors of the country.
10) Development of a specialization map (engineering and energy consulting firms, RE system equipment designers and manufacturers, repair, and maintenance companies, etc.) for the applicability of RES in the agro-industrial sector, depending on the availability of the RE resources and the potential of RES (RE resource map/atlas).
11) Preparation of proposed engineering and financial plans (based on the results of the analyses that will be conducted under this consultancy assignment – see above Tasks) for the implementation of the technically and economically feasible biomass-based energy systems, as well as PURE projects that are linked to such systems. The plans should be of such quality that these can be utilized by interested investors without (or at the most very minimal) adjustments/revisions.
12) Documentation of the gathered and processed new and updated biomass resource data; biomass resource mapping; and the findings, conclusions, and recommendations of the various assessments that are carried out. This includes the preparation of documents that will be used for securing support from the government and other donors in the application of the technically and economically viable biomass-based energy technologies, as well as PURE activities in Kazakhstan, and based on the plans that will be prepared in Task 11.
13) Presentation of the results of the various tasks that were carried out under this consultancy assignment to the main stakeholders such as the Ministry of Energy and those from the agriculture sector (e.g., an agro-industrial complex of the Republic of Kazakhstan, to provide incentives for additional investments, as well as to reduce the energy intensity of production. In particular, adjustments to the financial support mechanism to be implemented in the framework of the DREI

Project have to be proposed. Besides, the barriers and bottlenecks for the development of the RES use in agriculture as well as utilizing energy production potential of agriculture (companies, livestock industries) and rural communities have to be identified, and proposals on how such bottlenecks may be eliminated have to be clearly spelled.

The final results of the study should be presented to the main stakeholders, including the Ministry of Energy and the Ministry of Agriculture of the Republic of Kazakhstan, agricultural producers, agroindustry, and RES industry associations.

When performing the tasks under this ToR, it is necessary to take into account the results and recommendations of previous similar studies. Copies of such studies will be provided by the DREI Project Team. It is incumbent to the interested bidders not to duplicate the previously completed research work on this topic, rather make use of them and more importantly built on them.

Expected results

The deadlines for the submission of the specific deliverables of the consultancy assignment is as follows:

No.	Deliverable	Time frame	Checked and approved
1.	Works performed under Tasks 1, 2 and 3 *The energy consumption (electricity and heat) in energy and monetary units (with a regional breakdown), identified the areas with the highest energy needs including specific energy consumption assessed*	16 weeks from the date of commencement of works	ICTA (preliminary review) and Project Manager
2.	Works performed under Tasks 4, 5 and 6 *An initial assessment of the potential for the application of various renewable energy technologies conducted, a financial model (tool) developed for feasibility analysis, a detailed analysis on solid biomass potential usage developed*	20 weeks from the date of commencement of works	ICTA (preliminary review) and Project Manager
3.	Works performed under Tasks 7, 8, 9 and 10 *Analysis of the economic efficiency of replacing traditional fuel (coal/diesel fuel / liquefied and natural gas) with biomass developed. Evaluation of the opportunities and potentials for productive uses of renewable energy (PURE) conducted, detailed resource map developed.*	28 weeks from the date of commencement of works	ICTA (preliminary review) and Project Manager
4.	Works performed under Tasks 11, 12 and 13	32 weeks from the date of	ICTA (preliminary review) and Project Manager

	Proposed engineering and financial plans prepared, biomass resources data updated, resource map developed. Presentation of the results developed and presented to the stakeholders.	commencement of works	

Indispensable conditions

When carrying out all types of work that may have to be done in the performance of this assignment, the contractor must ensure the safe and legal production of the required deliverables (e.g., reports and finished products, excluding the creation of counterfeit products). It is necessary to ensure compliance with the copyright (and related rights) laws and regulations of the Republic of Kazakhstan.

All rights to products produced, including originals of documents and their copies, can be transferred to any third person by the decision of the client (DREI Project), and such transfer can be carried out directly to the third person and immediately upon completion and acceptance of all work, in accordance with this Terms of Reference.

The UNDP project reserves the right to amend the Terms of Reference (up to a maximum of 20% of the content) but ensuring no change in the general essence of the consultancy assignment and the cost of services under the Agreement.

Responsibility and accountability

The contractor bears full responsibility for the accuracy and legality of the information provided and for the timely provision of reports.

- Coordinates actions to be carried out with the International Chief Technical Advisor (ICTA) and DREI Project Manager.
- Collaborates with the expert team of the DREI Project.
- Ensures unconditional fulfillment of the requirements specified in the contract, General Terms, and Conditions for Contracts, and Terms of Reference.

Reports and materials

The reports and materials must be written in Russian in electronic form using MS WORD (2003 and above) according to the UNDP format; Font: Arial, 12.

Duration of work

8 months (tentative September 2021 -April 2022).

Place of work

Home-based, with trips to Kazakhstan. The travel schedule is determined by the service provider. All travel expenses, equipment rental, communication services, and other expenses associated with this work should be included in the price offer.

Qualifications requirements to the Supplier

A service provider can be a company/organization properly registered and meeting the following requirements:

- Have solvency, not to be subject to liquidation, the property should not be seized, financial and economic activities should not be suspended in accordance with legislation (Certificates confirming the absence of debts in the banks and tax authorities in the last fiscal year);
- Have at least 10 years of experience in the development, design, and documentation of scientific and technical solutions in the agriculture sector;
- Availability of material and technical, methodological, regulatory, including special software, for performing design work, including for calculating renewable energy technologies;
- A list of similar services performed with the indication of the Client, the name of the services/works, the year of the provision of services, and the cost (if possible);
- At least 5 recommendations from previous clients for similar/analogous services;
- Availability of key experts with good command of the Russian language by most of the team members and with the necessary qualifications and experience as listed below (a detailed CV and documents confirming qualifications of experts - diplomas, certificates, etc. to be provided):

	Group members	Education	Experience/Special skills
1	Project Manager	Higher education in engineering (preferably agricultural or mechanical) and applied sciences (e.g., economics and/or agriculture);	• At least 10 years of experience in research organizations in the field of preparation (development) of design solutions/documentation (feasibility study, business plans) in agriculture; • At least 5 years of experience as a project manager in agriculture; • Experience in analyzing sectors of the economy and economic models and systems, experience in transport and logistics sectors would be an asset; • Excellent knowledge of legislative and other regulatory documents in the field of agriculture; • Work experience in analyzing sectors of the economy, in general, and particularly the agriculture sector, and in the development and use of economic analysis models and systems; • Excellent presentation and reporting skills; • Availability of a certificate of professional attestation, if applicable.
2	**Expert 1**	Higher education in economics and/or agriculture;	• At least 7 years of experience in design, research organizations in engineering and technical positions; • Experience in preparing feasibility studies or business plans in the field of

			agriculture and organizing business processes, developing business strategies; • Practical experience in the implementation of agricultural projects (business plans, consulting on the construction of various agricultural facilities); • Knowledge of methodological and regulatory documents for the design, construction, and operation of agricultural facilities; technical, economic, environmental, and social requirements for the designed facilities; • Availability of a certificate of professional attestation, if applicable.
3	**Expert 2**	Higher technical education, in engineering (preferably agricultural or mechanical) and applied sciences	• At least 7 years of experience in design, research organizations in engineering and technical positions; • At least 5 years of work experience in conducting feasibility analyses and developing engineering and financial plans for projects on renewable energy and energy efficiency; • Knowledge and skills in using tools and other technical guides for the development of construction and engineering installation designs and plans, and in the implementation of the approved plans; • Experience in performing design work and drawing up estimates and financial/technical and economic calculations for agricultural or industrial facilities; • Practical experience in determining the cost of repair, installation, and construction work; • Experience in organizing logistic schemes, complex project management organizations would be an advantage.
4.	**Expert 3**	Higher education in economics, or a related field	• At least 7 years of experience in design, research organizations in the specialty;

			• Practical experience in economic calculations of feasibility studies, fuel and energy resources, feasibility studies or business plans in the field of finance (loans, direct investments, corporate finance); • Knowledge of methodological, regulatory, and other guiding documentation regarding the development of construction, the implementation of design, and construction works.

Quotation volume and payment schedule

%	Required Output
20	Deliverable 1
30	Deliverable 2
30	Deliverable 3
20	Deliverable 4

Evaluation method

Highest Combined Score (based on the 70% technical offer and 30% price weight distribution).

Annex 4

CHECKLIST FOR SUPPLIERS

LIST OF DEMANDED DOCUMENTS FOR SUBMISSION TO RFP-2021-021 COMPETITION

№	Name of document	Comments	Yes, submitted
1	Annex 2a: Duly completed and signed Form for submitting service provider's technical proposal	In English	☐
1.1	Information about the company / Company's profile indicating the list of projects/contracts, confirming the min. 10 years of experience in the development, design, and documentation of scientific and technical solutions in the agriculture sector (min 2 pages, max 5 pages)		☐
1.2	Methodology, strategy, and plan for the implementation of the required services in the format of the Gantt chart		☐
1.3	Names and qualifications of the key personnel that will perform the services indicating who is Project Manager and who are supporting, etc. Detailed CVs of key personnel		☐
2	Documents confirming the qualifications of key experts – education diplomas, certificates, etc.		☐
3	Annex 2b: Duly completed, signed and password protected Form for submitting service provider's financial proposal	Password protected In English	☐
4	A copy* of company's state registration certificate/Business License		☐
5	A copy of company's Charter (if applicable)		☐
6	A copy of VAT certificate (if applicable)		☐
7	Certificate on the absence of debts in tax authorities and serving banks		☐
8	Financial reports for the last 2 years (2019 and 2020)		☐
9	Written confirmation of availability of material and technical, methodological, regulatory, including special software, for performing design work, including for calculating renewable energy technologies		☐
10	Recommendation letters from previous clients (min. 5 should be presented)		☐
11	Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List (prepared in any form)		☐

**Copies of documents no need to notarize!*

[Name and Signature of the Service Provider's Authorized Person]
[Designation]
[Date]