

Technical Guidance for Facility Level Measurement, Reporting and Verification (MRV) of Greenhouse Gas Emissions in Abu Dhabi Emirate

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1. Introduction

This document serves to detail the technical requirements to establish and regulate the mandatory monitoring, reporting and verification of GHG emissions in the Emirate of Abu Dhabi. This has the broad aim of managing the reduction of GHG emissions in the Emirate in line with local, federal and international climate commitments and targets.

This guidance shall be applied in the Emirate, including all free zones according to the covered sectors, emissions threshold and greenhouse gas emissions described below.

Reporting is obligatory at the Facility level operating in a Covered Sector: Power, Oil & Gas, Industry and Transport. The obligation to monitor and report greenhouse gas (GHG) emissions falls on the Operator (as defined in page 5) of the Reporting Facility. Operators of facilities within the Covered Sectors are responsible for fulfilling all obligations related to registration, monitoring, reporting and verification of emissions. Monitoring, reporting and verification of emissions shall be obligatory for all Facilities whose activities result in Emissions meeting or exceeding the Emissions Threshold (as defined in page 5).

Operators of Facilities in Covered Sectors that meet or exceed the Emissions Threshold defined in Section 3 ("Covered Entities and Threshold") are in-scope and shall register and report their emissions in accordance with this Guidance, for the purpose of complying with Article (6) "Measurement, Reporting, and Verification" of Federal-Decree Law No. 11 of 2024. Facilities that do not meet the scoping requirements may voluntarily participate in the Scheme. In such cases, the Facility shall be treated as a reporting Facility and shall adhere to all requirements set out in this document.

This Guidance applies without prejudice to any obligations imposed on an Entity or Operator under Federal-Decree Law No. 11 of 2024 on the Reduction of Climate Change Effects and Cabinet Resolution No. 67 of 2024 concerning the National Register for Carbon Credits.

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2. Purpose of document

The overarching aim of this document is to provide a framework for facilities to address four core questions:

1. **Outline process:** What activities occur within the facility?
2. **Describe calculation:** Which calculation or measurement approaches are used to report emissions?
3. **Identify inputs:** What data inputs are collected and used within the facility to report emissions?
4. **Describe verification processes:** Which verification and quality assurance procedures are in place to ensure the robustness of reported data?

3. Entities covered and threshold

This document applies to all Facilities that are in-scope for the exercise and its contents shall be applied in the Emirate, including all free zones provided Facilities. Whether a Facility falls within scope depends on whether they:

- **Fall within the covered sectors:** The sectors included currently are Power (Electricity and Water), Oil & Gas, Industry and Transport
- **Meet the emissions threshold:** the emissions threshold is currently defined at 25,000 metric tons of carbon dioxide equivalent (CO₂e) or more emitted directly into the atmosphere from a facility during the Reporting Period. Facilities exceeding this threshold are required to comply with monitoring, reporting and verification requirements as stipulated in this document.

Reporting is obligatory at the Facility level operating in a Covered Sector. Note, voluntary participation for Facilities who do not meet the emissions threshold or fall within the covered sectors is possible. In which case, the Facility should be treated as a Reporting Facility and shall adhere to the requirements of this document.

The primary intent of this MRV system is to ensure accurate, transparent, and consistent tracking of GHG emissions in compliance with Federal Law No. 11 of 2024, Article 6, for facilities located within the Emirate of Abu Dhabi.

The MRV system will serve as a cornerstone for advancing Abu Dhabi's Climate Change Strategy and delivering on the Emirate's net-zero commitments. It is designed to support entities in accelerating decarbonization by fostering innovation, research and development, and the adoption of modern technologies, while strengthening institutional and technical capacities and enhancing private sector participation. This approach ensures alignment with national climate priorities and global net-zero pathways.

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4. Terms and definitions

The following section provides a non-exhaustive list of terms used in this Technical Guidance and their accompanying definitions. In the event of any inconsistency between this document and current or impending MRV legislation, the latter shall prevail.

No.	Term	Definition
1.	The Emirate	Emirate of Abu Dhabi
2.	The Agency	The Environment Agency – Abu Dhabi
3.	Facility	A unit or several fixed technical units used in activities regulated by this document within the sector covered by its provisions, or any activities that are technically directly related to the mentioned activities, located on one or more nearby or adjacent properties under common operational control, , which cause or can cause greenhouse gas emissions covered by the provisions of this document.
4.	Operator	The person or entity who operate or control a facility either as an owner of the facility, lessee of the facility or is delegated with operational control of the facility. Control over a facility shall include the authority to make legal, financial and operational decisions that affect the facility's compliance and the authority to make technical functioning decisions that affect the facility, including how it is managed, maintained and operated on day-to-day-basis.
5.	Covered Sector	Sectors that are covered by the provisions of this document, as may be amended from time-to-time
6.	Industry	Facilities engaged in the physical or chemical transformation of materials, substances, or components into products, including both primary production from raw materials and secondary production from recycled inputs. Covered emissions include: (i) process emissions arising directly from industrial or chemical reactions during manufacturing operations and (ii) stationary combustion emissions from the on-site burning of fuels to generate heat, steam, or power in direct support of manufacturing and industrial process operations. On-site combustion is covered under this sector only where it directly supports manufacturing operations. Combustion primarily for the purpose of electricity or steam export to third parties falls under the Electricity and Water sector. This includes but is not limited to: cement and lime production, metals (ferrous and non-ferrous), chemicals and petrochemicals, glass and ceramics, paper and pulp, food and beverage processing, and construction materials manufacturing. Service-oriented activities are excluded from this sector regardless of their economic classification.
7.	Transport	This sector applies to any entity that operates a fleet of vehicles for the purpose of transporting passengers or goods by road or rail, where such operations are managed from a fixed facility or base of operations within the Emirate of Abu Dhabi. Covered emissions include combustion emissions from the consumption of fuel to operate vehicles as part of fleet operations. Aviation and marine transport are excluded from this sector.

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No.	Term	Definition
8.	Emissions Threshold	Emissions threshold triggering monitoring, reporting and verification obligations pursuant to the provisions of this Document, currently defined at 25,000 metric tons of carbon dioxide equivalent (CO ₂ e). Facilities exceeding this threshold are required to comply with monitoring, reporting, and verification requirements as stipulated in this Law.
9.	Monitoring	the systematic process of collecting data on greenhouse gas emissions from Facilities that ensures that emissions are accurately measured, recorded, and reported in compliance with this document
10.	Monitoring Plan	A detailed plan, outlining the methodologies and procedures for measuring and calculating emissions
11.	Reporting	The process by which operators of facilities submit detailed accounts of their greenhouse gas emissions according to forms issued by the Agency pursuant to this document.
12.	Reporting Period	A calendar year during which emissions must be monitored and reported
13.	Verification	The activities carried out by an accredited verifier to assess the conformity of the documents transmitted by the operator with the requirements of this document
14.	Accredited Verifier	An independent third party, legal entity authorized to carry out verification activities by the Agency

5. Roles and responsibilities

The following section provides a non-exhaustive list of roles and responsibilities anticipated in the implementation of the MRV. As best as possible, these roles and responsibilities are aligned with any current and impending legislations. However, where there are any inconsistencies, please refer to any definition in legislation issued as taking precedence. Note, the absence of a party listed below does not necessarily mean that party is not authorized and/or involved in implementing the MRV.

No.	Entity	Responsibilities
1.	Agency	Mandated with managing, overseeing and ensuring the proper implementation of terms described in this document. This includes establishing, managing and overseeing the register of Facilities operating in the Covered Sectors. The Agency, shall: 1- Establish, manage and oversee the register of Facilities operating in the Covered Sectors, 2- Oversee and enforce compliance with the reporting requirements for emissions by operators of Reporting Facilities, 3- Establish, manage and oversee the method and process of reporting of GHG emissions and other emissions by operators, 4- Issue and manage the list of accredited verifiers and accreditation methodology, 5- Collect and analyze emissions data, reduction measures, and prepare an annual emission record, 6- Organize and deliver training and awareness activities related to the implementation of the MRV,

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No.	Entity	Responsibilities
		7- Issue and update technical guidance on best available technologies and best practices relevant to the Covered Sectors, taking into account technical feasibility, economic viability, and environmental benefits, 8- Issue binding technical guidelines necessary for the effective implementation of the MRV, which shall have mandatory application including technical guidance addressing the monitoring, reporting, and verification of greenhouse gas emissions.
2.	Operators	Operators shall secure that all Facilities operating in a Covered Sector are registered Operators of Covered Facilities shall submit a Monitoring Plan setting out measures to monitor and report emissions and shall annually submit a verified emissions report for each reporting period on the dates prescribed in this document Operators shall abide with the following general principles applied to monitoring and reporting: 1- Monitoring and reporting shall be complete and cover all Emissions belonging to activities of Facilities in Covered Sectors, while avoiding double-counting. 2- Operators shall take appropriate measures to prevent any data gaps within the reporting period. 3- Monitoring and reporting shall be consistent and comparable over time. To that end, operators shall use the same monitoring methodologies and data sets, over reporting periods, subject to changes and derogations approved by the Agency. 4- Operators shall obtain, record, compile, analyze and document monitoring data in a transparent manner that enables the reproduction of the determination of emissions by the verifier and the Agency. 5- Operators shall ensure that emission determination is neither systematically nor knowingly inaccurate. They shall identify and reduce any source of inaccuracies as far as possible. They shall exercise due diligence to ensure that the calculation and measurement of emissions exhibit the highest achievable accuracy. 6- Operators shall enable reasonable assurance of the integrity of emission data to be reported. They shall determine emissions using the appropriate monitoring methodologies 7- Operators shall take account of the recommendations included in the verification reports in their consequent monitoring and reporting. Operators of facilities are encouraged to adopt best available technologies, technical innovations and best practices to improve operational efficiency, reduce emissions, and support industrial decarbonization. Facilities adopting best available technologies or demonstrating best practices may report these measures in the emissions reports.
3.	Verifier	Verifiers help advance the aims of the MRV, to conclude with a high degree of certainty that operator-reported data are free from inconsistencies and collected according to the monitoring methodology approved by the Agency. Verifiers shall be included on the list of accredited verifiers by applying to the Agency and providing satisfactory proof of the required certifications. Verifiers who are not accredited according to the provisions of this document but are included on the list of verification agencies issued by the Ministry of Climate

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No.	Entity	Responsibilities
		Change and Environment (MOCCAE) according to the provisions of Cabinet Resolution 67 of 2024 shall be deemed accredited verifiers for the purposes of this document. The accredited verifier should have an accreditation from the International Organization for Standardization (ISO) for the scope of verification including the activities, processes and methodologies for undertaking the verification as per ISO 14065 Standards, or any subsequent edition or update of that standard, or any other relevant ISO standard that may be introduced, including: 1- ISO 14064-1, specifying principles and requirements at the organization level for quantification and reporting of greenhouse gas (GHG) emissions and removal, 2- ISO 14064-2, specifying principles and requirements and provides guidance at the project level for the quantification, monitoring and reporting of activities intended to cause greenhouse gas (GHG) emission reductions or removal enhancements, 3- ISO 14064-3, specifying principles and requirements for verifying and validating greenhouse gas (GHG) statements at organisation, project and product level, and ISO, 4- Where required, ISO 14067 specifying the principles, requirements and guidelines for quantifying and reporting the carbon footprint of a product (CFP) should also be followed.
4.	Chairman of the Board of Directors	The Chairman of the Board of Directors shall issue the regulations necessary for the implementation of the provisions of this document including: 1- A list of accredited verifiers authorized by the Agency or, the Secretary-General of the Agency based on the criteria to be issued by Chairman of the Board of Directors, 2- A schedule of violations and corresponding administrative fines and appeals mechanisms, 3- Processes for resolving disputes between operators and verifiers or other stakeholders, 4- And any other regulation necessary for the effective implementation of this document.

Section 1: Greenhouse gas emissions measurement and reporting requirement

Step 1: Registration

Any existing or new facility carrying out any activity at a Facility operating in a Covered Sector resulting in emissions of any greenhouse gas (GHG) emissions in a reporting year shall register in the register of Facilities held by the Agency

All Facilities holding an Environmental Permit shall be deemed registered in the Register of Facilities operating in a Covered Sector with immediate effect and shall report their greenhouse gas emissions to the Agency in accordance with this guidance document and Article (6) "Measurement, Reporting, and Verification" of Federal-Decree Law No. 11 of 2024, within the time period specified in this document. The Agency may request any additional information it deems necessary for registration.

Any existing or new facility operating in a Covered Sector that results in any greenhouse gas (GHG) emissions in a reporting year and does not hold an Environmental Permit shall register in the Register of Facilities maintained by the Agency.

The Agency shall maintain, manage and oversee a register of facilities, including those designated as Reporting Facilities. Facilities in Abu Dhabi have to register if they comply with the conditions set below.

a. Who is covered by this obligation to register?

Facilities in Abu Dhabi, who produce more than 25,000 tons of CO₂e per year from covered sectors and gasses.

The gasses to be checked against this CO₂e emission threshold are carbon dioxide and methane

The sectors included are power (electricity and water), Oil & Gas, Industry and Transport.

Operators of Facilities operating in Covered Sectors not meeting the Emissions Threshold or in Non-Covered Sectors may voluntarily commit to monitoring, reporting, and verification of their emissions. In this case, the facility shall be treated as a Reporting Facility and shall adhere to the requirements within this guidance.

An operator voluntarily committing to the monitoring and reporting requirements may discontinue its commitment by submitting an application for exemption to the Agency. The application must demonstrate:

- Completion of the requirements for the last reporting period; and

- Sufficient evidence that the Facility emissions fall below the Emissions Threshold or that the Facility operates in a Non-Covered Sector.

b. What should be included in registration?

Any Facility operating in a Covered Sector and not holding an Environmental Permit, shall apply to the Agency for registration by no later than 31 March of the reporting period, according to forms developed by the Agency for this purpose. An application to the Agency for registration shall include:

- an address to which correspondence relating to the application should be sent
- registration number of the operator, its registered address
- the address of the Facility and a description of the site and location of the Facility on it,
- a description of the Facility, the activities to be carried out at the Facility and the specified emissions from those activities,
- a description of the raw and auxiliary materials used in carrying out the activities at the Facility, the use of which is likely to lead to specified emissions,
- The sources of emissions of Covered Emissions from the activities carried out at the Facility
- A non-technical summary of the information referred to above – activities of the facility, materials used and sources of emissions
- any additional information that the operator wishes the Agency to take into account in considering the application, and
- Any other information requested by the Agency deemed necessary for registration

c. Registration to be renewed annually or updated in case of material change

Registration must be renewed annually by submitting an updated application, if registration information has changed, and a self-generated emissions report to the Agency.

Notwithstanding annual renewal of registration, operators shall apply to the Agency to update their registration information by immediately informing the Agency, according to forms established for this purpose, in the event that:

- Activities have not begun to be carried out at the Facility
- A regulated activity is no longer carried out at the Facility
- The Operator of the Facility ceases to have control over its operation pursuant to a change in ownership or delegation of authority or otherwise.
- Any significant changes occurring to the Facility by way of installation or de-commissioning of technical units, re-location of the Facility site,

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- change in the nature or functioning or an extension of the Facility
- Changes in the level of emissions affecting the Emissions Threshold
- Any other change to the information submitted for registration

The Agency may update the registration at any time if it considers that it is necessary and/or if the Operators fails to apply for updating the registration as required above.

The updated registration is given effect by the Agency giving a notice to the operator of the Facility setting out the variations and/or updates to the registration.

Step 2: Measurement

Each operator of a Reporting Facility shall monitor greenhouse gas emissions on the basis of a monitoring plan, taking into account the nature and functioning of the Facility to which it applies.

Each operator of a Reporting Facility shall develop and submit a detailed monitoring plan to the Agency within 90 days from the date of registration of the facility, and subsequently by 31st of March of each year. The monitoring plan shall be subject to an external audit by an accredited verifier to ensure compliance with the regulatory requirements. The audit report must be submitted to the Agency along with the monitoring plan.

The monitoring plan shall be supplemented by written procedures which the operator establishes, documents, implements and maintains for activities under the monitoring plan, as appropriate. The monitoring plan shall describe the instructions to the operator in a logical and simple manner, avoiding duplication of effort and taking into account existing systems in place at the Facility or used by the operator.

Operators are required to revise their monitoring plans in the event of significant changes in operations, methodologies, or regulatory requirements. Revised plans must be submitted to the Agency within 30 days of the change. The Agency shall review any subsequent revisions to the monitoring plan to ensure that the plan meets all regulatory requirements.

a. Contents of monitoring plan

The monitoring plan shall include:

- Description of the Facility
- Methods and standards for measuring and calculating greenhouse gas (GHG) emissions
- Data sources and data collection procedures
- Measurement equipment

- Quality assurance and quality control (QA/QC) measures
- Procedures for data management and record-keeping
- Identification of potential sources of emissions and corresponding monitoring methodologies

This should be done by partially completing the data gathering template excel with the above details. A blank template can be found in the Appendices.

b. Methods and Standards for Measuring Emissions

The methods and standards for measuring GHG emissions are detailed in Appendix 1. These guidelines shall be mandatory for all facilities required to measure and monitor emissions under this document. These methods must comply with internationally recognized standards and best practices. The Agency may issue additional guidelines covering other types of emissions.

For the purposes of a monitoring plan, please use either a calculation-based or measurement-based methodology. Where either approach proves not feasible, a fallback approach (including justification) may be used.

Under a standard methodology (the calculation approach) operators shall use, where possible, local and technology specific emission factors multiplied by activity data to obtain emission levels. They may defer to international guidelines (e.g., IPCC) where local factors are not available.

A measurement-based methodology where emissions are determined by continuous measurement of concentration of GHG can also be used.

Step 3: Reporting

a. Who is covered by the obligation to report?

All Facilities that are registered or deemed registered as Reporting Facilities shall report their greenhouse gas emissions to the Agency in accordance with Article (6) "Measurement, Reporting, and Verification" of Federal-Decree Law No. 11 of 2024 and the requirements of this Guidance.

Operators shall abide with the following general principles applied to monitoring and reporting:

- Monitoring and reporting shall be complete and cover all Emissions belonging to activities of Facilities in Covered Sectors, while avoiding double-counting
- Operators shall take appropriate measures to prevent any data gaps within the reporting period

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- Monitoring and reporting shall be consistent and comparable over time. To that end, operators shall use the same monitoring methodologies and data sets, over reporting periods, subject to changes and derogations approved by the Agency
- Operators shall obtain, record, compile, analyse and document monitoring data in a transparent manner that enables the reproduction of the determination of emissions by the verifier and the Agency
- Operators shall ensure that emission determination is neither systematically nor knowingly inaccurate. They shall identify and reduce any source of inaccuracies as far as possible. They shall exercise due diligence to ensure that the calculation and measurement of emissions exhibit the highest achievable accuracy
- Operators shall enable reasonable assurance of the integrity of emission data to be reported. They shall determine emissions using the appropriate monitoring methodologies set out in this document
- Operators shall take account of the recommendations included in the verification reports in their consequent monitoring and reporting

b. Annual reporting requirements:

The operator of a Reporting Facility shall submit to the Agency by March 31st of each year an emissions report that covers the annual emissions of the Reporting Facility in the reporting period and that is verified in accordance with the requirements of this guidance document.

The format and content of emissions reports is detailed in Appendix 1. These guidelines shall be mandatory for all facilities required to measure and monitor emissions under this document. These may be updated by the Agency as needed.

Emissions reports must be submitted to the Agency according to the following process and method of submission

Completed excel reports and verification documents will be emailed to EAD at the email address on the page where this document can be downloaded.

- Operators shall enable reasonable assurance of the integrity of emission data to be reported. They shall determine emissions using the appropriate monitoring methodologies set out in this document
- Operators shall take account of the recommendations included in the verification reports in their consequent monitoring and reporting

c. General principles applicable for monitoring and reporting of emissions:

Emissions reports must include, at a minimum:

- Total GHG emissions for the reporting period. Additional emission types, including air pollutants, may be integrated into the reporting framework upon issuance of specific guidelines by the Agency, including abiding and referencing the Technical Guidance Document (TGD) that was developed by EAD to support the self-reporting of environmental data including the air emission and other types of releases.
- Emissions data by source and type of GHG.
- Methodologies used for data collection and calculation.
- Any deviations from the monitoring plan.
- Verification statement from an accredited verifier.

Beyond these minimum requirements please, where possible, ensure robustness of data reported and provide as much detail as possible. This may, for instance, take the form of detailed reporting of activity data, specifying confidence / uncertainty levels where possible, and providing any additional information that would aid reporting. This would also assist the Agency in the internal verification of emissions estimation and consistency of information.

Step 4: Verification

Until 2027, the appointment of a third-party accredited verifier is not obligatory. During this period, Operators may elect to engage accredited verifiers on a voluntary basis, in accordance with the verification requirements outlined in this section.

The objective of verification is to conclude with a high degree of certainty that the operator reported data are free from inconsistencies and collected according to the monitoring methodology approved by the Agency.

All emissions reports shall be audited by an accredited verifier meeting the applicable requirements of the International Organization for Standardization (ISO), including ISO 14065:2021 and ISO 17029, or any subsequent editions, updates, or other relevant ISO standards. Upon completion of verification, the accredited verifier shall issue a verification report to the Operator, which shall be submitted to the Agency together with the emissions report.

Verification report shall be issued to the operator by the accredited verifier upon fulfilment of the requirements stipulated in this Article. The operator shall submit the verification report to the Agency together with the operator's report.

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a. Verification requirements:

The verification process shall include a thorough review of the monitoring plan, methodologies, emissions data, and supporting documentation. Operators should provide the verifier with sufficient information so that they can plan and carry out the verification activities as required by the provisions of this document. The verifier should gather sufficient information and evidence during the verification process to issue a verification report with reasonable assurance.

Verification Activities and Process

- The accredited verifier must determine, for each verification engagement requested, the time allocation needed to properly carry out the verification.
- The verification activities should begin during the year being reported on, rather than after the year has ended, and no later than the middle of that year.
- The accredited verifier must conduct a site visit at one or more appropriate times during the verification process.
- The accredited verifier must draft the verification report. The requirements for the content of the verification report shall be issued by the Agency.

b. Obligations of accredited verifiers

- Accredited verifiers shall establish, document, implement and maintain one or more procedures for verification activities and shall design, document, implement and maintain a management system in accordance with ISO 14065, or any subsequent edition or update of that standard, or any other relevant ISO standard that may be introduced
- Accredited verifiers shall maintain and manage records, including records on the competence and impartiality of personnel, to demonstrate compliance with this guidance, shall make the information available to the operator and other relevant parties and shall safeguard the confidentiality of information obtained during the verification in accordance with the ISO 14065, or any subsequent edition or update of that standard, or any other relevant ISO standard that may be introduced
- The accredited verifier shall be independent from the operator and impartial in carrying out its verification activities. The verifier and any part of the same legal entity shall not be an operator, the owner of an operator or owned by them, nor shall

the verifier have relations with the operator that could affect its independence and impartiality.

- An accredited verifier cannot perform verification activities or issue verifications reports for the same facility for more than six consecutive years. The accredited verifier will take two consecutive years break from the facility
- By no later than 1st July of each reporting year, the accredited verifier must notify their planned verifications to the Agency

c. Grace period for new facilities to gain exemption from verification

Facilities that have commenced operations within 24 months preceding the end of the applicable reporting period shall be classified as new facilities for the purposes of this document.

New facilities meeting the Emissions Threshold shall be exempt from the verification requirement for the reporting periods during their first year of operation.

Facilities subject to the grace period must submit a verified emissions report in the third year of operation. This report shall cover:

- Emissions data for the preceding reporting period (year 2 of operation)
- Any relevant adjustments or recalibrations necessary for compliance with this regulation

Operators of new facilities must notify the Agency of their operational start date within 90 days of commencing operations to qualify for this exemption.

This exemption applies solely to the verification requirement and does not waive the obligations for:

- Monitoring and data collection during the grace period
- Submission of unverified emissions data as required by this guidance

The Agency reserves the right to revoke the grace period for any facility if significant non-compliance with monitoring requirements is identified during the exemption period.

Step 5: Correction of errors and omissions

Operators must promptly identify and report any errors or omissions in their emissions reports or monitoring plans to the Agency. Errors or omissions discovered by the operator, verifier, or Agency must be corrected within 30 days from the date of discovery.

Operators are required to submit a corrected emissions report or monitoring plan, including a

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detailed explanation of the error and the corrective actions taken. The Agency shall review and approve the corrected report or plan within 30 days from the date of submission. All corrections must be documented and retained as part of the operator's records for a minimum of 5 years.

In the event of discrepancies between the emissions data reported by the operator and the data verified by the accredited verifier, the operator must resolve the discrepancies in consultation with the verifier. The operator must submit a revised report addressing the discrepancies within 30 days from the date of notification by the verifier.

If a dispute arises between the operator and the verifier regarding the accuracy of the emissions data or the monitoring plan, the operator may request a review by the Agency. The Agency shall review the dispute and issue a decision within 60 days from the date of the request. The decision of the Agency shall be final and binding.

Failure to correct errors or resolve discrepancies within the specified timeframes may result in administrative penalties, including fines and other enforcement actions.

Step 6: Enforcement and Compliance

The Agency shall work with Operators to facilitate adherence to the monitoring, reporting and verification requirements set out in this Guidance and in accordance with Federal Decree-Law No. 11 of 2024. To ensure compliance, the Agency may take administrative measures including the issuance of written notices identifying the violation, the corrective actions required, and the timeframe within which such actions shall be completed.

Notwithstanding the Agency's preference to support Operators through administrative compliance pathways, failure by a Facility to fulfill its obligations under Article (6) "Measurement, Reporting, and Verification" of Federal Decree-Law No. 11 of 2024 may result in the imposition of penalties as prescribed under Article (15) of the same law, in addition to any administrative penalties referenced under Article (17). Such penalties may be applied in cases of continued non-compliance, repeated violations, or where corrective measures are not implemented within the period specified by the Agency.

Where necessary, and without prejudice to any other legal provisions, the Agency may take further actions permissible under applicable legislation, including but not limited to the temporary suspension of Facility operations, until the Facility demonstrates compliance with the requirements of this Guidance and the provisions of Federal Decree-Law No. 11 of 2024.

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Section 2: Frequently Asked Questions (FAQs)

Q1: Where can I get further guidance?

The Technical Guidance is the primary reference for Operators fulfilling greenhouse gas monitoring and reporting obligations within the Emirate of Abu Dhabi. It has been developed to support implementation of Article (6) "Measurement, Reporting, and Verification" of Federal Decree-Law No. (11) of 2024. This document will be updated as necessary to reflect improvements in practice, policy developments, or adjustments required to maintain consistency with applicable legislation. Where Abu Dhabi MRV regulations or implementing instruments are issued in the future, those instruments shall prevail and serve as the authoritative reference.

To support understanding of technical concepts and alignment with international best practice, Operators may, at their own discretion, consult the European Union Monitoring and Reporting Regulation ("MRR") and associated guidance referenced in the data-gathering tool. Occasional references may also be made to Directive 2003/87/EC ("the Directive"), which establishes the regulatory framework under which the MRR operates. Operators may find further contextual guidance in Article 3 of the MRR and Article 3 of the Directive, which provide definitions and terminology commonly used in greenhouse gas monitoring and reporting systems. These resources are supplementary references only and are not binding in the Emirate of Abu Dhabi. They do not supersede the requirements set out in this Guidance or in applicable UAE legislation.

Operators should note that the Abu Dhabi MRV system has been developed in accordance with the mandates of Federal Decree-Law No. (11) of 2024 and is designed to address emissions reporting obligations within its jurisdiction. The system accordingly focuses on direct (Scope 1) greenhouse gas emissions and does not seek to implement the broader reporting approach adopted under GHG Protocol standards. Operators should be aware of this distinction to ensure accurate application of MRV requirements and to avoid inappropriate use of external frameworks or terminology.

Operators remain responsible for ensuring that any external documents or international references they consult are current, relevant, and applied in a manner consistent with the obligations and requirements set out in this Guidance and in applicable UAE legislation.

Q2: Is there a preferred template for submitting emissions reports?

Yes. EAD has prepared a standard reporting template. The Excel reporting template is available for download directly from the submission portal at <https://facilitymrv.ead.ae>. This is the only template to be used for monitoring and reporting within this scheme.

Q3: What system is used for submitting the report?

Emissions reports must be submitted to the Agency through the process and method of submission communicated by the Agency to Operators. The submission process includes steps for uploading the completed report, verification documents, and any additional required information. Supporting evidence for verification purposes may take the form of documents such as invoices or calibration certificates and need not rely solely on meter readings.

Submissions are currently made through the Facility Level MRV Reporting Portal at <https://facilitymrv.ead.ae>, in accordance with the procedures communicated by the Agency.

Q4: What are the requirements for selecting an accredited verifier?

The accredited verifier must hold accreditation from the International Organization for Standardization (ISO) covering the scope of verification activities, processes, and methodologies relevant to the facility, in accordance with ISO 14064 or any subsequent edition, update, or relevant ISO standard introduced thereafter.

Q5: How do I check if someone is an Accredited Verifier and how do I apply to be a verifier?

The Agency will issue an annual list of accredited verifiers authorised to conduct verification activities and issue verification reports in accordance with this Guidance. Verifiers seeking inclusion on this list must apply to the Agency and provide satisfactory evidence of the required certifications.

Q6: How do I monitor and report my emissions?

Facilities must apply the Operational Control Approach. This MRV system is designed to measure emissions from facilities over which operators exercise operational control, which is particularly relevant given the complexity of corporate structures in the UAE.

Emissions must be monitored using one of the following methodologies:

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- Calculation based methodology: determining emissions from source streams based on activity data (measured or default values) and recognized calculation factors.
- Measurement based methodology: determining emissions through continuous measurement using instruments at the facility.

If a facility relies on a single meter or gauge to monitor processes (e.g., for power generation or diesel usage in smaller entities like hospitals), the facility should highlight this reliance in its report. Where possible, facilities should reduce dependence on a single monitoring point to improve data accuracy.

Q7: Where should I source inputs for calculations, such as emission factors, oxidation factors, and grid emission factors?

Operators may draw on a range of credible, internationally recognised sources, including the IPCC, IEA, and EPA. The sources used must be cited in the reporting template.

Default oxidation factors may be obtained from the IPCC 2006 Guidelines, for instance. Where combustion efficiency can reasonably be assumed to be complete, Operators may confirm this with their maintenance team and apply an oxidation factor of 100%. Similarly, Tier 1 methane emission factors for natural gas combustion may be taken from IPCC default values.

For the purposes of the Abu Dhabi MRV system, grid electricity emissions and emission factors for TAQA Distribution or DEWA are not required. Only Scope 1 emissions are to be reported. For gas consumed at the facility, calorific values provided by the gas supplier are acceptable.

Q8: What is the reporting threshold, and what happens if a facility falls below it?

The reporting threshold is 25,000 tonnes of CO₂-equivalent (Scope 1 emissions) per year. Facilities with emissions below this threshold are not required to submit a full MRV report. However, they must provide a brief explanation in Tab 1b_Guidance of the reporting template, describing their key activities and the basis on which they have determined that their emissions fall below the threshold.

Q9: We operate multiple facilities. Does the threshold apply across our company as a whole?

No. The 25,000 tCO₂e threshold applies at the individual facility level, not at the company level. A site that emits below 25,000 tCO₂e is below the threshold regardless of the company's aggregate emissions across all sites.

Each geographically separate site must submit its own MRV report. Emissions from different sites may not be aggregated into a single submission. Only facilities that are physically contiguous or adjacent may be reported together. Sites that are not physically adjacent are considered separate facilities and must be reported individually.

Q10: What are the consequences of exceeding the threshold? Is a mitigation plan required?

No mitigation plan is required at this stage. The current exercise is designed solely to collect accurate emissions data in accordance with Article (6) of Federal Decree-Law No. (11) of 2024. There are no immediate obligations for mitigation and no penalties apply.

While mandatory mitigation is not currently required, the Agency strongly encourages all facilities to identify and implement cost-effective emissions reduction measures, including energy efficiency improvements, process optimization, low-carbon fuel switching, and the adoption of best available technologies where practicable. Voluntary action at this stage will demonstrate corporate leadership, support the Abu Dhabi Climate Change Strategy and the UAE Net-Zero by 2050 target, and help facilities prepare for future regulatory or market-based requirements.

Q11: How does this MRV reporting obligation relate to EAD's existing environmental self-monitoring and reporting requirements?

This MRV reporting obligation is separate from and additional to EAD's environmental self-monitoring and reporting requirements. While the self-monitoring scheme addresses a broad range of environmental parameters, this system is focused specifically on the quantification and reporting of greenhouse gas emissions volumes.

GHG reports must be submitted through the dedicated Facility-Level MRV Reporting Portal at <https://facilitymrw.ead.ae/>. For queries relating to the wider environmental self-monitoring and permitting requirements, please contact EAD Customer Happiness.

Q12: Can I use external consultants? Is there an EAD-approved list?

Emissions can be estimated / calculated either by a third party, or you may do it yourself, if you want. We need to understand the activities you have at site, and b) then undertake calculation to estimate what quantity of emissions that consumption translates to. This may, for example, include understanding on-site fuel consumption, process activities or other emission sources and applying the appropriate methodology to estimate the resulting greenhouse gas emissions.

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Q13: Do you recommend engaging a third-party verifier?

For historical submissions covering 2025 and prior reporting years, Operators are expected to complete the template to the best of their ability using existing internal capacities. Third-party verification is not a strict requirement for these historical submissions, given the short timeframes involved. Operators should submit their best available data. Work is underway to make accredited verifiers available to support future reporting cycles.

Q14: Our facility is still under construction. Do we need to report?

No. If construction activities are being carried out by a third-party contractor and the facility has not yet commenced operations, there is no reporting obligation. This status can be indicated in sheets 2C1 and 2C2 of the reporting template.

Q15: We believe our facility will run on electricity only. Do we need to report emissions still?

A fully electric facility is likely to have total Scope 1 emissions below the reporting threshold. Where this is clearly the case, the facility may report that figure and will not be required to complete the full declaration beyond sheets 2C1 and 2C2. However, if the calculated Scope 1 emissions exceed the threshold even with full electric operations, the facility remains subject to full reporting requirements.

Q16: How should emissions from diesel-powered generators be reported?

You need to estimate emissions from your on-site diesel consumption, such as that used by forklifts or generators

These emissions can be calculated either internally or with the help of a third party. The process involves:

- Identifying the volume of diesel consumed on-site, and
- Applying the appropriate emissions factor (as outlined in the technical guidance) to estimate the resulting emissions.
- You can speak with the operators of the equipment to gather fuel consumption data.

Q17: We have multiple source streams (e.g., diesel and methane gas). Do we have to submit separate reports for both?

If it's one facility and you have two separate source streams, natural gas fired source and diesel fired source, you need to just:

- Describe what the two source streams are

- Declare how you calculate each of those
- Report the total emissions for the site in a single spreadsheet with both gas and diesel streams included.

Q18: Can you clarify how to calculate emissions from diesel for the purposes of this reporting?

Diesel (e.g., used in generators) are typically a Scope 1 emission when used directly by you to fuel your facility. What we want to know is the annual use of diesel. This can be done by applying the appropriate diesel emission factor to fuel consumption (including diesel used in on-site equipment such as generators or mobile equipment like forklift) you should then get your emissions. You can calculate the number and if it is small and below the threshold, you don't have to do the full declaration. You just need to show us that the number is small.

The general logic of reporting is show us the chain of logic and the calculations. If below the threshold, explain why you are below the threshold.

Q19: Do we need to record emissions from contractors and third parties operating at our facility?

No. Only Scope 1 emissions from the facility's own operations are required at this stage. This includes emissions from the facility's own fuel use and from vehicles or equipment operated directly by the facility or under its operational control. Data relating to third-party contractors is not required at this stage, though it may be requested in future reporting cycles.

Q20: Our facility uses rented vehicles, but we pay for and control the fuel. Are these Scope 1 emissions?

This exercise only considers what your vehicles are doing at your site (scope 1 emissions). For instance, If third party contractors are delivering and bringing things to the site, those are scope 3 emissions, they are generated by other businesses, not by you, so do not need to be included in the calculations.

If the rented cars are being used for facility operations and activity, and/or staff on-the-job transport, then the emissions from the use of those rented cars would need to be reported. However, if you have a third-party contractor who is doing your deliveries for you – or if individual employees own their own personal vehicles - those emissions are not directly produced by the company, so would not need to be reported / estimated.

Therefore, **do not include:**

- Emissions from third-party logistics providers

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- Supplier deliveries
- Customer pickups
- Rented or contracted transporters

Q21: Will you share any recordings of workshops / trainings?

Yes. Recordings will be uploaded to the Facility-Level MRV Reporting Portal at <https://facilitymrw.ead.ae/> once available.

Q22: Will participation in this programme count towards CBAM compliance?

No. Participation in the Abu Dhabi MRV programme does not currently exempt facilities from Carbon Border Adjustment Mechanism (CBAM) reporting obligations under EU regulations. Exporters to the EU must comply with CBAM requirements independently. Alignment between the two frameworks may be explored in the future, but no such recognition is in place at present.

Q23: Our facility generates power via a gas turbine and recovers waste heat through an HRSG unit. How should we calculate emissions?

What you are measuring is your natural gas going in, not your exhaust going out. So you would be doing a calculation on the typical combustion approach here where you have your known volume of fuel, using an emissions factor for this particular unit you are using, and you can assume your oxidation factor is 100%, so that gives you all of your numbers that you need to give you your emissions.

Q24: Why am I being asked to provide product information if this is an MRV for greenhouse gas emissions?

Product and production information are being requested to support alignment with international benchmarks (e.g., the EU ETS-style benchmarking approaches) and to enable consistent analysis of emissions performance by product line across facilities and sectors.

Under this system, emissions are still being collected at the facility level and where applicable, by emission source in line with best practices. Product-level information is therefore collected to allow emissions data to be analysed by product line for benchmarking and international best-practices alignment purposes.

Q25: Do I need to define source streams if I use a measurement-based approach?

No, for clarity, source streams are only required where emissions are quantified using a calculations-based approach

Where a measurement-based methodology is applied, emissions are determined directly at the emission source using measurement systems. In such cases, operators are required to report emission sources and measurement instruments and are not required to define source streams for the purposes of emissions quantification.

Q26: Can I use both a calculation-based and measurement-based approach?

Yes, facilities may apply different monitoring methodologies within the same facility. Operators must ensure that each emission source is reported using only one clearly-defined methodology and there is no double-counting.

Q25: Where can I download the reporting template and submit my MRV report?

The reporting template can be downloaded, and all submissions must be made through the dedicated online portal at <https://facilitymrw.ead.ae/>. This portal is the sole channel for all MRV reporting required under this Technical Guidance.

Q26: Our facility is located in Abu Dhabi. Are we required to report our emissions under the national MRV system managed by MOCCAE?

Facilities physically located within the Emirate of Abu Dhabi are not required to submit separately to the national MRV channels managed by the Ministry of Climate Change and Environment (MOCCAE). EAD manages this requirement directly through its own dedicated channel on behalf of facilities in Abu Dhabi, ensuring a single consolidated reporting pathway.

This arrangement is established under Article (6) of Federal Decree-Law No. (11) of 2024, which designates EAD as the competent authority for emissions measurement, reporting, and verification within the Emirate. Under this Article, the Ministry is required to establish an electronic system for emissions measurement and data submission mechanisms, and to coordinate linkages with systems operated by competent authorities such as EAD.

All MRV-related requirements, communications, and instructions directed at facilities operating within the Emirate of Abu Dhabi will be issued by EAD. Facilities should treat EAD as their sole point of contact for all matters relating to greenhouse gas emissions measurement, reporting, and verification, and should act upon requirements received from EAD accordingly.

6. Sources and references

In designing this document, we have surveyed the following regulations (sorted chronologically by type / level starting from Local Laws, then federal laws then Cabinet Resolutions):

- Law No. (1) of 1974 pertaining to the reorganization of the Governmental Body in the Emirate of Abu Dhabi and its amendments,
- Law No. (2) of 1971 pertaining to the National Advisory Council and its amendments,
- Law No. (16) of 2005, pertaining to the reorganization of the Abu Dhabi Environment Agency and its amendments,
- Federal Decree No. (61) of 1995 concerning the United Nations Framework Convention on Climate Change,
- Federal Law No. (24) of 1999 Concerning the Protection and Development of the Environment and its amendments,
- Federal Decree No. (238) of 2016 Ratifying the Paris Agreement on Climate Change;
- Federal Decree-Law No. (11) of 2024 on the Reduction of Climate Change Effects,
- Cabinet Resolution No. (37) of 2001 Incorporating Regulations into the Implementing Bylaw of Federal Law No. (24) of 1999 Concerning the Protection and Development of the Environment and its amendments,
- Cabinet Resolution No. (67) of 2024 Concerning the National Register for Carbon Credits,
- Decision of the Chairman of the EAD Board of Directors No. 1 of 2024, concerning reporting of environmental data in the Abu Dhabi emirate,
- and based on what was presented to and approved by the Executive Council.

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Appendix 1: Manual for EAD Template Workbook

1.1. How is the template structured?

The template is organized into four distinct sections, each serving a unique purpose in the data collection process.

1. The first section is introductory in nature, containing a table of contents and this sheet, to enable the end-user to understand the purpose of this document
2. The second section contains identifiers for the site and details of relevant facilities / process streams
3. The third section contains pages for the end-user to fill out calculation methods used and in the event that neither prescribed methods are used, why a fallback approach is chosen. Where the facility has identified methane emissions, there will be a sheet to populate relevant information.
4. The fourth section contains pages to enter any data gaps the end-user anticipates, data assurance and any additional information they wish to provide.

1.2. How do I monitor and report my emissions?

You may use either a calculation-based methodology or a measurement-based methodology.

A calculation-based approach consists of determining emissions from source streams based on activity data obtained by means of measurement systems or laboratory analyses or default values (e.g., multiplying activity data against recognised calculation factors).

A measurement-based methodology consists of determining emissions from emissions sources by means of continuous measurement of the GHG emitted using measurement instruments in your facility and activity data.

Calculation of emissions under the standard methodology (calculation approach)

Under the standard methodology, the operator shall calculate combustion emissions source stream by multiplying the activity data related, for example, to the amount of fuel combusted, expressed as terajoules based on net calorific value (NCV), by the corresponding emission factor, expressed as tonnes of CO₂ per terajoule (t CO₂/TJ) consistent with the use of NCV, and the corresponding oxidation factor.

In calculation-based methodologies, measurement devices and meters may be used to support the determination of activity data (e.g. fuel quantities or material throughput). However, such devices do not define the emission source or source stream itself. The source stream is defined by the fuel, material, or process giving rise to emissions, while measurement devices serve as inputs to the calculation.

The agency may allow the use of emission factors for fuels expressed as t CO₂/t or t CO₂/Nm³. In such cases, the operator shall determine combustion emissions by multiplying the activity data related to the amount of fuel combusted, expressed as tonnes or normal cubic metres, by the corresponding emission factor and the corresponding oxidation factor.

The operator shall determine process emissions per source stream by multiplying the activity data related to the material consumption, throughput or production output, expressed in tonnes or normal cubic metres, by the corresponding emission factor, expressed in t CO₂/t or t CO₂/Nm³ and the corresponding conversion factor. Where a tier 1 or tier 2 emission factor already includes the effect of incomplete chemical reactions, the oxidation factor or conversion factor shall be set to 1.

For Scope 1 emissions, the 2006 IPCC Guidelines and the GHG Protocol is the reference standard for methods for calculation. Where possible, we encourage the use of higher tiers estimation methods by using country or technology specific emission factors where data is available. In case local or technology specific emission factors are not available, please defer to the IPCC Emission Factor Database ([linked here](#)) as a substitute standard.

Calculation of emissions under the mass balance methodology

Under the mass balance methodology, the operator shall calculate the quantity of CO₂ corresponding to each source stream included in the mass balance by multiplying the activity data related to the amount of fuel or material entering or leaving the boundaries of the mass balance, with the fuel's or material's carbon content multiplied by 3,664 t CO₂/t C.

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The emissions of the total process covered by the mass balance shall be the sum of the CO₂ quantities corresponding to all source streams covered by the mass balance. CO emitted to the atmosphere shall be calculated in the mass balance as emission of the molar equivalent amount of CO₂.

For deriving the carbon content from an emission factor, the operator shall use the following equations:

for emission factors expressed as t CO₂/TJ

$$C = (EF \times NCV) / f$$

for emission factors expressed as t CO₂/t

$$C = EF / f$$

In those formulae, C is the carbon content expressed as fraction (tonne carbon per tonne product), EF is the emission factor, NCV is the net calorific value, and f is the factor 3,664 t CO₂/t C.

The quantity of fuel or material processed during the reporting period shall be calculated as the quantity of fuel or material in stock at the beginning of the reporting period minus the quantity of fuel or material at the end of the reporting period plus the quantity of fuel or material received during the reporting period, minus the quantity of fuel or material moved out of the facility.

Where it is technically not feasible or would incur unreasonable costs to determine quantities in stock by direct measurement, the operator may estimate those quantities on the basis of one of the following:

- data from previous years correlated with output for the reporting period.
- documented procedures and respective data in audited financial statements for the reporting period

Calculation of emissions using a measurement based methodology

A measurement-based methodology shall consist in determining emissions from emission sources by means of continuous measurement of the concentration of the relevant greenhouse gas in the flue gas and of the flue-gas flow, including the monitoring of CO₂ transfers between installations where the CO₂ concentration and calculation-based methodology is applied, the operator shall for each source stream define, in the monitoring plan, whether the standard methodology or the mass balance methodology is used.

In a measurement-based methodology, emissions are determined directly at the emission source through continuous or periodic measurement using dedicated measurement systems. Each measurement device shall therefore be clearly linked to a specific emission source within the facility. In this context, emissions are quantified directly and do not rely on source streams, activity data, or emission factors.

Further, please consult where appropriate the Technical Guidance Document (TGD) developed by the Agency to support the self-reporting of environmental data including the air emission, GHGs and other types of releases.

1.3. How do I fill out this template?

Step 1: Gather all identifying information relating to your facility

Include the following information and fill it out in **Sheet 2C1_Identifiers**

Description of your facility (including your permit number)

Contact details of the GHG manager / person-in-charge of the facility

This step is where the activities of a facility are outlined in a manner that allows the regulator or an auditor to clearly understand what are the sources of emissions at the site and where are they key measurement points that are being used to calculate or measure those emissions for reporting.

Step 2: Familiarise yourself with key terms

The template contains terms that might sound similar but have very different meaning. For instance, “emission source” and “source stream” have technically different meaning and this is reflected in the template. For the purposes of the template, the words “tier” and “category” will also have special technical meaning (see step 5 below).

As best as possible, key terms are defined in red and embedded throughout the template but if in doubt please consult the list below:

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- 1) 'activity data' means data on the amount of fuels or materials consumed or produced by a process relevant for the calculation-based monitoring methodology, expressed in terajoules, mass in tonnes or (for gases) volume in normal cubic metres, as appropriate;
- (2) 'source stream' means any of the following: (a) a specific fuel type, raw material or product giving rise to emissions of relevant greenhouse gases at one or more emission sources as a result of its consumption or production; (b) a specific fuel type, raw material or product containing carbon and included in the calculation of greenhouse gas emissions using a mass-balance methodology. Source streams are defined and reported only where emissions are quantified using calculation-based or mass-balance methodologies. They are not required where emissions are quantified using measurement-based methodologies;
- (3) 'emission source' means a separately identifiable part of an installation or a process within an installation, from which relevant greenhouse gases are emitted or, for aviation activities, an individual aircraft;
- (4) 'uncertainty' means a parameter, associated with the result of the determination of a quantity, that characterises the dispersion of the values that could reasonably be attributed to the particular quantity, including the effects of systematic as well as of random factors, expressed in per cent, and describes a confidence interval around the mean value comprising 95 % of inferred values taking into account any asymmetry of the distribution of values;
- (5) 'calculation factors' means net calorific value, emission factor, preliminary emission factor, oxidation factor, conversion factor, carbon content, biomass fraction or unit conversion factor;
- (6) 'combustion emissions' means greenhouse gas emissions occurring during the exothermic reaction of a fuel with oxygen;
- (7) 'reporting period' means a calendar year during which emissions have to be monitored and reported;
- (8) 'emission factor' means the average emission rate of a greenhouse gas relative to the activity data of a source stream or a fuel stream assuming complete oxidation for combustion and complete conversion for all other chemical reactions;
- (9) 'oxidation factor' means the ratio of carbon oxidised to CO₂ as a consequence of combustion to the total carbon contained in the fuel, expressed as a fraction, considering carbon monoxide (CO) emitted to the atmosphere as the molar equivalent amount of CO₂;
- (10) 'measurement system' means a complete set of measuring instruments and other equipment, such as sampling and dataprocessing equipment, used to determine variables such as the activity data, the carbon content, the calorific value or the emission factor of the greenhouse gas emissions. It is also possible, in lieu of a measuring instrument or meter, that a document (e.g., an invoice or calibration verification) is used.
- (11) 'fugitive emissions' means irregular or unintended emissions from sources that are not localised, or too diverse or too small to be monitored individually

Step 3: Description of the installation and its activities (including site diagram)

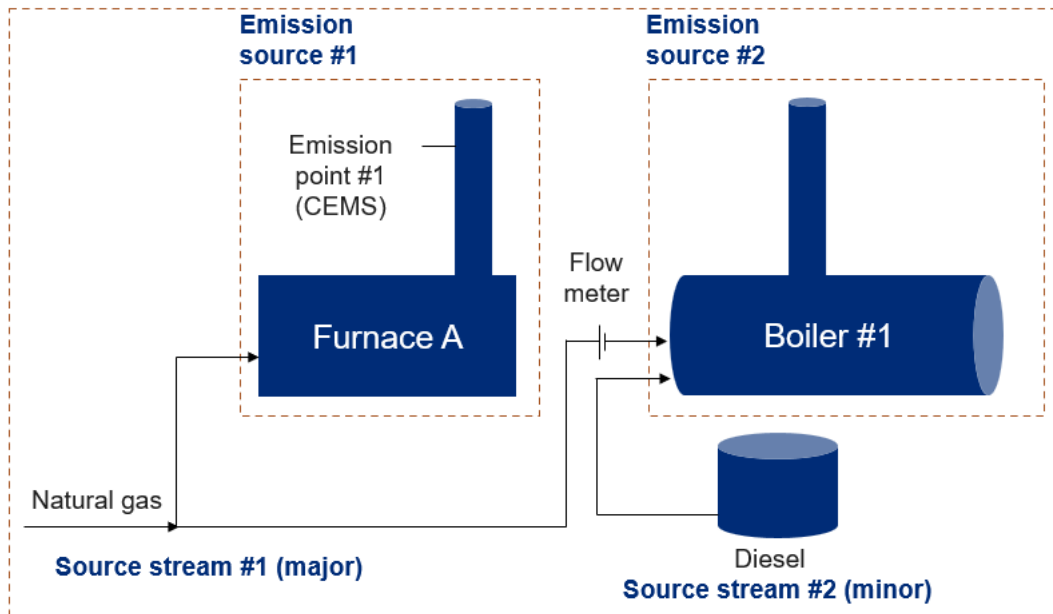
Please provide here a brief outline description of the site and the installation, and describe the location of the installation on the site. Please include a non-technical summary of the activities carried out at the installation, briefly describing each activity performed and the technical units used within each activity. In particular, the description should also identify and explain any part(s) of the installation which are not operated by the applicant, or parts which are not deemed to fall under the scope of the scheme. This description must be sufficient for demonstrating that neither data gaps nor double counting of emissions occur.

This description should provide the linking information which is needed to understand how the information given in other parts of this template are used together for calculating the emissions. It is recommended that a diagram of the emission sources, source streams, sampling points and metering equipment be included where such diagram simplifies describing the installation or referencing emission sources, source streams, measuring instruments and any other parts of the installation relevant for the monitoring methodology including data flow activities and control activities. Any later reference to a source, source stream or measurement point should be identifiable on this diagram. Where a diagram is omitted from a sufficiently simple facility, the agency may later request it be created.

Example visualization of a site's mapped activities

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Example facility



A facility may have multiple streams existing on site but in practice not all are material contributions to emissions and less stringent standards may be applied in order to reduce monitoring requirements.

Operators may review the relative contribution of individual source streams to the total of all monitored emissions and classify the smallest as 'de-minimis' or 'minor':

- **De-minimis:** source streams that are jointly <1 kT CO₂e or <2% total, up to a limit of 20 kT CO₂e, whichever is higher
- **Minor:** source streams that are jointly <5 kT CO₂e or <10% total, up to a limit of 100 kT CO₂e, whichever is higher
- **Major:** all other source streams.

Examples of minor or de-minimis sources would be:

- Stand-by power generation sources that are activated at a low frequency for maintenance and testing.
- Equipment at infrequently used locations

This is required to be done for the monitoring plan. Processes and procedures for how the measurement devices to be used for reporting will be maintained in good order should also be included. This is to demonstrate that the readings taken from those devices will be correct when used in the reporting.

Step 3: Fill out the summary table

To aid the EAD in its data collection, we have included a summary table in the template in **Sheet 2c2_Facility Description**. When completing the facility description, operators shall first identify the primary sector and principal production or operational activity of the facility. This should be followed by a description of secondary or supporting activities that contribute to greenhouse gas emissions. Presenting information in this order ensures that the facility's emissions profile can be clearly understood within its sectoral and operational context.

Where the template requests an indicative total emissions value at the facility level, this value is intended solely as a consistency and validation check. Operators shall ensure that this total reconciles with the sum of emissions reported across all individual emission sources and monitoring methodologies. Any discrepancy should be investigated and resolved prior to submission.

Sheet 2c2_Facility Description provides a structured summary of facility characteristics and operational information required to contextualise the greenhouse gas emissions reported elsewhere in the template. This includes high-level information on the facility, its activities, and relevant operational characteristics that may affect emissions generation, data availability, and the selection of monitoring methodologies. All information provided in this sheet shall be consistent with, and traceable to, the detailed information reported in subsequent sheets.

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Identify in the drop down boxes of section (d) of sheet 2c2 which calculations will be completed and the relevant sheets to complete will be identified:

- Calculation approach for CO₂ - sheet 3d1 and 3d2
- Measurement approach for CO₂ - sheet 3e1 and 3e2
- Fall-back approach - sheet 3f
- Methane emissions - sheet 3g

Please align any inputs you place in this sheet (2c2) with inputs you place in the remainder of the template and if applicable, any inputs provided to the National-level MRV and avoid inconsistencies.

Sheet 2c2 also includes the reporting of product or production information to support alignment with EU ETS-style benchmarking approaches, including analysis of emissions by product line. This information is collected to enable consistent sectoral benchmarking and comparative analysis and does not alter the methodology used to quantify or verify greenhouse gas emissions at the facility level. Please see the FAQ section for clarity on why this information is requested.

The reporting of product or production information does not affect emissions calculations, verification outcomes, or compliance assessments under this MRV framework. Emissions obligations remain installation-based.

Step 4: Select a monitoring approach to be followed and include relevant information for each approach

As above, you may choose between a calculation-based or measurement-based approach. Where a calculation-based or mass-balance methodology is selected, operators are required to define the relevant source stream(s) and provide associated activity data, calculation factors, and uncertainty levels. Where a measurement-based methodology is selected, emissions are determined directly at the emission source, and the definition of source streams is not required for emissions quantification.

Where you cannot comply with either approach, you may then provide justification as to why a fallback approach is chosen and the monitoring methodologies you use for emission sources or source streams under the fallback approach.

Step 5: Categorise your source stream and emission sources

For calculation-based reporting, operators shall clearly identify the relevant source streams and associated data-gathering points. For measurement-based reporting, operators shall identify the relevant emission sources and associated measurement points used to quantify emissions directly. These should be traceable to the schematic provided on sheet 2c1.

For individual source streams & emission sources, you are required to follow the individual tier requirements which will have their own separate uncertainty requirements

According to best practices, facilities are typically categorised in four Tiers as per the table below

	Tier 1	Tier 2	Tier 3	Tier 4
Tiers for activity data (maximum permissible uncertainty for each tier)	± 7,5 %	± 5 %	± 2,5 %	± 1,5 %

Note this is aligned with category C in EU legislation. The levels A and B referred to in EU legislation are not used.

All facilities should aim to follow the highest Tier possible.

Monitoring methodology not based on tiers ("the fallback methodology")

The operator may use a monitoring methodology that is not based on tiers for selected source streams or emission sources, provided that all of the following conditions are met:

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- It is technically unfeasible or would incur unreasonable costs to conduct achieve at least tier 1 under the calculation-based methodology for one or more major source streams or minor source streams or a measurement-based methodology for at least one emission source related to the same source streams
- the operator assesses and quantifies each year the uncertainties of all parameters used for the determination of the annual emissions in accordance with the ISO guide to the expression of uncertainty in measurement (JCGM 100:2008) or another equivalent internationally accepted standard, and includes the results in the annual emissions report.
- the operator demonstrates to the satisfaction of the competent authority that by applying such a fallback monitoring methodology, the overall uncertainty thresholds for the annual level of greenhouse gas emissions for the whole facility do not exceed 7.5 %

Sheet 3f provides a format to detail the fall-back monitoring methodology covering

- a detailed description of the monitoring methodology applied for all source streams or emission sources, for which no tier approach is used.
- a concise description of the monitoring approach, including formulae, used to determine your annual CO₂ or CO₂(e) emissions in the text box below.
- a concise justification for the application of a fall-back approach to the above emission sources
- demonstration that the overall uncertainty for the annual level of greenhouse gas emissions for the whole installation does not exceed 7.5%.

The agency may request full details of your justification to demonstrate that application of a tiered calculation based method or measurement approach is technically not feasible or would lead to unreasonable costs.

Methane emissions

Sheet 3g_ is used to report methane (CH₄) emissions that occur at the facility and are material to the greenhouse gas emissions profile. Given the higher global warming potential of methane and its relevance to key emitting sectors, methane emissions are reported separately to ensure transparency, methodological clarity, and consistency with international best practice.

For each relevant methane emission source, operators shall report the following information, as applicable:

- Identification of total methane emissions
- Estimation methods used to calculate emissions (including emission factors)
- Main emission sources of methane (fuel combustion, process, fugitive methane)
- Procedures used to manage or detect methane leaks

Step 6: Data quality – tiers by approach, calculation factor, fuel and/or material quantity

The below list of available tiers should be used for each activity and parameter (fuel quantity, emission factor etc.).

	Tier 1	Tier 2	Tier 3	Tier 4
Tiers for activity data (maximum permissible uncertainty for each tier)	± 7,5 %	± 5 %	± 2,5 %	± 1,5 %

Where there are reasons why compliance with the prescribed uncertainty level for each tier is not possible, please flag these.

Step 7: Risk assessment: QA/QC measures

In **sheet 4H – Verification and Data gaps**, please specify any data gaps you've encountered and the verification process you used to verify information.

For the verification process, it is expected that a description of the verification methodology applied for all source streams or emission sources will be provided. Reference to the source streams as described on sheet 2c1 should

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be provided to allow clear identification of which process applies to each source stream where multiple processes or source streams exist.

In the event that there are any data gaps from any of the source streams or measurement approaches, please briefly describe these here with the reasons for their occurrence and their estimated emissions impact.

In **sheet 4I – Management & QA** where possible, please specify any QA/QC measures and procedures on your site – including the relevant management personnel involved.

For those with responsibilities for monitoring and reporting emissions from the installation, identify the relevant job titles/posts and provide a succinct summary of their role relevant to monitoring and reporting.

For the procedures used to ensure quality assurance of measuring equipment provide a brief description that identifies how all relevant measurement equipment is calibrated and checked at regular intervals, if applicable, and how non-compliance with the required performance is dealt with.

For the procedures used to ensure regular internal reviews and validation of data the brief description should outline the review and validation process that includes a check on whether data is complete, comparisons with data over previous years, comparison of fuel consumption reported with purchase records and factor obtained for fuel suppliers with international reference factors, if applicable, and criteria for rejecting data.

For individual procedures, details expected are

- Title of procedure
- Reference for procedure
- Diagram reference (where applicable)
- Brief description of procedure
- Post or department responsible for the procedure and for any data generated
- Location where records are kept

Step 8: Add additional information and be ready to clarify anything

In **Sheet 4J – Mitigation Measures**, report any mitigation action, programme, or initiative that was not already captured through your emissions inputs elsewhere in the workbook. This includes anything your facility is doing, planning, or studying to reduce emissions, even where a quantified impact is not yet available.

If you are aware of any inconsistencies between figures reported at national level and those reported at sub-national or facility level, flag them in this sheet with a brief explanation. Do not leave inconsistencies unaddressed as they will be queried during review.

Where your facility uses carbon removal programmes, describe them in this sheet. This covers external carbon offsetting through purchased credits, on-site carbon capture, and any other mechanism that removes or compensates for emissions rather than reducing them at source. For each programme, state what it covers, the volume of CO₂e involved, and the reporting year it applies to.

Where any measure or programme follows a recognised methodology or standard, such as the IPCC Guidelines or equivalent, state which one applies and how compliance with it was determined.

1.4. What should I do with the reporting template once I have filled it out?

Where there are any changes or modifications to the contents of this document once submitted (including changes to your methodology), please notify the EAD. You should also regularly check if the contents of this document are up to date and your facility is functioning as you declare it is and record and declare any modifications.

Each operator shall regularly check whether the monitoring plan reflects the nature and functioning of the facility. The operator shall inform the agency of any changes planned in the nature or functioning, or an extension, of the facility which may require updating of the document. The agency or a verifier may offer suggestions for how the monitoring methodology can be improved and the operator should account for these through action or explanation why no action is taken.

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The operator shall notify the agency of any proposals for modification of the monitoring plan without undue delay. Any significant modification of the monitoring plan as mentioned above shall be subject to approval by the agency. Where the agency considers a modification not to be significant, it shall inform the operator without undue delay.

While awaiting approval from the agency the operator or may carry out monitoring and reporting using the modified monitoring plan where it can reasonably assume that the proposed modifications are not significant, or where monitoring in accordance with the original monitoring plan would lead to incomplete emission data. In case of doubt, the operator shall use in parallel both the modified and the original monitoring plan to carry out all monitoring and reporting in accordance with both plans, and it shall keep records of both monitoring results.

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Appendix 2: EAD Excel template to be filled by operator

