Request for Proposals:
South Africa: Design, Develop, and Implement the Greenhouse Gas Industrial Emissions Management System to Enable the Implementation of NDC Mitigation Policy Instruments that have been Developed to Target Industry Emissions

April 2024

ABOUT THE NDC PARTNERSHIP

The NDC Partnership is a global coalition of countries and institutions working to mobilize support and achieve ambitious climate goals while enhancing sustainable development. Through the Partnership, country members leverage their resources and expertise to provide countries with the tools they need to implement their NDCs and combat climate change to build a better future. Hosted by WRI, the UNFCCC Secretariat, and the UN Office for Project Services, the NDC Partnership has members in all regions of the world, with staff in Washington DC and Bonn, Germany.

Through the collective support of its members, the NDC Partnership has engaged with South Africa on the update and enhancement of its NDC, NDC implementation, mobilization of climate finance and mainstreaming NDC action to national planning and budgeting. Through its engagement with the Department of Forestry, Fisheries and the Environment, as its focal point institution, the Partnership supports the Government of South Africa on priority needs for implementation under the framework of the Paris Agreement. In this context, the Partnership issues this Request for Proposal for the development the National Climate Change Adaptation Investment Plan.

INTRODUCTION AND BACKGROUND

The Republic of South Africa ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1997 and is therefore required to undertake several projects related to climate change. The objective of the UNFCCC is to stabilize Greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous human-induced interference with the climate system. The ability of South Africa to achieve this objective is dependent on the accurate knowledge of emissions trends and on our collective ability to alter these trends. Article 4, paragraph 1(a) and Article 12, paragraph 1(a), of the convention provide for each Party to prepare and report national GHG emissions and removals to the Conference of the Parties (COP). The key mechanism for reporting these GHG emissions is through the national communication and the Biennial Update Reports.

According to Decision 17/CP.8,3, each non-Annex I Party shall, as appropriate and to the extent possible, provide in its national inventory, on gas-by-gas basis and its units mass, estimates of anthropogenic emissions of carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) by sources and removals by sinks. Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6). Parties under the (UNFCCC) adopted the Paris Agreement in 2015, and through it established an enhanced transparency framework (ETF). Under the ETF parties must transition from reporting Biennial Update Reports to Biennial Transparency Reports.

Article 4 of the Paris Agreement sets out Nationally Determined Contributions (NDCs) as the instrument that countries must develop to present their part of the global effort to reduce greenhouse gas emissions and to limit the temperature increase to 1.5°C above pre-industrial levels. South Africa through its updated NDC has committed to an emissions range between 350 and 420 Mt CO2-eq by 2030. To achieve its updated NDC goals, South Africa aims to regulate climate change responses through the development of the National Climate Change Bill, with mitigation elements included in chapter 5 of the bill. These include instruments such as sectoral emissions, carbon budgets and greenhouse gas mitigation plans. The carbon budgets prescribe the maximum amount of GHG emissions that companies may emit over a certain period (also known as assigned amount of emissions), sectoral emissions targets are previously known as Desired Emission Reduction Outcomes contained in the National Climate Change Response Policy). SETs are either quantitative or qualitative greenhouse gas emission targets or aspirations assigned to an emitting sector or sub-sector, over a defined time period.

The National Climate Change Response White Paper:, In response to Decision 17/CP.8,4 of the UNFCCC and the requirements of Section 6.1.4 of the National Climate Change Response White Paper, the Department has promulgated the National Pollution Prevention Plans Regulations, 2017 (NPPPR's) in terms of section 53(a), (o) and (p) read with section 29(3) of the National Environmental Management Air Quality Act (Act 39 of 2004 as amended), under Government Notice No. R.712 of Government Gazette 40996 of 21 July 2017 and through a gazette notice that declared six greenhouse gases (GHGs) as priority air pollutants, under section 29(1), read with section 29(4) of the Air Quality Act. The declared priority six greenhouse gases are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF6). Section 3(1) of the Declaration notice requires that a person conducting a production process set out in Annexure A to this Notice with an annual threshold of emissions of greenhouse gases in excess of 0.1 Megatons (MtCO2-eq) reported as carbon dioxide equivalents (CO2-eq), if so directed by the Minister, submits a pollution prevention plan for approval by the Minister, which details how the said company intends to reduce its emissions.

Section 6.5 of the NCCRWP required that the Carbon Budget process should identify an optimal combination of mitigation actions at the least cost to-and with the most sustainable development benefits for-the relevant sector and national economy to enable and support the achievement of the desired emission reduction outcomes (currently known as sectoral emission targets) to align with the benchmark National GHG Emissions Trajectory Rang target. Furthermore, the policy states that the allocation of the CBs should be undertaken through a rigorous consultation process between Government affected industry and other key stakeholders to ensure transparency in approaches, mechanisms and outcomes. However, this alignment was never met due to late promulgation of the National Pollution Plan Regulation which was implemented in June 2018. to December 2020, the first phase & the subsequent

PPP submission being from 31 May 2021 to 31 December 2025) and the carbon budget regulation never being implemented. As a result, this had led to the implementation of the voluntary CB Phase 1 which run from 2016 to 2020 and the extended voluntary phase (2021 to 2025) Gazetted notice issued on 20 October 2020.

Chapter 6.7 of the policy requires the compilation of accurate, complete, and updated GHG emissions inventory to ensure a good foundation for effective mitigation response. The first national GHG inventory in South Africa was prepared in 1998, using 1990 data; it was updated to include 1994 data and published in 2004. In 2009 the country prepared its third GHG inventory which was based on the base year 2000. Recently (2020) South Africa produced its 7th GHG inventory covering the period 2000 – 2020. Several challenges were identified in the compilation of the GHG inventory namely, lack of activity data resulting in incompleteness due to use of lower tier methods leading to inaccuracy and lack of transparency which affect the quality of the National Inventory.

South Africa's Regulatory Framework for mandatory reporting of emissions by industry - The National Greenhouse Gas Reporting Regulations 2016. In response to Decision 17/CP.8, 3 of the UNFCCC and the requirements of Section 6.7 of the Climate Change White Paper, in 2017 the South African government promulgated the National Greenhouse Gas Emission Reporting Regulations 2016 (NGERs) to facilitate the annual reporting of national GHG emissions and related activity data by industry to the Competent Authority (DFFE). The regulations set out mandatory reporting requirements of GHG emissions in South Africa by industry, which began in January 2018 reporting cycle. The objective of these regulations is:

- to introduce a single national reporting framework for GHG emissions and related activity data by industry;
- to enable the Department (DFFE), which is defined as the Competent Authority in the Regulations to collect, collate and publish GHG emissions data and information in an effective and efficient manner for South Africa to meet its obligations on international reporting requirements under the United Framework Convention on Climate Change and to inform domestic policy and decision-making processes;
- to fulfil section 6.7 of the National Climate Change Response that requires GHG emissions inventories that are accurate, complete, and up to date,
- to inform government policy formulation and the South African public; and
- to avoid duplication of similar reporting requirements in South Africa.

The South African Greenhouse Gas Emissions Reporting System (SAGERS) The South African Greenhouse Gas Emissions Reporting System (SAGERS) was developed in 2019 with the intention to introduce an online platform for reporting of GHG emissions by industry. The system enables industry to comply with the GHG Reporting Regulations 2016 to submit emission data online and it's an iterative tool that provides guidance to data providers on how to report their emissions. In 2021 the System was updated to integrate the Carbon Budget and Mitigation Plan (CB & MP module) to provide for online administration of the CB and MP reporting and management components to support industry to comply with CB and MT Regulations.

The primary purpose of SAGERS is to:

- Enable South Africa to meet its international reporting obligation under the UNFCCC in an effective and sustainable manner. Essentially, South Africa must report its national GHG emissions for the period of its Biennial Update Report (BUR) once every two years and its national communications once every four years. Under the enhanced transparency framework, South Africa must report its first biennial transparency report by December 2024.
- Ensures that South Africa understands its emissions profile and its key drivers of changes in emission trends.
- Provide relevant stakeholders access to information regarding historical GHGs. It also provides data providers with guidance resources for reporting to support effective and efficient GHG management.
- Improved Monitoring and Reporting: Implementing a standardized emissions reporting system allows for better monitoring and tracking of greenhouse gas emissions across various sectors of the economy.
- Informed Business Decisions: Businesses can use emissions data to identify areas of improvement, optimize operations, and integrate sustainability into their long-term strategies and identify business model solutions for their brands.
- Supports International Commitments such as Paris Agreement commitments and encourages Emission Reduction Initiatives by role players.
- Fosters Research and Innovation: Availability of emissions data can stimulate research and innovation in the field of climate change.
- Supporting climate change mitigation projections and plays a critical role in climate change decision making and policy formulation.
- Enables the department to fulfil paragraph 6.7 of the National Climate Change Response (which requires GHG emissions inventories that are accurate, complete and up to date) thereby improving the quality of the National GHG Inventory.
- Enables the department to fulfil its requirements as outlined in paragraph 6.1.4 (requiring companies and economic sectors or sub-sectors for whom desired emission reduction outcomes (currently known as sectoral Emissions Target) have been established to prepare and submit mitigation plans that set out how they intend to achieve the desired emission reduction outcomes.) and 6.5 achievement of carbon budget allocation by industry (
- Ensures that the DFFE maintains a standardized emissions reporting system that facilitates international cooperation and allows for meaningful comparisons of emission levels among countries. South Africa is considered a leading country in MRV in the Africa region and has provided lessons learnt to other countries in terms of MRV development;
- Support the National Treasury and the South Africa Revenue Service (SARS) in the verification of Carbon Tax.

OBJECTIVES

The DFFE has established and institutionalized the reporting of greenhouse gas emissions through the National Greenhouse Gas Emissions Reporting Regulations (NGERS, 2017) and the SAGERS which is critical for informing the tracking of the country's transition to lower carbon economy and climate resilience society. Since its inception in 2020, the SAGERS has been offering tools and methodological guidance for the reporting of six GHGs (CO_2, CH_4, N_2O, and perfluorocarbons, hydrofluorocarbons, and Sulphur hexafluoride). There are currently 436 registered data providers on the system, during peak period (January –March which is the reporting cycle) more than 1000 users visit the system. With the introduction of the new Enhanced Transparency Framework (ETF) due to come into effect as of 2024 and the promulgation of Climate Change Act, South Africa needs to review and reform its monitoring, reporting and verification systems consistent with the new reporting requirement under the Paris Agreement as informed by the Climate Change Act. Furthermore, the new upgraded system is necessitated to administrator the various elements of the mitigation system. To address current constraints and gaps in transitioning to the new ETF reporting framework there is currently a need to upgrade and align the current tools and systems to enhance the country's ETF readiness and to meet the new reporting requirement under the Paris Agreement. It is in this context that DFFE is publishing this bid, to secure the services for the design, development, implementation, maintenance and support of a new system that will replace SAGERS to meet the emerging industrial GHG emissions management as borne out by the introduction of the climate change bill and the need to implement the ETF of the Paris Agreement. In addition, National Treasury, through its previous national budget vote speeches in 2022 and 2023, will introduce reforms to the Carbon Tax regime which will have implications for monitoring and processing of carbon budget information and progress analysis.

The Chief Directorate: Climate Change Mitigation and Specialist Monitoring Services within DFFE has developed a SAGERS Strategic Plan for 2022 – 2030 with the view to establish a robust and consistent system to meet the regulatory requirements under the NGERs. A gap analysis for SAGERS was conducted in 2021 that identified desired system enhancements to meet emerging domestic and international reporting requirements. The gap analysis identified the requisite system improvement upgrades, current discrepancies and gaps, additionally an action plan for implementation of related MRV functional system designs improvement upgrades consistent with new emerging reporting mandate.

These terms of reference are circulated to support DFFE to achieve its stated strategic mandate of the Chief Directorate: Climate Change Mitigation and Specialist Monitoring Services to implement a comprehensive data collection and analyses application to enable emission projections, analyses for short, medium to long-term response measures, including monitoring and evaluation of the NDC (Nationally Determined Contributions).

In this context the main objective of this assignment is to:

- Establish a new online system for the management and administration of industrial GHG emissions and improve DFFE's overall processing, reviewing, and management of GHG emissions and GHG emission reductions through an automated system.
- The aim of this intended system is to improve efficiency for companies to submit GHG reports, maintain mitigation plans and carbon budgets and generate automated references as well as streamline communications between companies and the DFFE to ensure regulatory compliance to

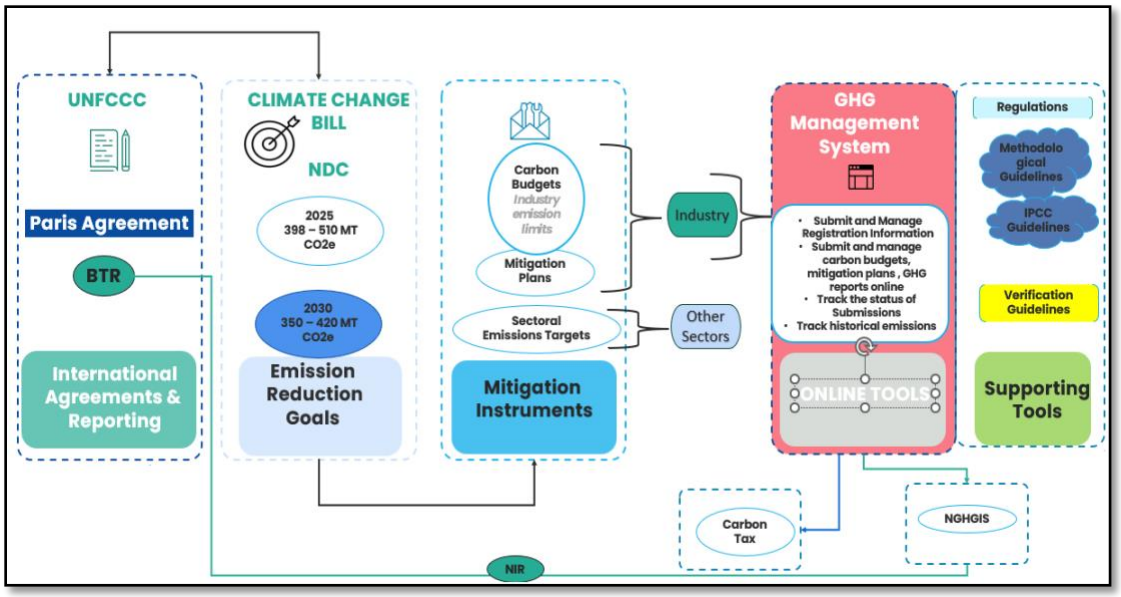
relevant regulations. Concurrently, the system must enable the DFFE authorities to improve processing as well as conducting technical reviews and analysis for GHG reports to reduce turnaround times.

- Review existing systems in order to develop an upgraded and integrated system aligned to international and domestic reporting requirements and that will also support the implementation of the soon to be promulgated Climate Change Bill, covering three aspects, reporting and validation of GHG reports including supporting the South African Revenue Service for verification of carbon tax,
- Supporting industry to submit mitigation plans and annual progress reports as well as carbon budgets ensuring an alignment with the relevant guidelines and legislation:
- Ensure that the system designed conforms to domestic and international reporting requirements.
- Ensure that the system has functionality to enable analyses of emissions trends, including detailed reporting on changes in emissions intensity in the economy and a comparison of actual GHG emissions against the benchmark national GHG emission trajectory range as described in Section 6.4 of the White Paper.
- Ensure that the systems are able to process NF_3 and indirect and precursor GHGs such as nitrogen oxides (NO_x), sulphur dioxide (SO_2), non-methane volatile compounds (NMVOCs), carbon monoxide (CO) and ammonia (NH_3)

The envisaged system must ensure conformance to strategic imperatives in tracking the implementation of South Africa's revised National Determined Contributions, inform future NDC updates, and support domestic policy and decision-making process to enhance climate action ambition.

Figure 1 below provides schematic presentation how the envisaged emissions management system will support the implementation of mitigation policy instruments.

Figure 1 - South Africa 2025 & 2030 Emissions Targets, NDC, September 2021, Mitigation Instruments



SCOPE OF WORK AND ACTIVITIES

1. Approach

The service provider is expected to finalize the requirements gathering and design of a new system. This must amongst others include benchmarking against existing domestic and international systems. This must be followed by the development, implementation, and maintenance and support of the system, as defined in this document.

The scope of work for the service provider will include the items listed below:

2. Scope Item A: Project Planning

The work of the service provider must be delivered in the form of a project. The specific project management methodology to be used is not prescribed, but it is mandatory that the service provider's selected methodology must be an industry standard recognized methodology, that is supported by comprehensive documentation and that complies to conventional project management practices.

As a minimum, the selected project management methodology must cover at least the following:

- Project initiation, Including initial project planning, up to the approval of a Project Charter, with Project plan and Project Business Case
- Ongoing maintenance and updating of the project's planning, Project Charter and project Business Case throughout the duration of the project
- Detailed planning of the specialist delivery of the project on a stage-by-stage basis.
- Documentation of all specialist work to be done by various delivery teams on a stage-by-stage basis
- Execution of all project work falling under the responsibility of the service provider
- Advising on work to be done by DFFE teams
- Monitoring and reporting on project progress on a continual basis;
- Reporting and managing project risks
- Reporting and managing all project issues, including change requests and approved changes
- Structured and orderly closure of the project with appropriate reporting.

The service provider to prepare a project charter. The project charter must highlight amongst others, methodological approach, implementation review process and project timelines as well as key decision points in the project.

3. Scope Item B: Requirements Gathering Investigation & Analysis

3.1. Minimum Process

The service provider must undertake workshops with the relevant authorities at DFFE to assess the business needs and situation analysis, including a review & benchmarking of domestic and

international systems and applicable regulations and guidelines to inform the user and functional requirements of the system.

Requirements gathering must cover the following areas:
a. All functional requirements statement as listed below.
b. All non-functional requirements
c. A benchmarking of the requirements against similar domestic & international systems
d. An investigation into the legislation and other governance requirements as listed below.

3.2. Functional Requirements Statements

3.2.1. Legislative Requirements

The review must include, but not limited to following to ensure that the system is designed considering local requirements:

- National Greenhouse Gas Emissions Reporting Regulations and its related guidelines.
- Pollution Prevention Plans regulations and applicable guidelines.
- The process for allocation of mandatory carbon budgets and pollution prevention plans.
- Methodological guidelines for quantification of greenhouse gas emissions.
- Technical guidelines for validation and verification of greenhouse gas emissions.
- Carbon Tax Act.
- Technical Guidelines for Carbon Sequestration under the Carbon Tax
- The carbon budget methodology.
- GHG emissions reporting requirements under the enhanced transparency framework of the Paris Agreement.

3.2.2. Functional Requirements: Data Provider Registration Module

The service provider must define requirements to develop a Registration of Data Providers Module:

- The system must have functionality to enable registration for industry users required to report activities as per the National Greenhouse Gas Emission Reporting Regulations. The registration function must cover that all submissions (first-time registration, modification, deregistration) as required by the regulation 5(1) and regulation 6(1) (2) & (3) of the National Greenhouse Gas Emission Reporting Regulations and draft carbon budgets and mitigation plans regulations. The registration process must also consider additional registration information and data requirements that is associated with carbon budgets and mitigation plans;
- The registration module must have functionality to register and report country-specific emission factors that could be applicable at sector (e.g., cement industry), company or facility level; This registration module must be linked to the emission factor module of the system.
- Registration, modification and deregistration, including change of ownership of activities and sources that generate greenhouse gas emissions from Entities required to report as per the regulations;

When any of these four processes are triggered, especially for entities that have carbon budgets, the system should require the data provides to provide information to indicate how such changes will affect the allocated carbon budget and mitigation plan.

- The system must have functionality to complete automated quality control checks and a component for DFFE to review and approve registration submissions, including management of tasks during the review process, submit all required information. The system must have the capability to send correspondence to data providers and send back submissions to the Data Providers for amendments during the review process.

3.2.3. Functional Requirements: Data Provider Reporting Module

The service provider must define requirements to develop a GHG Data Provider Reporting module as required by the regulation 7(1) of the National Greenhouse Gas Emission Reporting Regulations, carbon budget annual reporting information and mitigation plan annual progress reporting. The system must have functionality to complete automated quality control checks and ensure that all required information is submitted and a component for DFFE to review and approve GHG, carbon budget and mitigation plan report submissions.

The system should provide the following capabilities:

- Allow reporting and online computation and calculation of emissions from activities in the Energy, Industrial Processes and Product Use (IPPU), Agriculture, Forestry and Other Land Use (AFOLU), Waste, as per Annexure 1 of the National Greenhouse Gas Emission Reporting Regulations (2017), the methodologies defined in the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines, the 2019 refinement to the 2006 IPCC Guidelines and the Methodological Guidelines for quantification of greenhouse gas emissions.
- In terms of the on-line computation and calculation of emissions defined in the first bullet above, the system must accommodate: tier 1 (all emissions sources), tier 2 (where relevant) and tier 3 (where relevant) methods. The service provider can consult the Methodological Guidelines for quantification of greenhouse gas emissions to understand the definitions of the “tier” methods and their data requirements. In cases where a tier 2 and tier 3 method are used, the system should allow for upload of documentation (e.g. excel based calculation files, word or PDF documents, etc.).
- Maintain a database of emission factors and other parameters required for the computation of emissions for each sector and ensure that parameters can be updated and locked by DFFE for each reporting year.
- Generate reporting template for the data provider based on the latest activities declared by the Data Provider on the registration module, modification module, excluding deregistered activities for each reporting year.
- The system must have the capability for assignment of relevant sector experts to review and recommend for approval of GHG reports, mitigation plans and annual progress reports.
- The system must have the capability to send correspondence to data providers and send back submissions to the Data Providers for amendments and archiving of the different versions of the

submissions during the review process.

- Track review times to ensure that reports are reviewed within legislated timelines.

3.2.4. Functional Requirements: Carbon Budget Allocation and Mitigation Module

The service provider must define requirements to develop a Carbon Budget Allocation and Mitigation module for submission and management of carbon budgets, mitigation plans and annual progress reports which meets requirements as defined DFFE. The annual GHG emissions report that shall be filed in the reporting module of the proposed system shall give an indication of progress achieved for those data providers with carbon budgets. Therefore, the carbon budget allocation module must be linked with the annual GHG emissions reporting module.

The system must have functionality to enable the submission of mitigation plans, carbon budgets and annual reports and to report progress towards mitigation of emissions.

3.2.5. Functional Requirements: Automated Data Quality and Assurance Component

The system must have the capability to perform a GHG emissions reports review automatically and generate detailed auditing reports for each GHG emissions report based on the requirements in the regulations and comparison of emissions from similar sectors.
Data Quality ad Assurance component should audit the following:

- IPCC broad category (E.g., Energy)
- IPCC sub-sector (E.g., Main electricity generation)
- IPCC source (E.g., Coal)
- IPCC codes
- Tier Method selected

The service provider is encouraged to view the United Nations Framework Convention on Climate Change (UNFCCC) GHG emissions review tool, in particular the “SODT” tool at https://rt.unfccc.int/ to gain a better understanding of the data analytics functionality that DFFE is looking for.

3.2.6. Functional Requirements: GIS and Analytics

The system must include functionality for both GIS (Data Visualization) and Analytics. This includes developing a GIS module with the ability for emissions data from all source/ sectors to be uploaded in gridded format. This will provide the ability for the emissions to be spatially and temporarily represented in the gridded GIS format.

The analytics module must consist of different GHG emissions summary reports and a data visualization platform. Furthermore, the system must provide useful on-line applications to support effective and efficient GHG management.

The system should be able to provide data analytics and GIS module to analyze the following:

- GHG (Direct and Indirect/precursors) emissions and activity data by activity type (IPCC activities)
- GHG emissions (Direct and Indirect/precursors) and activity data by facility, Data provider, Province, District/Metro & Local Municipality
- GHG (Direct and Indirect/precursors) emission trends by greenhouse gas
- GHG (Direct and Indirect/precursors) emissions by economic activity (generation of Air Emissions Accounts). This must be informed by linking IPCC codes to Standard Industrial Classification (SIC) codes
- Compliance/ Incompliance status table
- Top CO2-eq emission Data Provider, Top Substance emission, and Top incompliance data provider and substance (Chart)
- CO2-eq greenhouse gas emission map
- Incompliance map

The service provider is encouraged to view the United Nations Framework Convention on Climate Change (UNFCCC) GHG emissions review tool, in particular the "COMPARISON TOOL" at https://rt.unfccc.int/ to gain a better understanding of the data analytics functionality that DFFE is looking for.

3.2.7. Functional Requirements: Additional

The service provider must define requirements to develop the following functionality:

- Reporting Module to enable users to calculate and report greenhouse gas emissions for all relevant sources of greenhouse gases within their operational control in line with the IPCC Guidelines & the Methodological Guidelines for quantification of greenhouse gas emissions (See URL below). https://www.dffe.gov.za/sites/default/files/legislations/aq_ngers_g44190gon135.pdf
- The GHG reporting platform must cater for facility-level and company-level reporting with traceability particularly for those companies that have more than one facility and GHG emission categories;
- Validation & auditing of GHG reports and management of all tasks to completed during the validation process;
- Generation of standardized GHG reports by company, facility, sector, province, district/ metro, local municipality, IPCC activities and tailor-made reports in response to the needs of the DFFE & its stakeholders;
- Performance tracking to ensure that tasks are completed within legislated time frames;
- Migration of data reported in the existing SAGERS to ensure a seamless transition, this includes data on all existing profiles and registration details.
- Management of user accounts and access by the Department that allows transfer of Data Provider profiles including historical information in cases where there is changes in Accounting Officers.

3.3. Non-Functional Requirements: Governance & Standards

- All ICT systems implemented in government have to be certified for compliance against the Government's Minimum Interoperability Standards (MIOS). It is the obligation of the service provider to adhere to the applicable processes during the design, construction and implementation of the solution, which will result in the system obtaining the required certification. MIOS can be obtained from the Internet at the following URL: https://www.sita.co.za/content/minimum-interoperability-standards
- DFFE has a defined ICT security policy, including specific functional and non-function requirements regarding User Access Management (UAM). The strategy will be made available to the successful bidder. It is the obligation of the service provider to ensure that the final systems conform in all respects to DFFE's ICT Security Strategy.
- All ICT systems in DFFE must be developed in line with the DFFE ICT Standards for Hardware and Software.

4. Scope Item C: System Architecture & Design

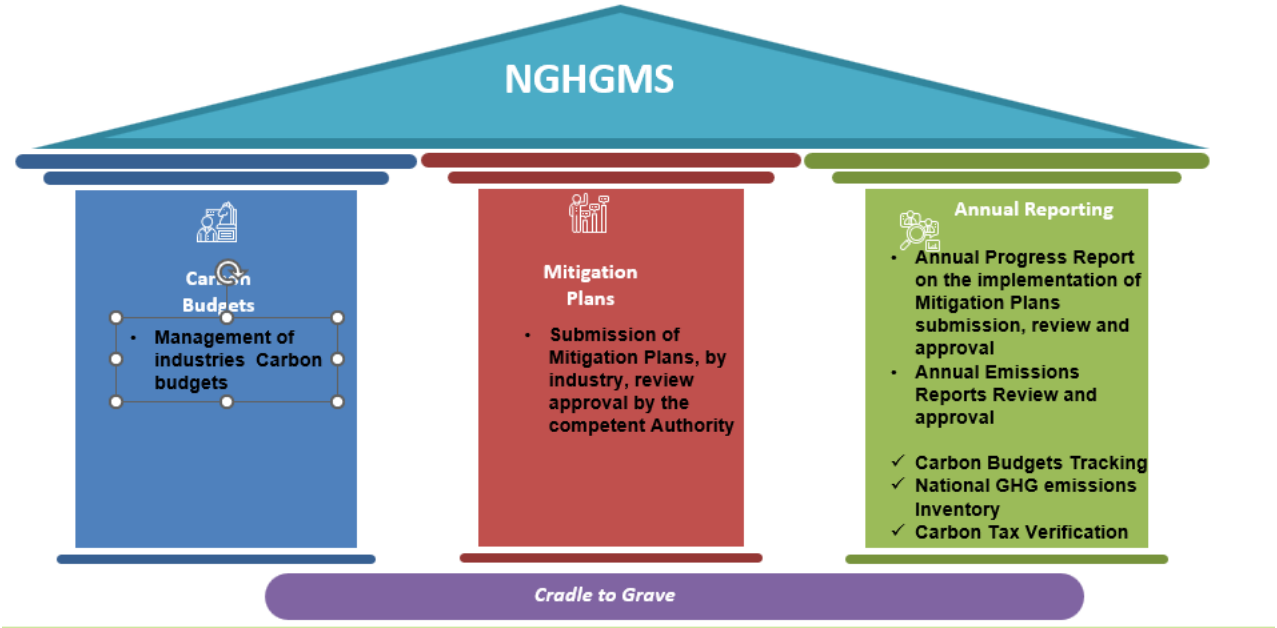
The service provider must develop a system architecture and design based on the user and functional requirements defined in Scope Item B above. The service provider must specify the technical requirements of the system, including data collection methods, data storage, data processing for each business process of each module to be developed as outlined in the Scope D below. Compile a clear and detailed description of the system architecture and functionality and overview for all business processes including but not limited to the following:

- the type of data that is collected, organized and how it will be reported into the system;
- the sequence of business processes and timelines;
- of how and when the activity data is reported;
- how the reported activity data QA and QC will be automated by the system;
- how data is stored, sorted, and archived;
- how the data will be extracted from the system into different offline formats;
- how the activity data will be accessed and secured; and
- how data will be synchronized or shared with other systems.

5. Scope Item D: Development

The service provider must develop the system in line with the design outputs, to ensure that the three critical pillars of the system are in place, covering the deliverables below:

Figure 2: Pillars of the National Greenhouse Gas Management System



The development must cover the modules as per the defined requirements outlined in **Scope Item B** (Requirements Gathering, Investigations & Benchmarking), in line with the Architecture and Design outputs. The minimum expected development outputs are as follows.

5.1. GHG Data Provider Registration Module

The service provider must develop and deliver the GHG Data Provider registration module that covers all submissions (first-time registration, modification, deregistration) required by the regulation 5(1) and regulation 6(1) (2) & (3) of the National Greenhouse Gas Emission Reporting Regulations and draft carbon budgets and mitigation plans regulations, including the review and approval of the submitted information by DFFE.

5.2. GHG Data Provider Reporting Module

The service provider must develop and deliver the GHG Data Provider reporting module as required by the regulation 7(1) of the National Greenhouse Gas Emission Reporting Regulations, including a component to audit, validate and verify of submitted information by DFFE.

5.3. Output: Carbon Budget & Mitigation Plan Module

The service provider must develop the Carbon Budget Allocation and Mitigation module for submission and management of carbon budgets, mitigation plans and annual progress reports which meets requirements as defined DFFE, including review and approval of submitted information by DFFE.

5.4. Output: Automated Data Quality and Assurance Component

The system to have the capability to perform a GHG emissions reports review automatically and generate detailed auditing reports for each GHG emissions report based on the requirements in the regulations and comparison of emissions from similar sectors

5.5. Output: Data Analytics and GIS Module

The system shall also include both GIS and analytics modules

6. Scope Item E: Testing

The service provider must ensure that all components of the are tested. All issues that are identified must be recorded and tracked in an Issue log.

Once all the system modules have been developed and tested, the service provider must create a UAT Testing environment to be used by DFFE officials to test using dummy data prior roll-out. The system needs to be tested considering the population of all the data used to generate all reports required by DFFE. The UAT environment must be always available post project completion to be used for training purposes.

7. Scope Item F: Training

The service provider must ensure capacity building for Authority users and a system administrator(s). Outline plans for user training and support, including the development of training materials and resources for system users.

8. Scope Item G: Implementation & Go Live

8.1. User Acceptance Testing

Once all the system modules are developed the service provider must create a UAT Testing environment to be used by DFFE officials using dummy data prior roll-out. The system needs to be tested considering the population of all the data used to generate all reports requires by DFFE. The UAT environment must be always available post project completion to be used for training purposes.

8.2. Roll-out and Go Live

The service provider must ensure that the system deployed to production and rolled-out to all the relevant user groups.

KEY DELIVERABLES

Scope Item	Expected Deliverables / Outputs
Scope Item A: Project planning	**Output A(I):** Project Charter **Output A(II):** All other project management deliverables as listed above as minimum project management outputs
Scope Item B: Requirements gathering investigation & benchmarking	**Output B(I):** Approved URS containing all of the requirements as in section 4.2 **Output B(II):** Desktop Domestic & International Systems & Benchmarking Report
Scope Item C: System Architecture & Design	**Output C:** System architecture and design artefacts
Scope Item D1: Development -GHG Data Provider Registration Module	**Output D1(I)**: GHG data provider new registration, Modification & Deregistration Module (Public Interface) **Output D1(II))**: GHG data provider registration review and approval module (Review of Submission by DFFE)
Scope Item D2: Development -GHG Data Provider Reporting Module	**Output D2(I)**: GHG data provider reporting module (Public User Interface) **Output D2 (II)**: GHG data provider reporting module review and approval (Authority User Interface) **Output D2(III):** Module for generation of annual emissions reports
Scope Item D3: Development -GHG Emissions Factor Submission Module	**Output D3(I)**: Emission factor submission module (public site) **Output D(II)**: Emission factor submission module review and approval (Authority site)
Scope Item D4: Development -Carbon Budget & Mitigations Module	**Output D5(I)**: Carbon Budget & Mitigations Plans Submission Module (Public User Interface) Output D5 (II): GHG data provider Annual Progress Reporting (Public User Interface) Output D5 (III): GHG data provider Carbon Budget, Mitigation Plans and Annual Progress report management, review and approval (Authority User Interface)
Scope Item D5: Development -Automated Data Quality & Assurance Components	**Output D6:** Data Quality and Assurance Reports
Scope Item D6: Development - GIS & Analytics	**Output D7**: GIS and Analytics
Scope Item E: Testing	**Output E(I)1**: Test Results **Output E(II)**: Issue Log

Scope Item F: Training	**Output F(I):** Data Providers Editable User Guide and Training Videos **Output F(II):** DFFE Competent Authority Interface User Guide and Training Videos (Super User) **Output F(III):** Technical Training for Administrators **Output F(IV):** Train the Trainer for Super Users
Scope Item G: Implementation	**Output G(I)**: UAT SITE **Output G(II)**: UAT Report and Sign-off
Compliance Outputs	**Output I1:** MIOS certification **Output I2:** Conformance to DFFE's ICT Security strategy

PROJECT MANAGEMENT

This assignment will be managed closely by a project steering committee (PSC) comprised of points of contact in DFFE and the NDC Partnership Support Unit. For policy alignment across sectors, additional departments in the Government of South Africa will likewise be engaged throughout this assignment, where related Article 6 initiatives are anticipated to originate from. These include:

- Department of Mineral Resources and Energy (DMRE)
- Department of Forestry, Fisheries and Environment (DFFE) - UNFCCC focal point
- Department of Transport (DoT)
- National Treasury (NT)
- Department of Trade, Industry and Competition (DTIC)

CONTRACT TERMS

- Estimated start date: 6 May 2024
- Estimated end date: 15 November 2024

TEAM OF EXPERTS REQUIRED

The project team should have the following qualifications and experience:

1. Relevant academic qualifications preferably a post-graduate degree or equivalent thereof in Software Engineering);
2. Relevant academic qualifications, preferably a post-graduate degree or equivalent thereof in GHG Accounting and Reporting.
3. In addition, one member of the team with a qualification in project management would be an advantage.

Project Team

The proposed team to be assigned to the project should have required qualification and experience to undertake the project assignment and demonstrate technical capacity to establish an automated tool to facilitate the process of carbon budget allocation for all regulated sector companies.
Bidder(s) should submit curriculum vitae for all experts to be assigned project tasks. Curriculum Vitae is to include specific details of participating experts including, inter alia, their relevant qualifications and experience.

Technical experts assigned to the project must have at least a post – graduate Degree or higher qualifications and demonstrate their technical expertise to undertake and successfully complete the assigned project tasks.

The project team requirements are as follows;

Expert 1: Project Manager or Team leader should have a post graduate Degree in Software Engineering):

- The team leader will be responsible for the overall management of project, quality assurance and oversight for the project team where relevant.
- Bidder(s) are required to submit/ attach certified copy of relevant qualification for the Project/ Team Leader in the areas of software engineering (Post - Graduate Degree in Software Engineering, preferably MSc Degree or higher qualifications would be an advantage).
- Bidders should demonstrate the technical capability/ expertise and track record of a project manager to be assigned to the project to design, develop, test and deploy a system to manage and implement an integrated system for management of carbon budgets and mitigations plans thereby ensuring that mitigation plans enforce the compliance with carbon budgets at company level and as well as to create a public platform for data dissemination for the benefit of society in general and the research community in particular.

Expert 2: Technical Experts in GHG Accounting and Reporting, (number not specified, service provider to decide on optimal team configuration given the scope of the terms of reference of the project):

- Technical experts assigned to the project should have post-graduate Degree in GHG Accounting and Reporting or similar qualifications

Expert 3: A recognized Qualification in Project Management

RFP PROPOSAL REQUIREMENTS

Prospective vendors should submit:

- Description of proposed project management structure (lead team/project manager, sub-contracted organizations, local experts, etc.)
- Proposed implementation approach/project monitoring plan
- Examples of and references for similar previous work (with URLs and contact details)
- A proposed schedule for deliverables
- Bidder(s) are required to demonstrate relevant experience and competency of the company for all successfully completed projects.
- Demonstrable experience working in the field of climate mitigation, database management, and mitigation instruments in South Africa and/or sub-Saharan Africa
- Demonstrated skills in managing and aligning diverse stakeholder groups, including development agencies, non-state actors / civil society, financial institutions, the private sector, and others;
- Demonstrate knowledge of South Africa's climate change policy landscape
- Qualifications and CVs of team members
- Advanced degree in related discipline, preferably in Software Engineering, and GHG Accounting and Reporting, or a similar subject
- At least 5 years of experience in issues related to climate/environment, sustainable development, project management, or monitoring in any of the NDC sectors
- A proposed budget with a breakdown of costs sufficient to assess reasonableness and compliance with our funder requirements.
- Excellent writing, editing, digital and oral communication skills;
- Fluency in English.
- Priority will be given to South Africa based entities.

EVALUATION AND SELECTION

Evaluation Criteria

The following elements will be the primary considerations in evaluating all proposals submitted in response to this RFP:

- Completion of all required elements;
- The extent to which the vendor's proposal fulfills the NDC Partnership's stated requirements as set out in the RFP;
- Experience with similar projects;
- Overall cost of the vendor's proposal;
- Debarment and sanctions –the NDC Partnership will not consider proposals from vendors that are presently debarred by the U.S. government or named on any restricted parties lists;
- Sustainability – the NDC Partnership values sustainability and all other factors being equal, will favor a proposal to more sustainably perform the work.
- The bidder offering the best overall value will be selected. For this procurement, price and non-price aspects are considered to be of approximately equal importance.

Selection Process

No proposal development costs shall be charged to WRI / all expenses are to be borne by the bidders. WRI may award to the bidder offering best value without discussion. However, WRI reserves the right to seek bidder clarifications and to negotiate with those bidders deemed to be within a competitive range.

WRI may, at its discretion and without explanation to the prospective vendors choose to discontinue this RFP without obligation to such prospective vendors or make multiple awards under this RFP. Contracts will not be awarded to vendors debarred by the US government or named on restricted parties lists.

SUBMITTING PROPOSALS

To submit expressions of interest and proposal documents, please send relevant materials to:

- Margaret Barihaihi, Regional Manager for Anglophone and Lusophone Africa, NDC Partnership Support Unit: margaret.barihaihi@ndcpartnership.org
- Christine Luttmer, Program Specialist for Country Engagement Support, NDC Partnership Support Unit: christine.luttmer@ndcpartnership.org
- Gabriel Malunga, Regional Project Officer for Anglophone Africa, NDC Partnership Support Unit: gabriel.malunga.5@ndcpartnership.org

All proposals must be received **by 5:00pm EST on Friday, 12 April 2024** in electronic format to the contacts listed above.