**The Regional Environmental Centre for the Caucasus (REC Caucasus) announces an tender for the Design, Development, Testing and Activation of a Software for Technicians Certification Management within the GEF-funded project “Georgia’s Integrated Transparency Framework for Implementation of the Paris Agreement”**

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**TERMS OF REFERENCE**

**For**

**The Design, Development, Testing and Activation of a Software for Technicians Certification Management**

**REC Caucasus is executing the project “Georgia’s integrated transparency framework for implementation of the Paris agreement”, which aims to meet the Enhanced Transparency Framework (ETF) requirements under the Paris agreement.**

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| --- | --- |
| **Project Title:** | Georgia’s Integrated Transparency Framework for Implementation of the Paris Agreement |
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| **REC Caucasus Project ID:** | 024RECC/G/UNEP |
|  |  |
| **Contract type:** | Service Contract |
|  |  |
| **Position:** | Service Provider |
|  |  |
| **Starting Date:** | August 4, 2023 |
|  |  |
| **Duration:** | 1 month (August 4, 2023 – August 31, 2023) |
|  |  |
| **Duty Station:** | Tbilisi, Georgia |

**1. Project Background**

Contract is concluded for implementation of the GEF financed Project (2019-2023) “Georgia’s Integrated Transparency Framework for Implementation of the Paris Agreement”.

The Paris Agreement, adopted at the 21st Conference of Parties (CoP) in December 2015, sets out a global action plan that puts the world on track to avoid dangerous climate change by limiting global warming to well below 2°C. The Agreement refers to ‘Nationally Determined Contributions’ (NDCs) that each individual country should make to achieve the worldwide goal set of reducing anthropogenic emissions of greenhouse gases. As part of this Agreement, all countries agreed to an Enhanced Transparency Framework (ETF) for action and support (Article 13), with built-in flexibility which considers Parties’ different capacities and builds upon collective experience. For Georgia there is a need to set up new transparency governance structures, develop and implement MRV procedures, and update, implement, and integrate new data and information flows with pre-defined periodicity. The clear, comparable, accountable and flexible MRV system should integrate mitigation strategies, measures and their effect into the national level. A key condition for successful implementation of the Paris Agreement’s transparency requirements is the provision requiring adequate and sustainable financial support and capacity building to enable developing countries to significantly strengthen their efforts to build robust domestic and regulatory processes. For the above purposes, the GEF Funded Project “Georgia’s Integrated Transparency Framework for Implementation of the Paris Agreement” is planned to be implemented in Georgia.

**The overall objective of the project** is to meet the ETF requirements under the Paris Agreement.

**Project Components:**

1. Strengthening vertical integration in Georgia for transparency-related activities;

2. Georgia’s National Greenhouse Gas (GHG) Inventory system and HFC data management system are aligned with the ETF;

3. Climate Change Mitigation in Georgia’s transparency system.

**Outset situation**

The Government of Georgia adopted its updated Nationally Determined Contribution (NDC) pursuant to the decree #167 dated 8th of April 2021 and submitted to the United Nations Framework Convention on Climate Change (UNFCCC).

Within the adoption of the NDC, the economy wide approach is selected for low carbon development of the Country. The category of Product Use as Substitutes for Ozone Depleting Substances from *2006 IPCC Guidelines for National Greenhouse Gas Inventories* is taken into consideration for the mitigation of greenhouse gas emissions in Georgia (paragraph 8, NDC).

Accordingly, the gases, including perfluorocarbons (PFCs) and hydrofluorocarbons (HFCs), contributing to greenhouse effect, are in a scope of the country, to the extent possible. Since Georgia is going to meet the Enhanced Transparency Framework (ETF) under the Paris Agreement it is important to develop the F-gases emissions management system for the country and increase accuracy and completeness of the inventory reports.

The EU-Georgia Association Agreement (AA) is another key document shaping the Climate Change commitments at the national level. The agreement explicitly mentions the adoption of important parts of the Regulation (EC) No 517/2014 on fluorinated greenhouse gases including training and certification of technicians handling these gases and establishment of (internal) reporting systems for acquiring emission data from the relevant sectors.

In order to operationalize the F-gases emissions management system in Georgia, the technical regulation on management of the fluorinated greenhouse gases is a subject of adoption. The regulation considers the capacity development activities such as training and certification of data providers of GHG emissions of f-gases (technicians) who are handling the equipment that contain the refrigerants and other F-gases. During the execution of their service (e.g., charging equipment with f-gases, removing f-gases from equipment etc.), the certified technicians (GHG emission data providers) will be asked to provide information in a specific journal about GHG emissions of f-gases handled during their service.

The resource-effective certification process requires the development of the supportive tools such as the software for Technicians Certification Management.

**2. Objective and scope of the assignment**

REC Caucasus engages service provider in designing, developing, testing and activating a **software for Technicians Certification Management.** The service provider should provide the Technicians Certification Management Software with the technicians data base, protected user account for technicians, computer-based exam module (tests in Georgian, English and other languages), certificate generation and printing, licence card generation and printing.

***Specific Objective of the Assignment:***

The service provider will responsible for design, development, testing and activation of a software package that will include: the technicians data base, protected user account for technicians, computer-based exam module (tests in Georgian, English, and other languages), certificate generation and printing, licence card generation and printing.

The software package should have the following functions:

Before the exam (1) allowing an applicant to upload exam fee payment check and photo 3X4 or indicate that the documents will be presented in-person via personal user account; (2) allowing an applicant to select tentative exam dates (three options) and receive the approval from the software manager via personal user account; (3) displaying the exam rules on the computer screen (the number of questions, how many mistakes are allowed, the right to jump the questions, and then go back, the right answer will be assigned a green colour and wrong one red colour, etc.).

During the exam (1) displaying the minute countdown for the certification exam on the computer screen; (2) in case of technical failure (e.g., power outage, internet cut, etc.) allowing the exam taker to continue the exam from the point where the test was terminated; (3) allowing the exam taker to skip the questions, and return back to them later; (4) the right answers will be assigned a green colour and the wrong answers red colour; (5) allowing the exam taker to make three mistakes out of thirty questions and after the fourth wrong answer, terminating the test and displaying the information window of the test failure on the computer screen; (6) after all questions are answered by the exam taker, ending the test and displaying the test results, including the status of each question, on the computer screen automatically.

After the exam (1) for each applicant that passed the exam, automatically generating a filled-out digital licence card and certificate. Each certificate will have registration number generated by system. Numbering will be grouped by Test Suffix; (2) making the digital certificate available for downloading and printing from personal user account; (3) the Centre’s technician person will print the licence card during 10 days; (4) synchronising technician data base information automatically with EIEC web-page; (5) monitoring licence validity period and informing the appropriate technician and software manager on the license expiry date prior to one month, two weeks and three days before the expiration date through the email and SMS text (in case of MEPA decision); (6) indicating the technicians expiring (during the last month of licence operating) and expired licence status with predefined colour mark in the data base.

Overview of the general workflow of the Software: Those who wish to obtain a certificate must register as a user / applicant in the certification system using the following link: <https://my.mepa.gov.ge>. After passing the validation process, the applicant enters the exam module and selects the desired test type (test name, language, date and time) from the available alternatives, uploads the receipt after paying the certification fee and registers the request to take the test.

After finishing the registration process, the admin will be informed via SMS message or e-mail.

Internal system, windows authorization: (1) Test Category: Category Name, Category Description; (2) Test: Numeration suffix (ex.: Ref-00001, Ftor-00001), Test Category, Test Name, Test Description, Number of Questions, Minimal quantity of correct questions (answers), Language, Status (active or not), Duration, Message Text (Instructions, Regulations), Certificate Validity Period; (3) Questions: Status (active or not), Text of the Question; (4) Answers: Text of the Answer, Status (True/False).

EIEC-admin sees the request, the payment receipt and confirms/ rejects the notice. The applicant will be notified about the confirmation / rejection of the request.

After the arrival of the user / applicant, the administrator activates the testing system on the service computer and enters the personal number of the applicant. The required information (name, surname, date of birth) will be received from the database.

The instructions / rules are displayed before the test begins (how many questions the test includes, the time allotted for passing the test, how many mistakes it is allowed to make, etc.). The applicant confirms that he / she has read the information displayed and starts taking the test. A stopwatch is switched on at the beginning of the test.

After successful completion of the test, the administrator will be able to print a certificate in standard form. The same certificate should appear for the user / applicant on the website my.mepa.gov.ge (personal profile).

***Planned activities are as follows:***

***Step 1.***

**Ensuring that the Software package has the technicians data base with:**

* the technician’s name, surname, date of birth, ID card identity number, mobile number, email address, company name (if applicable), region/municipality, certificate number, certificate validity period dates, certificate renewal status;
* protected user account for technicians;

***Step 2.***

**Ensuring that the Software package has the following functions (Before the exam):**

* Allowing an applicant to upload exam fee payment check and photo 3X4 or indicate that the documents will be presented in-person via personal user account;
* allowing an applicant to select tentative exam dates (three options) and receive the approval from the software manager via personal user account;
* Before the exam, displaying the exam rules on the computer screen (the number of questions, how many mistakes are allowed, the right to jump the questions, and then go back, the right answer will be assigned a green colour and wrong one red colour, etc.).

***Step 3.***

**Ensuring that the Software package has the following functions (During the exam):**

* displaying the minute countdown for the certification exam on the computer screen;
* in case of technical failure (e.g., power outage, internet cut, etc.) allowing the exam taker to continue the exam from the point where the test was terminated;
* allowing the exam taker to jump the questions, and then switch back;
* the right answers will be assigned a green colour and the wrong answers red colour;
* allowing the exam taker to make three mistakes out of thirty questions and after the fourth wrong answer, terminating the test and displaying the information window of the test failure on the computer screen;
* after all questions are answered by the exam taker, ending the test and displaying the test results, including the status of each question, on the computer screen automatically;

***Step 4.***

**Ensuring that the Software package has the following functions (After the exam):**

* for each applicant that passed the exam, automatically generating a filled-out digital licence card and certificate. Each certificate will have registration number generated by system. Numbering will be grouped by Test Suffix;
* making the digital certificate available for downloading and printing from personal user account;
* the Centre’s technician person will print the licence card during 10 days;
* synchronising technician data base information automatically with EIEC web-page;
* monitoring licence validity period and informing the appropriate technician and software manager on the license expiry date prior to one month, two weeks and three days before the expiration date through the email and SMS text (in case of MEPA decision);
* indicating the technicians expiring (during the last month of licence operating) and expired licence status with predefined colour mark in the data base.

***Step 5.***

Ensuring that the Software development process regarding registration, internal system, windows authorization, validation, examination and certificate generation and printing matches the following general workflow:

***Step 5.1.***

**Registration**

Those who wish to obtain a certificate must register as a user / applicant in the certification system using the following link: <https://my.mepa.gov.ge>. After passing the validation process, the applicant enters the exam module and selects the desired test type (test name, language, date and time) from the available alternatives, uploads the receipt after paying the certification fee and registers the request to take the test.

After finishing the registration process, the admin will be informed via SMS message or e-mail.

***Step 5.2.***

**Internal system, windows authorization**

* Test Category
  + Category Name
  + Category Description
* Test
  + Numeration suffix (ex.: Ref-00001, Ftor-00001)
  + Test Category
  + Test Name
  + Test Description
  + Number of Questions
  + Minimal quantity of correct questions (answers)
  + Language
  + Status (active or not)
  + Duration
  + Message Text (Instructions, Regulations)
  + Certificate Validity Period
* Questions
  + Status (active or not)
  + Text of the Question
* Answers
  + Text of the Answer
  + Status (True/False)

***Step 5.3.***

**Validation**

EIEC-admin sees the request, the payment receipt and confirms/ rejects the notice. The applicant will be notified about the confirmation / rejection of the request.

After the arrival of the user / applicant, the administrator activates the testing system on the service computer and enters the personal number of the applicant. The required information (name, surname, date of birth) will be received from the database.

**Examination**

The instructions / rules are displayed before the test begins (how many questions the test includes, the time allotted for passing the test, how many mistakes it is allowed to make, etc.). The applicant confirms that he / she has read the information displayed and starts taking the test. A stopwatch is switched on at the beginning of the test.

**Certificate generation and printing**

After successful completion of the test, the administrator will be able to print a certificate in standard form.

The same certificate should appear for the user / applicant on the website my.mepa.gov.ge (personal profile).

***Step 6.***

**Ensuring that during and after the Software development the following extra technical requirements are fulfilled:**

* Contractor Should use latest front-end/back-end technologies in (Html5, JavaScript, jQuery, Ajax, .Net framework, Microsoft SQL Server and third part components (DevExpress or Telerik);
* Software should be developed by considering all security standards of the Ministry IT Department for the selected candidates at the beginning stage of the software development;
* Acquire software with modern, robust, ASP.NET MVC, LINQ to SQL, JavaScript, html5, Entity Framework, Transact SQL, DevExpress, Telerik, MS SQL Server content-oriented navigation system;
* Based on software content develop graphics by coordinating with the project team; designing images, icons, banners, etc.;
* Prepare software by installing and configuring server software; ensuring platform integration with the MEPA server;
* Maintain software appearance by developing and enforcing content and display standards; editing submissions.
* Assistance and maintenance of any software bugs (errors) identified at the operation stage during the year of product delivery to the beneficiary.

**3. QUALIFICATIONS AND EXPERIENCE**

The service provider should demonstrate their qualifications and proven experience in the graphic design and technical implementation of user interfaces in a web-based environment. Candidates should provide a portfolio containing examples of their achievements.

The service provider/service provider team members should have:

* 7 years of working experience;
* At least 4 years of working experience in software development on enterprise-level projects in a mission-critical environment; Extensive knowledge in Web application development, Windows Services, and application security;
* Knowledge and experience using ASP.NET MVC, LINQ to SQL, JavaScript, html5, Entity Framework, Transact SQL, DevExpress, Telerik, MS SQL Server (Required);
* Demonstrable professional code preferably on some enterprise level/large application(s);
* Proven database programming with PL SQL, SQL / Optimization (expert level), SQL Server (Large Scale Systems), Mobile dev. experience will be an added advantage;
* Experience in taking over the enhancement of code-intensive applications;
* Eye for design and attention to detail.

**4. WORKING AND REPORTING LANGUAGEs**

working and reporting language shall be **English and/or Georgian**.

**5. SPECIAL REQUIREMENTS REGARDING REPORTING FORMAT**

All reports shall be produced in the following format:

|  |  |
| --- | --- |
| ***Alignment:*** | Justified |
| ***Font:*** | Arial for English / Sylfaen for Georgian |
| ***Font Size:*** | 11 |
| ***Lane Spacing:*** | single |
| ***Spacing before:*** | 0’ |
| ***Spacing after:*** | 0’ |
| ***At:*** | 0 |

**6. AWARD CRITERIA**

Evaluation will be made in accordance with the quality/price based selection method per REC Caucasus procedures and rules. The best value for money will be established by weighing technical quality against price on an 80/20 basis.

When evaluating technical offer of a candidate, a score out of a maximum 100 points could be received by the offer in accordance with the technical evaluation grid (setting out the technical criteria, sub-criteria and weightings) laid down in this Terms of Reference (see below).

Only offer that achieved a score of 75 or more shall be declared 'technically accepted'.

The quality of a technical offer will be evaluated in accordance with the award criteria and the associated weighting as detailed in the following evaluation grid of this Terms of Reference:

*Technical Evaluation Grid*

|  |  |
| --- | --- |
| EVALUATION GRID | Maximum |
| **Experience of the Entity and conditions offered** | |
| ( Max 100 points ) | |
| **General Professional Experience**   * 7 years of working experience | 20 |
| **Specific Professional Experience**   * Similar contracts successfully completed in the past 3 years and evidences of successful completion. * At least 4 years of working experience in software development on enterprise-level projects. | 35 |
| **Portfolio** | 15 |
| **Assignment Implementation Approach** | 15 |
| **Timetable of Activities** | 15 |
| Overall total score | 100 |