**Annex 2b**

1. **COST BREAKDOWN BY DELIVERABLES (ACCORDING TO THE TOR):**

**ANNEX 2b MUST BE PASSWORD PROTECTED!**

|  |  |  |  |
| --- | --- | --- | --- |
| ***#*** | ***Outcomes/ Deliverables*** | ***Payment %*** | ***Total price (all-inclusive), KZT*** |
| 1  | **Stage 1**1. Building a justification for the development of methods and ways for testing the above RES technologies (normative / regulatory references, practicality, justification and other aspects related to testing the components of RES technologies);2. Methods and ways of applicable assessment to an extended list of quality parameters of energy generating equipment based on renewable energy sources (photovoltaics, solar heat, wind energy, low potential heat pumps) and its components;3. Submission and agreement with UNDP on the content of testing methods for RES technologies (at least 10 pages), which should contain at least:- general provisions (terms and concepts, test objects);- test procedure (test procedures for components, list of test equipment, test methods, formulas for calculations);- test results (test reports, generation of reports and documentation)- applications.4. Provisions for compliance and harmonization of the developed methods with the requirements of the legislation of the Republic of Kazakhstan and regulatory documents. Recommendations and a list of normative documents;5. Development of the first edition of 4 methods for testing renewable energy technologies:- testing of solar photovoltaic panels (without limitation on unit power of one panel);- testing of wind turbines, including turbine components (up to 1 MW);- testing of solar collectors for hot water supply;- boilers/boilers for solid biomass, pressed straw bales, unit capacity up to 1 MW. | *40* |  |
| 2 | **Stage 2**6. Preparation of letters and distribution of the first edition of the methodologies to interested organizations and companies in the field of testing and certification of RES devices for receiving feedback and comments;7. Discussion with representatives of testing laboratories of the developed methods for testing renewable energy technologies at the TC 117 meeting, in a hybrid format, so that participants from remote regions can also take part;8. Expert analysis work with comments, suggestions and recommendations from testing laboratories;9. Preparation of a comparative table on test methods based following the analysis of the recommendations of testing laboratories and comparison with international practice of testing;10. Refining, introduction of reasonable changes and submission of the proven version of the methods and ways for testing RES technologies. Based on the results of consideration and approval of the methods, the Contractor prepares a summary of reviews including accepted and not accepted comments and suggestions of testing laboratories. In case of disagreement with the comments and suggestions, a grounded justification should be given;11. As a result of agreeing on the final text of methods and methods for testing RES technologies - preparation of the final version in Russian and Kazakh languages; | *40* |  |
| 3 | **Stage 3**12. Registration of methods for testing RES technologies in accordance with national regulatory acts in the field of standardization and testing of equipment (in Russian and Kazakh languages);13. Preparation of an explanatory note with the attachment of all related documents prepared during the development of 4 methods;14. Preparation of a draft / text of the order of the authorized body for further approval of the developed methods for testing RES technologies (in Russian and Kazakh languages);15. Based on the results of the work performed, it is necessary to provide a final information and analytical report with minutes of discussions and summaries of feedback, as well as a draft article in the media.The work should be presented and discussed with all interested parties, including, but not limited to: the Ministry of Energy, Industry and Infrastructure Development, the Committee for Technical Regulation and Metrology (hereinafter - CTRM) and testing laboratories. | *20* |  |
|  | *Total:*  | *100%* |  |

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

1. **Cost Breakdown by Cost Component:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activity** | **Unit of Cost** | **Duration of services**  | **Number**  | **Total** |
| **I.** **Personnel Services, including all tax costs, pension and social benefits and deductions** |
| Project Manager |   |   |  |   |
| Technical Expert |  |   |  |  |
| Expert-corrector |   |   |  |   |
| **II. Expenses associated with preparation of 4 methods** |
| Organization of the necessary activities for the coordination of draft methods in accordance with the existing procedures in the Republic of Kazakhstan, including online discussion with representatives of testing laboratories of the prepared methods for testing RES technologies at the site of TC 117 |   |   |   |   |
| Translation into the state language (at the rate of 1 method, about 30 pages) |  |  |  |  |
| **III. Office and other expenses**  |
| Printout of draft methods when submitted for consideration to interested organizations, discussions with laboratories and other coordination activities (including all necessary explanatory notes, comparative tables, justifications) |  |  |  |  |
| Operating expenses (communication services, banking commissions, etc.) |  |  |  |  |
| **TOTAL:** |  |  |  |  |
| **IV. Unforeseen expenses (describe in detail if any)** |  |  |  |  |
| **TOTAL CONTRACT AMOUNT KZT** |  |  |  |  |
| **VAT (if applicable)** |  |  |  |  |
| **Grand total in KZT** |  |  |  |  |

*[Name and Signature of the Service Provider’s Authorized Person]*

*[Designation]*

*[Date]*