

Terms of reference (ToR) for the procurement of services below the EU threshold

CONFIDENTIAL

Technical Consultancy for Identification and Incorporation of Process Emissions in the Iron & Steel Sector under CCTS	Project number/ ofcost centre:G- 018078-001
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Tender number

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List of abbreviations

AG	Commissioning party
AN	Contractor
AVB	General Terms and Conditions of Contract for supplying services and work
FK	Expert
FKT	Expert days
KZFK	Short-term expert
ToRs	Terms of reference

1. Context

Brief information on the project

GIZ is an international cooperation enterprise for sustainable development which operates worldwide, on a public benefit basis. GIZ is fully owned by the German Federal Government, GIZ implement development programs in partner country on behalf of the German Government in achieving its development policy objectives.

Energy efficiency the energy efficiency project of GIZ has been working with BEE in the implementation of energy conservation act. The project has supported BEE in many initiatives for large industries and MSMEs. Despite these achievements, substantial untapped potential remains, requiring an expanded policy and adequate instrument mix.

To address this, the Bureau of Energy Efficiency (BEE), under the Ministry of Power, Government of India collaborates with GIZ India on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) through the project “Energy Efficiency in India” which adopts a comprehensive approach to industrial decarbonisation by strengthening institutional and individual capacities of relevant stakeholders. Its interventions focus on:

- a. Developing strategies for industrial decarbonisation, including integration within the Indian Carbon Market.
- b. Supporting the design and implementation of incentive schemes.
- c. Promoting industrial energy efficiency measures through demonstration projects and awareness campaigns.
- d. Advancing gender equality and social inclusion in the industrial transition.

Background

The Government of India has notified the Carbon Credit Trading Scheme (CCTS), 2023 under the Energy Conservation Act, 2001, as amended. The CCTS establishes the framework for India's compliance-based carbon market, including sector-specific greenhouse gas (GHG) emission intensity targets, monitoring, reporting and verification requirements, and issuance of Carbon Credit Certificates.

The Bureau of Energy Efficiency (BEE), Ministry of Power, is responsible for operationalising the CCTS in coordination with relevant stakeholders. Obligated Entities (OEs) are required to report their energy consumption, production, GHG emissions and other relevant parameters in accordance with the applicable sector-specific methodologies and reporting formats.

The Iron & Steel sector is characterised by multiple production routes and complex industrial processes, including integrated BF-BOF routes, coal-based DRI, gas-based DRI, EAF/IF and associated processes such as coke making, sintering, pelletisation, lime and dolomite calcination and steelmaking. In addition to emissions arising from fuel combustion and electricity consumption, several process-related activities may result in direct GHG emissions through chemical reactions, reduction of iron oxides, carbonate decomposition and oxidation of carbon-containing process materials.

To support effective implementation of the CCTS, it is essential to systematically identify process emission sources across different iron and steel production routes and develop standardized data requirements, calculation parameters and quantification methodologies.

The existing Iron & Steel sector-specific CCTS proforma requires further assessment to determine whether all relevant process-emission sources and associated activity data are adequately captured. Accordingly, GIZ intends to engage a specialised technical consulting firm to undertake a comprehensive sector assessment, consult with sectoral associations and stakeholders, undertake representative plant-level field assessments, develop an additional data collection format, collect information from a representative sample of obligated entities, and recommend and support the incorporation of relevant process-emission parameters into the existing sector-specific proforma.

The assignment will support BEE in strengthening the technical robustness, completeness and consistency of process-emission accounting under the CCTS.

2. Tasks to be performed by the contractor

The overall objective of the assignment is to identify, assess, quantify and develop an appropriate framework for capturing process emissions from the Indian Iron & Steel sector and incorporate the relevant process-emission parameters and data requirements into the existing Iron & Steel sector-specific CCTS proforma.

1. Identify and map major process-emission sources across different Iron & Steel production routes and plant configurations in India.
2. Review existing CCTS methodologies, sector-specific proforma and relevant national/international approaches for accounting of process emissions.
3. Consult sectoral associations, technical institutions, industry representatives, experts and other relevant stakeholders to understand existing practices and data availability.
4. Undertake representative plant-level/field assessments covering relevant categories and production routes to validate process-emission sources and data requirements.
5. Develop a concise additional data collection format for capturing process-emission-related activity data from Obligated Entities.
6. Collect process-emission information from 40% of the OE covered under CCTS, primarily through a structured Google Form/data-collection mechanism, supplemented by field-level validation wherever required.
7. Analyse the collected information and determine appropriate process-emission parameters, activity data, emission factors, calculation approaches and reporting requirements.
8. Recommend modifications/additions to the existing Iron & Steel sector-specific CCTS proforma for effective capture of process emissions.
9. Conduct three stakeholder workshops to discuss, validate and finalise the proposed process-emission parameters and revised data requirements.
10. Prepare a comprehensive final technical report documenting the methodology, findings, data analysis, stakeholder consultations, proposed proforma modifications and recommendations for implementation.

The contractor shall be responsible for carrying out, but not limited to, the following tasks:

2.1 Review of Existing Framework and Preparation of Process-Emission Mapping

- Review the existing CCTS Iron & Steel methodology and proforma, including GHG calculation provisions, activity data, fuel and production data, and emission factors, to identify existing gaps.

- Review national and international approaches and map major Iron & Steel production routes, including BF-BOF, DRI, EAF/IF, coke making, sintering/pelletisation, and lime/dolomite calcination.
- Identify and assess process-emission sources arising from reduction reactions, carbonate decomposition, carbon oxidation and other process inputs across different production routes.
- Differentiate process emissions from fuel-combustion and electricity-related emissions and identify the additional data requirements for their consistent reporting under CCTS.

2.2 Consultation with Sectoral Associations and Stakeholders

- Conduct structured consultations with BEE, relevant Iron & Steel sectoral associations, steel producers, DRI/EAF/IF operators, coke/sinter and lime/dolomite producers, technical institutions and ACVAs.
- Assess stakeholder inputs on process-emission sources, existing monitoring practices, data availability, emission factors, calculation approaches, data gaps and challenges across different production routes.
- Document the consultation findings and prepare a Stakeholder Consultation Summary Report, including recommendations for incorporating additional process-emission data requirements into the existing CCTS reporting framework.

2.3 Plant-Level Assessment / Field Visits / template preparation

- Identify representative plants for field-level assessment covering different plant categories and major production routes, including BF-BOF, DRI and EAF/IF, to ensure sector-wide representation.
- Assess plant-level processes and data availability, including raw materials, reducing agents, carbon inputs, fluxes, process gases, production data, existing monitoring systems, emission calculations and supporting records.
- Evaluate data gaps and feasibility of additional data collection under CCTS, and prepare plant-level process maps with key observations and recommendations.
- Develop a concise Additional Process Emission Data Collection Format covering plant details, production routes, raw materials, reducing agents, coke/coal/PCI, fluxes, carbon inputs, electrodes and process gases.
- Include key calculation and verification parameters, such as process activity data, emission factors, measurement/estimation methods, source documents and data quality/uncertainty information.
- Ensure the format is practical and avoids unnecessary reporting burden, and submit the draft to GIZ and BEE for review and approval before sector-wide data collection.

2.4 Sector-Wide Data Collection, Process-Emission Analysis and Incorporation into CCTS Proforma

- Undertake structured data collection from at 40% of OEs covered under CCTS through a standardised Google Form or approved digital mechanism, covering diverse production routes, plant sizes and technologies.

- Coordinate the data collection process by providing clear guidance, conducting follow-ups, checking data quality and completeness, and addressing missing, inconsistent or anomalous information.
- Develop the Process-Emission Calculation Framework, covering calculation equations, mass-balance requirements, treatment of carbon-containing inputs/by-products, monitoring frequency and verification requirements.
- Clearly distinguish process emissions from fuel-combustion emissions and recommend appropriate parameters, data sources and calculation approaches for consistent reporting under CCTS.
- Recommend modifications to the existing Iron & Steel sector-specific CCTS proforma, including additional data fields, definitions, units, emission factors, calculation methods, supporting documents and verification requirements, in consultation with GIZ and BEE.

2.5 Stakeholder Workshops

The contractor shall organise and provide technical support for three stakeholder workshops.

Workshop	Focus
Workshop 1 – Identification and Initial Assessment	Process-emission source mapping; stakeholder consultation findings; initial data gaps; proposed parameters.
Workshop 2 – Data Collection and Calculation Framework	Plant assessment and sector-wide data findings; data collection format; calculation approach; emission factors and data requirements.
Workshop 3 – Validation and Finalisation	Proposed proforma modifications; validation of parameters; stakeholder feedback; finalisation of data fields and calculation requirements.

The contractor shall prepare presentations, background material, discussion documents, workshop proceedings and an action-point matrix for each workshop.

2.6 Finalisation and Technical Documentation

- Finalise and update the existing sector-specific CCTS proforma by incorporating the additional process-emission data requirements, revised sections, and appropriate guidance for Obligated Entities.
- Finalise data quality and verification requirements, strengthen process-emission monitoring and reporting, and prepare a comprehensive technical book documenting the process-emission assessment, key findings, methodology, data analysis, outcomes and recommendations.

Certain milestones, as laid out in the table below, are to be achieved during the contract term:

Milestones/partial works	Key Activities	Timelines
Inception, Desk Review and Process-Emission Source Mapping	Inception report, review of existing CCTS methodology/proforma, national/international approaches, process mapping and initial gap assessment.	Within 10 working days post contract awarding
Stakeholder Consultation and Plant-Level Assessment Report	Stakeholder consultations, identification of representative plants, category/route-wise field visits, plant-level process assessment and data-gap analysis.	Within 120 days post contract awarding
Process-Emission Data Collection and Analysis	Development of additional data collection format, collection of data from at least 40% of targeted plants, data validation and analysis.	Within 180 days post contract awarding
Process-Emission Calculation Framework and Workshop Validation	Development of calculation methodology, activity data requirements, emission factors, equations and mass-balance approach, including two stakeholder workshops.	Within 210 days post contract awarding
Revised CCTS Proforma and Final Stakeholder Validation	Incorporation of process-emission parameters into the existing Iron & Steel sector-specific proforma, guidance for OEs, data quality/verification requirements and third validation workshop.	Within 240 days post contract awarding
Finalisation and BEE Approval of Process-Emission Framework	Finalise the revised proforma, calculation framework and guidance; prepare a comprehensive technical book documenting the methodology, findings and outcomes ; incorporate stakeholder feedback and obtain BEE approval .	Within 270 days post contract awarding

Period of assignment: from **November-2026** until **July-2027 (Nine Months)**.

3. Concept

In the tender, the tenderer is required to show *how* the objectives defined in Chapter 2 (Tasks to be performed) are to be achieved, if applicable under consideration of further method-related requirements (technical-methodological concept). In addition, the tenderer must describe the project management system for service provision.

Technical-methodological concept

Strategy (1.1): The tenderer is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 1 Context) (1.1.1). Following this, the tenderer presents and justifies the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 2 Tasks to be performed) (1.1.2).

The tenderer is required to present the actors relevant for the services for which it is responsible and describe the **cooperation (1.2)** with them.

The tenderer is required to present and explain its approach to **steering** the measures with the project partners (1.3.1) and its contribution to the **results-based monitoring system (1.3.2)**.

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule (1.4.1) that describes how the services according to Chapter 2 (Tasks to be performed by the contractor) are to be provided. In particular, the tenderer is required to describe the necessary work steps and, if applicable, take account of the milestones and **contributions** of other actors (partner contributions) in accordance with Chapter 2 (Tasks to be performed) (1.4.2).

The tenderer is required to describe its contribution to knowledge management for the partner (1.5.1) and GIZ and to promote scaling-up effects (1.5.2) under **learning and innovation**.

Project management of the contractor (1.6)

The tenderer is required to explain its approach for coordination with the GIZ project. In particular, the project management requirements specified in Chapter 2 (Tasks to be performed by the contractor) must be explained in detail.

The tenderer is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the tender; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

The tenderer is required to describe its backstopping concept. The following services are part of the standard backstopping package, which (like ancillary personnel costs) must be factored into the fee schedules of the staff listed in the tender in accordance with Section 3.1 of the GIZ AVB:

- Service-delivery control
- Managing adaptations to changing conditions
- Ensuring the flow of information between the tenderer and GIZ
- Assuming personnel responsibility for the contractor's experts
- Process-oriented steering for implementation of the commission
- Securing the administrative conclusion of the project

Further requirements (1.7)

Eligibility criteria for the consulting firm

- Should be registered in India.
- Agency must sign / stamp / submit "compliance declaration (Refer Annexure) on company's letterhead.
- Average annual turnover for the last 3 financial years should be 120,000 Euros
- Number of employees (as of December last year) should be 10
- Minimum two reference project on carbon market/ emission trading schemes, and one project involving Sectoral Decarbonisation Pathway and Net-Zero Transition Studies (in Iron & Steel sector). The reference projects should be of more than 20,000 Euros and in last three years.

- At least 5 years of experience in industrial energy efficiency/ decarbonization is desirable.
- At least 5 years of experience in projects related to Industrial (CCTS/ PAT) sectors.
- Minimum 3 years work experience in India
- Minimum 1 ODA financed project

4. Personnel concept

The tenderer is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

(Team Lead/ Lead Expert):

Tasks of the team leader

- Lead and supervise the overall implementation of the assignment and ensure timely delivery of all contractual deliverables.
- Coordinate with GIZ, BEE, Accredited Carbon Verification Agencies (ACVAs), obligated entities, and other stakeholders for effective implementation of the assignment.
- Lead the development of the process-emission assessment methodology.
- Lead stakeholder consultations and technical discussions.
- Review and validate process-emission calculations and methodological approaches.
- Lead the development of the revised sector-specific proforma.
- Supervise the expert team and ensure technical quality assurance of all outputs.
- Lead the organisation and delivery of three stakeholder workshops.
- Ensure timely and quality submission of all contractual deliverables.
- Overall coordination and management of the assignment.

Qualifications of team leader

- Qualification: Be an engineering graduate from the Indian university system (2.1.1)
- Language: Be proficient in Hindi or English (2.1.2)
- General professional experience: 15 years of work experience in the field of energy efficiency (2.1.3)
- Specific professional experience: Minimum 7 years of relevant experience in developing policies, technical frameworks, and methodologies for Government of India programmes, with demonstrated expertise in process-emission assessment, GHG accounting, carbon footprint, LCA, including a strong understanding of the Carbon Credit Trading Scheme (CCTS) and sector-specific process-emission methodologies. (2.1.4)
- Leadership experience: 10 years of experience at leadership positions (2.1.5)
- Regional experience: 5 years of working in the India (2.1.6)
- Development cooperation experience: 3 years of working with development corporation (2.1.7)
- Other: Certified energy auditor/manager or ISO14064 certification(2.1.8)

Expert 1: (Process Expert):

Task of expert 1:

- Identify and map process-emission sources across different steel production routes.
- Assess process emissions from BF, BOF, DRI, EAF/IF, coke, sinter, lime, and dolomite production processes.
- Undertake plant-level assessments to validate process-emission sources, data availability, and measurement practices.
- Assess reducing agents, fluxes, carbon-containing inputs, and process gases contributing to process emissions.
- Develop process-emission calculation equations, emission factors, and activity-data requirements.
- Provide technical inputs for the development of the revised sector-specific proforma for process-emission reporting under the ICM/CCTS
- Any other work required to complete the work defined in the ToR

Qualifications of expert 1

- Qualification: Be an engineering graduate from the Indian university system (2.2.1)
- Language: Be proficient in Hindi or English (2.2.2)
- General professional experience: 10 years of work experience in the Iron & Steel Sector (2.2.3)
- Specific professional experience: Minimum 5 years of relevant experience with practical experience in steel production processes and plant operations, along with knowledge of GHG emission assessment, process-emission sources, carbon accounting, emission factors, and activity-data requirements. (2.2.4)
- Leadership experience: Not required (2.2.5)
- Regional experience: 5 years of working in the India (2.2.6)
- Development cooperation experience: Not required (2.2.7)
- Other: Certified energy auditor/manager or ISO14064 certification (2.2.8)

Expert 2: (Emission Accounting Expert):

Task of expert 2:

- Develop process-emission calculation methodologies aligned with CCTS requirements.
- Review and validate emission factors, activity data, and data sources.
- Develop additional data collection formats and templates for process-emission assessment.
- Design and manage digital data collection systems, including Google Forms.
- Undertake data quality assessment, validation, and analysis of collected information.
- Develop data dictionaries, calculation templates, and supporting tools for process-emission quantification.
- Support the integration of process-emission parameters into the revised CCTS sector-specific proforma.
- Any other work required to complete the work defined in the ToR

Qualifications of expert 2

- Qualification: Be an engineering graduate from the Indian university system (2.2.1)
- Language: Be proficient in Hindi or English (2.2.2)

- General professional experience: 7 years of work experience in the field of Energy efficiency (2.2.3)
- Specific professional experience: Minimum 5 years of relevant experience in GHG accounting, Life Cycle Assessment (LCA), industrial emissions, with sound knowledge of GHG emission assessment, process-related emission pathways, carbon accounting (2.2.4)
- Leadership experience: Not required (2.2.5)
- Regional experience: 5 years of working in the India (2.2.6)
- Development cooperation experience: 2 years of working with development corporation (2.2.7)
- Other: Certified energy auditor/manager or ISO14064 certification (2.2.8)

5. Costing requirements

Assignment of personnel and travel expenses

Per diem allowances are reimbursed as a lump sum up to the maximum amounts permissible under tax law for each country as set out in the country table in the circular from the German Federal Ministry of Finance on travel expense remuneration (downloadable from the [German Federal Ministry of Finance – tax treatment of travel expenses and allowances for international business travel as of 1 January 2026 \(GERMAN ONLY\)](#)).

Accommodation allowances are reimbursed as detailed in the specification of inputs below.

With special justification, additional Accommodation costs up to a reasonable amount can be reimbursed against evidence.

All business travel must be agreed in advance by the officer responsible for the project. Travel under this assignment is expected to these states: (Punjab Maharashtra, Jharkhand, Tamil Nadu, Kerala, Gujrat, Karnataka and Haryana etc.), travel to any other location would be taken with prior approval from GIZ

Sustainability aspects for travel

GIZ has undertaken an obligation to reduce greenhouse gas emissions (CO₂ emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest-emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO₂ efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.

CO₂ emissions caused by air travel must be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The [Development and Climate Alliance \(German only\)](#) has published a [list of standards \(German only\)](#). GIZ recommends using the standards specified there.

Specification of inputs

Fee days	Number of experts	Number of days per expert	Total	Comments
Expert 1: (Team Lead/ Lead Expert)	1	20	20	
Expert 2: (Process expert)	1	80	80	
Expert 3: (Emission Accounting expert)	1	190	190	
Travel expenses	Quantity	Number per expert	Total	Comments
Per-diem allowance in country of assignment	30	2	60	For one night stay per diem applicable 15 visits x 02 experts x 2 days
Overnight allowance in country of assignment	15	2	30	02 experts X 15 Visits X 1 Night
Transport	Quantity	Number per expert	Total	Comments
Domestic flights	15	2	30	(15 round trips x 02 experts) Flights within the country of assignment during service delivery.
CO ₂ compensation for air travel <i>Link to working aid and table for determining the budget and Guidance for GIZ service providers on avoiding, reducing and offsetting GHG emissions on setting the budget.</i>	15	2	30	(15 round trips x 02 experts). CO2 compensation for air travel round trip is consider as 25EUR for 30 trips i.e. EUR 683.
Travel expenses (train, car) • Local travel	15	2	30	Travel within the country of assignment (India), transfer to/from airport etc. Each local travel is inclusive of airport and venue transfers.

Other costs	Number	Price	Total	Comments
Workshops Workshop cost	3			3 workshops X 50 participant

6. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToR. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English (language).

The complete tender must not exceed 20 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages each. They must clearly show the position and job the proposed person held in the reference project and for how long. The CVs can also be submitted in English (language).

Please calculate your financial tender based exactly on the parameters specified in Chapter 5 Quantitative requirements. The contractor is not contractually entitled to use up the days, trips, workshops or budgets in full. The number of days, trips and workshops and the budgets will be contractually agreed as maximum limits.

7. Outsourced processing of personal data

The performance of the contract may be associated with the processing of personal data by the contractor, such as (but not limited to) names and contact information. In such cases, the contractor shall act as an independent DATA CONTROLLER and must alone comply with ALL applicable data protection obligations, including those stemming from regional and local laws. The contractor shall process personal data only when a given goal cannot be reasonably attained without such data. The data protection principles such as lawfulness, data minimization, accuracy, purpose limitation, storage limitation, transparency, integrity and confidentiality, and accountability, as well as the numerous rights of the data subject must be paid due attention. The GIZ is NOT in any way responsible for such processing.

Whenever the contractor executes the instructions of a partner to the GIZ with regard to such processing, the partner shall be the data controller, and the data processing shall be carried out in accordance with the partner's instructions as well as laws and standards to which it is subject.

If the contractor is not subject to the GDPR and the applicable laws do not contain any explanation on the data protection principles and rights mentioned here, the definitions and meanings provided by the GDPR (Regulation (EU) 2016/679) should be considered."