ARTICLE 6.4 MECHANISM

A6.4-SB07-AA-A06

Draft Standard

Article 6.4 mechanism validation and verification standard for projects

Version 01.0

United Nations
Framework Convention on
Climate Change

COVER NOTE

1. Procedural background

1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), at its third session, adopted rules, modalities and procedures (RMPs) for the mechanism established by Article 6, paragraph 4, of the Paris Agreement (the Article 6.4 mechanism) and requested the Supervisory Body, among others, to develop provisions for the development and approval of methodologies, validation, registration, monitoring, verification and certification, issuance, renewal, first transfer from the mechanism registry, voluntary cancellation and other processes pursuant to chapters V.B–L and VIII of the RMPs.

2. The CMA, at its fourth session, elaborated some elements of the RMPs relating to the operation of the activity cycle of the Article 6.4 mechanism (hereinafter referred to as the elaboration of the RMPs).

3. The Supervisory Body, at its fourth meeting, considered the concept note “Development of activity standard, validation and verification standard and activity cycle procedure” prepared by the secretariat, and requested the secretariat to: (i) draft activity standards, validation and verification standards, and activity cycle procedures, drawing on the corresponding documents developed for the clean development mechanism (CDM), with modifications to accommodate the requirements in the RMPs and the elaboration of the RMPs; as well as to (ii) reflect the guidance provided by the Supervisory Body at that meeting. Such guidance includes that the secretariat should:

    (a) Start with projects and programmes of activities (PoAs) as activity types to be covered by these standards and procedures, and develop two sets of the standards and the procedures (one for projects and the other for PoAs), noting that the Supervisory Body will start considering “other types of activity” that may be registered under the Article 6.4 mechanism in accordance with paragraph 31(b) of the RMPs, such as policy, jurisdictional or sectoral programme, and may revise these standards and procedures to expand the scope or develop a new set of these standards and procedures, as appropriate;

    (b) Cover both emission reductions and removals as mitigation types to be addressed by these standards and procedures from the outset, noting that requirements specific to removal activities are to be elaborated after the guidance on removals is provided by the CMA;

    (c) Develop provisions on minimizing the risk of non-permanence and addressing reversals as a general requirement applicable to both emission reduction and removal activities;

    (d) Integrate the provisions on the use of the sustainable development tool to be developed by the Supervisory Body and make the tool mandatory;

(e) Develop a process for host Parties to demonstrate the fulfilment of the requirements to participate in the Article 6.4 mechanism contained in paragraphs 26–27 of the RMPs, including templates for use by host Parties for that purpose;

(f) Develop two options for the substantive check of requests: one to be conducted by external experts, and the other to be conducted by the secretariat;

(g) Include provisions to ensure that double registration and double issuance under different activity types or different crediting schemes are avoided and to require that any overlapping elements such as baselines and monitoring be coordinated;

(h) Draft an appeals and grievances process based on the proposed approach in the concept note, learning also from the similar practices under other crediting schemes.

4. The Supervisory Body also requested the secretariat, in drafting the documents referred to in paragraph 3 above, to ensure coherence on the following cross-cutting issues within these documents as well as with other regulatory documents for the Article 6.4 mechanism that the secretariat is requested to draft:

(a) Roles and responsibilities of host Parties in the Article 6.4 mechanism and their implications on activities at various stages of the activity cycle;

(b) Roles, reliance and liability of designated operational entities in the Article 6.4 mechanism.

5. The Supervisory Body further requested the secretariat, in presenting the drafts of the documents referred to in paragraph 3 above, to highlight the differences from the corresponding documents developed for the CDM and to refer to the practices under different crediting mechanisms, where appropriate.

2. Purpose

6. The purpose of this document is to present the first draft Article 6.4 mechanism validation and verification standard for projects.

3. Key issues and proposed solutions

3.1. General

7. Key changes from the equivalent document under the CDM (“CDM validation and verification standard for project activities”) are summarized in the appendix.

3.2. Scope of the standard

8. In accordance with the guidance of the Supervisory Body as referred to in paragraph 3(a) above, the draft validation and verification standard does not cover the activity type of PoAs, for which a separate standard will be developed later. Such separation of standards for projects and PoAs would reduce confusion on the applicability of requirements relating to the validation and verification of projects, PoAs or both.

9. Furthermore, the draft validation and verification standard does not cover provisions that are specific to removal projects, including provisions relating to afforestation and reforestation projects that were included in the CDM project standard for project activities.

Provisions specific to removal projects will be included in this standard in conjunction with the same in the activity standard under the guidance of the Supervisory Body once the CMA adopts RMPs for removal activities.

3.3. Document structure

10. The draft validation and verification standard contains the following two groups of provisions:

    (a) Provisions applicable to all types of validations and verifications:

        (i) Principles for validation and verification;

        (ii) General validation and verification requirements;

    (b) Provisions applicable only to specific validation or verification types:

        (i) Validation for registration;

        (ii) Validation of post-registration changes;

        (iii) Verification of implementation and monitoring;

        (iv) Validation for renewal of the crediting period.

11. The provisions in the draft validation and verification standard are based on those in the "CDM validation and verification standard for project activities", but have been significantly streamlined, by removing provisions irrelevant in the Article 6.4 mechanism context (e.g. specific provisions for small-scale activities) as well as by removing or simplifying repetitive or self-evident provisions, while adding or revising provisions to align with the requirements contained in the draft "Article 6.4 mechanism activity standard for projects" and the draft "Article 6.4 mechanism activity cycle procedure for projects".

12. For this reason, in the sections on specific validation or verification types, only provisions containing specific validation or verification means that are unique or may add value are retained, while it has been clarified at the start of each of these sections that it is the DOE's responsibility to validate the compliance of the proposed or registered A6.4 project with all relevant activity requirements arising from the "Article 6.4 mechanism activity standard for projects" as an overarching requirement.

13. The provisions that particular attention of the Supervisory Body may be needed are described in the sections below.

3.4. On-site inspection in validation and verification

14. An on-site inspection of the project is a very effective means of validation and verification as it would provide direct evidence to DOEs to determine whether the information and claim made in the document prepared by the activity participants are real or plausible. On the other hand, it is costly and time-consuming as it involves travel arrangements for DOE personnel. Considering big-scale projects in terms of GHG emission reductions or net GHG removals would pose high risk to the environmental integrity if an on-site inspection is not conducted at registration, or long time-gap from the previous on-site inspection at verification could overlook actual changes on the project site, the following conditions are set for mandatory onsite inspection:

(a) At validation for registration or renewal of crediting period:

(i) Its estimated annual average of greenhouse gas (GHG) emission reductions or net GHG removals is more than [50,000] [100,000] t CO_2 eq; or

(ii) There is pre-project information that is relevant to the requirements for registration of the project and may not be traceable after the registration;

(b) At verification of implementation and GHG emission reductions or net GHG removals:

(i) It is the first verification for the DOE with regard to the project;

(ii) More than three years have elapsed since the last on-site inspection conducted for verification for the project; or

(iii) The project has achieved more than 300,000 t CO_2 eq of GHG emission reductions or net GHG removals since the last verification when an on-site inspection was conducted.

15. "Remote inspection" by using IT tools (e.g. web cam) has, although not providing the same level of certainty, become more and more utilized as a cost-effective and time saving means for validation (and verification) under the CDM. It was a predominant alternative means to on-site inspection during the COVID pandemic period and found effective if conducted properly. Based on this experience, the conditions where a remote inspection may be conducted as an alternative means to an on-site inspection and the guidance on the modalities for remote inspections developed for the CDM has been attached (appendix 1).

16. The necessity of on-site inspection at validation for post-registration changes may depend on the types of change. Therefore, the option to use remote inspection is included.

3.5. Avoidance of double or revived registration

17. To ensure the compliance with the requirement of avoidance of double or revived registration contained in the draft "Article 6.4 mechanism activity standard for projects", it is proposed that the DOE to determine, "based on the publicly available information and/or the information provided by the activity participants upon its request", whether the registration of the proposed project under the Article 6.4 mechanism does not lead to double or revived registration with under any other international, regional, national or subnational GHG crediting schemes. The phrase "based on the publicly available information" may be elaborated to provide clarity of the boundary of responsibility of DOEs for this check.

3.6. Application of methodologies and standardized baselines

18. Provisions of validation of application of methodologies and standardized baselines are kept at a general level, since detailed methodological requirements including on baseline setting, additionality demonstration and types and application of standardized baselines for A6.4 activities have not yet been adopted by the CMA. While the general provision serves the fundamental purpose of validation, that is to determine whether methodologies and standardized baselines are correctly applied in accordance with the requirements therein, providing specific means of validation for some methodological requirements may

strengthen the credibility of the project. Therefore, the provisions may need to be elaborated once the CMA adopts detailed methodological requirements.

3.7. Simplified validation of some activity requirements for registration

19. Due to the digitization of some activity requirements for registration under the Article 6.4 mechanism activity cycle as contained in the draft "Article 6.4 mechanism activity cycle procedure for projects", validation of compliance with these requirements are made simple by checking the information published on the UNFCCC website. Such activity requirements include:

    (a) Submission of prior consideration notification;

    (b) Project type to be within the types indicated by the host Party;

    (c) Host Party approval of the project;

    (d) Host and other Party authorization of activity participants;

    (e) Type, length and start date of the crediting period.

3.8. Verification of project implementation and operation

20. Since the implementation and operation of the project in accordance with the registered PDD after registration, post-registration change or renewal of the crediting period is the basis for monitoring and calculation of GHG emission reductions or net GHG removals, it is made clear that at each and every verification, the implementation of the project also needs to be verified.

3.9. Application of materiality in verification

21. Since the application of materiality concept in verifications would make verifications cost-effective without materially impacting the final key outcome of verification (i.e. the amount of verified GHG emission reductions or net GHG removals), the provisions on the application of materiality and the materiality thresholds developed under the CDM are included with necessary modifications due to non-existence of activity scale concept under the Article 6.4 mechanism.

3.10. Continuous stakeholder engagement

22. To reflect the process of continuous stakeholder engagement contained in the draft "Article 6.4 activity cycle procedure for projects", the requirement for the DOE, as part of each verification, to determine whether relevant comments on the registered A6.4 project have been submitted from Parties, stakeholders or UNFCCC-admitted observer organizations, and if so, determine whether the activity participants have taken into account the comments in their actions in the Article 6.4 mechanism activity cycle, as appropriate, is included.

4. Impacts

5. The Article 6.4 mechanism validation and verification standards, together with the Article 6.4 mechanism activity cycle procedures and the Article 6.4 mechanism activity standards, will form the regulatory basis for the operationalization of the Article 6.4 mechanism.

6. Subsequent work and timelines

7. The secretariat will modify the draft validation and verification standard based on the guidance of the Supervisory Body and present it to the Supervisory Body for consideration at its next meeting (SB 008).

8. After SB 008, under the guidance of the Supervisory Body, the secretariat will organize focused and inclusive stakeholder interactions on the package of draft activity standard, draft validation and verification standard, and draft activity cycle procedure for projects.

9. The equivalent regulatory document for PoAs will follow upon the adoption of the regulatory documents for projects.

10. Recommendations to the Board

11. The secretariat recommends that the Supervisory Body provide guidance on how to modify the draft Article 6.4 mechanism validation and verification standard for projects contained in this document.

Appendix. Changes of key requirements from the CDM

Requirement	Main changes from CDM project standard	Reason for change
Overarching elements	• Removed provisions of validation or verification specific to: – Small-scale and microscale activities – Afforestation and reforestation activities	• Align with requirements in the draft AS
	• Replaced sections of validation and verification specific to carbon capture and storage (CCS) activities with placeholders	• Rules and modalities for CCS activities under the Article 6.4 mechanism are not agreed yet
	• Added square brackets to provisions relating to the application of standardized baselines	• Wait for the adoption by the CMA of elaborated methodological requirements
Principles	• Updated based on ISO 104062-3:2019 - Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions	• Align with the latest ISO standard
Validation for registration	• Moved the content of subsection “Objectives of validation” to “**General validatin and verification approach**” section	• Simplify and improve relevance of sections
	• Converted subsection “Validatin approach” to “**Overarching requirement**”	• Clarify the intent of the section
	• Added a new subsection “**General**” to cover overall responsibility of DOE	• Clarify the basic validation requirements
	• Deleted the requirement for the DOE to publish the PDD	• Align with the Article 6.4 mechanism activity cycle as contained in the draft ACP
	• Removed sections on **prior consideration**, **start date**, **identification of project type** and **description of project**	• Remove requirements covered by overarching requirement
	• Created a new subsection “**Avoidance of double or revived registration**”, introducing new provisions and simplifying existing provisions	• Align with the corresponding requirements in the draft AS
	• Moved the validation requirements on applicability of selected methodologies and standardized baselines from subsection “Application of methodologies and standardized baselines” to “**Selection of methodologies and standardized baselines**”	• Improve relevance of provisions
	• Modified the general validation requirements in subsection “**Application of methodologies and standardized baselines**”	• Align with the corresponding requirements in the draft AS
	• Added square brackets the validation requirements for projects that apply specific type of **standardized baselines**	• Wait for the adoption by the CMA of elaborated methodological requirements

Requirement	Main changes from CDM project standard	Reason for change
	• Streamlined the validation requirements on **baseline scenario** • Removed the detailed validation requirements on specific elements for demonstration of **additionality** • Streamlined the validation requirements on **monitoring plan** • Removed section on **environmental impacts** • Streamlined section on **local stakeholder consultation** • Simplified the validation requirements on **global stakeholder consultation** • Simplifed the validation requirements on **approval and authorization by Parties** • Simplified section on **modalities of communication** • Added a placeholder of a possible new section on **integrity safeguards** • Restructured the **validation report** section, merging subsections on validation opinion and validation report	• Remove requirements covered by overarching requirement • Remove requirements covered by overarching requirement • Remove requirements covered by overarching requirement • Remove requirements covered by overarching requirement • Remove requirements covered by overarching requirement • Align with the process contained in the draft ACP • Align with the process contained in the draft ACP • Remove requirements covered by overarching requirement • Align with the corresponding process introduced in the draft ACP • Consolidate similar and related provisions
Validation of post-registration changes	• Simplified subsection “General validation requirements” and converted to “**Overarching requirement**” • Added a new subsection “**General**” to cover overall responsibility of DOE • Removed the detailed validation requirements on **temporary deviation from the registered monitoring plan** • Removed section on **changes to the start date of the crediting period** • Simplified sections on **permanent changes to the monitoring plan** and **changes to the project design** • Removed the description of detailed reporting elements in the **validation report** section	• Remove procedural and self-evident requirements • Clarify the basic validation requirements • Align with the corresponding requirement in the draft AS • Align with the corresponding requirement in the draft AS • Remove requirements covered by overarching requirement • Remove requirements covered by overarching requirement
Verification of implementation and monitoring	• Simplified subsection “General verification requirements” and converted to “**Overarching requirement**”, clarifying that	• Clarify the intent of the section

Requirement	Main changes from CDM project standard	Reason for change
	the verification of implementation and operation of registered projects is a part of every verification	
	• Moved the content of subsection "Objectives of verification" to "**General validatin and verification approach**" section	• Simplify and improve relevance of sections
	• Removed the requirement for the DOE to publish the monitoring report	• Align with the Article 6.4 mechanism activity cycle as contained in the draft ACP
	• Modified **materiality** thresholds	• Align with the lack of concept of scales of activities under the Article 6.4 mechanism
	• Added a new subsection "**General**" to cover overall responsibility of DOE	• Clarify the basic verification requirements
	• Added a verification requirement of **monitoring reports** being prepared in chronological order	• Align with the corresponding requirement in the draft AS
	• Made verification of **sustainable development co-benefits** mandatory	• Align with the corresponding requirements in the draft AS
	• Added a new subsection on **continuous stakeholder engagement** process	• Align with the corresponding process introduced in the draft ACP
	• Restructured the **verification and certification report** section	• Align with the validation report section
Validation for renewal	• Simplified subsection "General" and converted to "**Overarching requirement**"	• Clarify the intent of the section
	• Removed the procedural requirements for the DOE for a renewal case where the activity has not been implemented for the whole crediting period	• Align with the lack of concept of the case in question under the Article 6.4 mechanism activity cycle as contained in the draft ACP
	• Added a new subsection "**General**" to cover overall responsibility of DOE	• Clarify the basic verification requirements
	• Added square brackets to the validation requirements of original **baseline** or its update	• Wait for the adoption by the CMA of elaborated methodological requirements
	• Removed detailed content of the **validation report** by referring to the validation report for registration	• Simplify the text

Note: AS = "Article 6.4 mechanism activity standard for projects";
ACP = "Article 6.4 mechanism activity cycle procedure for projects"

TABLE OF CONTENTS **Page**

1. Introduction

1.1. Background

1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), at its third session, adopted rules, modalities and procedures (RMPs) for the mechanism established by Article 6, paragraph 4, of the Paris Agreement (the Article 6.4 mechanism)[1] and requested the Supervisory Body, among others, to develop provisions for the development and approval of methodologies, validation, registration, monitoring, verification and certification, issuance, renewal, first transfer from the mechanism registry, voluntary cancellation and other processes pursuant to chapters V.B–L and VIII of the RMPs.[2]

2. The CMA, at its fourth session, elaborated some elements of the RMPs relating to the operation of the activity cycle of the Article 6.4 mechanism.[3]

1.2. Objectives

3. The objective of the "Article 6.4 mechanism validation and verification standard for projects" (hereinafter referred to as the standard) is to set out requirements relating to validation and verification for Article 6.4 mechanism projects (A6.4 projects).

2. Scope and entry into force

2.1. Scope

4. This standard provides designated operational entities (DOEs) with minimum requirements for validation of a proposed or registered A6.4 project of its compliance with the relevant design requirements and other attributes for registration, post-registration change and renewal, as well as for verification of greenhouse gas (GHG) emission reductions or net GHG removals achieved by a registered A6.4 project.

2.2. Entry into force

5. Version 01.0 of this standard enters into force on [1 January 2024].

3. Terms and definitions

6. The following terms apply in this standard:

   (a) "Shall" is used to indicate requirements to be followed;

   (b) "Should" is used to indicate that among several possibilities, one course of action is recommended as particularly suitable;

[1] Decision 3/CMA.3, annex, available at: https://unfccc.int/sites/default/files/resource/cma2021_10_add1_adv.pdf#page=25

[2] Decision 3/CMA.3, paragraph 5(a).

[3] Decision 7/CMA.4, annex I, chapters III–VI, available at: https://unfccc.int/sites/default/files/resource/cma2022_10a02_adv.pdf#page=33

(c) "May" is used to indicate what is permitted;

(d) "Activity participant" is a public or private entity that participates in an A6.4 project.

4. Principles

4.1. General

7. The following principles[4] guide the preparation, execution, and reporting of validation and verification activities.

4.2. Impartiality

8. Design and execute the validation or verification activity so that it is objective and does not introduce bias.

4.3. Evidence-based approach

9. Ensure that the validation or verification activity employs a rational method for reaching reliable and reproducible validation or verification conclusions and is based on sufficient and appropriate evidence.

4.4. Fair presentation

10. Ensure that the validation or verification activity, findings, conclusions and reports are truthfully and fairly presented. Report significant obstacles encountered during the validation or verification, as well as unresolved, diverging opinions among validators or verifiers, to the responsible party (e.g. the secretariat/the Supervisory Body) and the client (e.g. the activity participants).

4.5. Documentation

11. Document the validation or verification and ensure it establishes the basis for the conclusion and conformity with the criteria.

4.6. Conservativeness

12. When assessing comparable alternatives, use a selection that is cautiously moderate.

5. General validation and verification requirements

5.1. Validation and verification approach

13. The DOE shall select a competent team to perform the validation or verification for the A6.4 project in accordance with the "Standard: Article 6.4 mechanism accreditation".

[4] This text is taken from ISO 14064-3:2019 - Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions and is reproduced with the permission of the International Organization for Standardization, ISO. This standard can be obtained from any ISO member from the website of the ISO Central Secretariat at the following address: <www.iso.org>. Copyright remains with ISO.

14. In carrying out its validation or verification work, the DOE shall:

    (a) Follow this standard and integrate its provisions into the DOE's own quality management systems;

    (b) Apply the most recent applicable decisions and guidance provided by the Supervisory Body;

    (c) Determine whether each proposed or registered A6.4 project meets all applicable Article 6.4 mechanism rules and requirements, including those specified in the "Article 6.4 mechanism activity standard for projects", the selected methodologies, the selected standardized baselines and any other standards, methodologies, methodological tools and guidelines applied in accordance with the selected methodologies (hereinafter "any other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the selected(applied) methodologies" are collectively referred to as the other (applied) methodological regulatory documents);

    (d) Assess the accuracy, conservativeness, relevance, completeness, consistency and transparency of the information provided by the activity participants;[5]

    (e) Determine whether information provided by the activity participants is reliable and credible;[6]

    (f) Apply consistent validation/verification criteria:

        (i) To the requirements of the selected methodologies, the selected standardized baselines and the other applied methodological regulatory documents throughout the crediting period(s);

        (ii) To A6.4 projects with similar characteristics such as a similar application of the selected methodologies, the selected standardized baselines and the other applied methodological regulatory documents, use of technology, time period or region;

        (iii) To expert judgements, over time and among A6.4 projects;

    (g) Base its findings and conclusions on objective evidence and conduct all validation or verification activities in accordance with Article 6.4 mechanism rules and procedures;

    (h) Not omit evidence that is likely to alter the validation or verification opinion;

    (i) Present information in the validation report or verification and certification report in a factual, neutral and coherent manner and document all assumptions, provide references to background material, and identify changes made to the documentation;

    (j) Safeguard the confidentiality of all information obtained or created during the validation or verification;

[5] Principles for each can be found in the "Article 6.4 mechanism activity standard for projects".

[6] Information is credible if it is authentic and is able to inspire belief or trust, and the willingness of persons to accept the quality of evidence. Information is reliable if the quality of evidence is accurate and credible and able to yield the same results on a repeated basis.

(k) Conduct a thorough and independent assessment against the applicable Article 6.4 mechanism rules and requirements.

5.2. Use of and compliance with applicable standards

15. In carrying out its validation and verification work, the DOE shall use and determine the compliance with the valid version of applicable standards, methodologies, standardized baselines, methodological tools, guidelines and other regulatory documents adopted by the CMA or the Supervisory Body.

5.3. Use of applicable forms

16. The DOE shall determine whether the activity participants completed the valid version of the relevant forms by following the instructions therein.

17. The DOE contracted to conduct validation for registration of a proposed A6.4 project, post-registration changes or renewal of the crediting period of a registered A6.4 project shall prepare a validation report using the valid version of the relevant validation report form[7] and following the instructions therein.

18. The DOE contracted to conduct verification and certification of the implementation of the registered A6.4 project and monitored GHG emission reductions or net GHG removals shall prepare a verification and certification report using the valid version of the relevant verification and certification report form[8] and following the instructions therein.

5.4. Use of applicable global warming potentials

19. The DOE shall determine whether the global warming potentials (GWPs) were correctly applied in the project design document (PDD) and in the monitoring report in accordance with relevant requirements in the "Article 6.4 mechanism standard for projects".

6. Validation for registration of projects

6.1. General requirements

6.1.1. Overarching requirement

20. The DOE shall determine whether the proposed A6.4 project complies with all relevant requirements in the "Article 6.4 mechanism activity standard for projects" for registration of the project under the Article 6.4 mechanism.

6.1.2. Standard auditing techniques

21. The DOE shall assess the information provided by the activity participants.

22. In assessing the information, the DOE shall apply the means of validation specified throughout this standard and, where appropriate, standard auditing techniques, including, but not limited to:

(a) Document review, involving:

[7] All types of validation report forms are available on the UNFCCC website.

[8] All types of verification and certification report forms are available on the UNFCCC website.

(i) A review of data and information;

(ii) Cross checks between the information provided in the PDD and information from sources other than those used; if available, the DOE's sectoral or local expertise; and, if necessary, independent background investigations;

(b) Follow-up actions (e.g. on-site inspection and telephone or e-mail interviews), including:

(i) Interviews with relevant stakeholders in the host country, such as personnel with knowledge of the project design and implementation;

(ii) Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted;

(c) Reference to available information relating to projects or technologies similar to the proposed A6.4 project under validation;

(d) Review, based on the selected methodologies, the selected standardized baselines and the other applied methodological regulatory documents, of the appropriateness of formulae and accuracy of calculations;

(e) Sampling approach in accordance with the "Standard for sampling and surveys for Article 6.4 mechanism activities".

23. It is mandatory for the DOE to conduct an on-site inspection at validation for the proposed A6.4 project if:

(a) Its estimated annual average of GHG emission reductions or net GHG removals is more than [50,000] [100,000] t CO_2 eq; or

(b) There is pre-project information that is relevant to the requirements for registration of the project and may not be traceable after the registration.

24. For cases that are not referred to in paragraph 23 above, it is optional for the DOE to conduct an on-site inspection at validation. If the DOE does not conduct an on-site inspection as a means of validation, it shall describe the alternative means used and justify that they are sufficient for the purpose of validation. If the DOE conducts a remote inspection as an alternative means to an on-site inspection, the DOE should follow the guidance contained in appendix 1.

25. Where no specific means of validation is specified, the DOE shall apply the standard auditing techniques described in paragraph 22 above.

6.1.3. Corrective action requests, clarification requests and forward action requests

26. If the DOE identifies issues that require further elaboration, research or expansion in order to determine whether the proposed A6.4 project meets the relevant Article 6.4 mechanism rules and requirements, the DOE shall ensure that these issues are accurately identified, formulated, discussed and concluded in the validation report.

27. The DOE shall raise a corrective action request (CAR) if one of the following situations occurs:

(a) Mistakes have been made by the activity participants that will influence the ability of the proposed A6.4 project to achieve real, measurable, verifiable and additional GHG emission reductions or net GHG removals;

(b) The applicable Article 6.4 mechanism rules and requirements have not been met;

(c) There is a risk that GHG emission reductions or net GHG removals cannot be monitored or calculated.

28. The DOE shall raise a clarification request (CL) if the information provided by the activity participants is insufficient or not clear enough to determine whether the applicable Article 6.4 mechanism rules and requirements have been met.

29. The DOE shall raise a forward action request (FAR) if issues related to project implementation that require review during the first verification after the validation of the proposed A6.4 project are identified. The DOE shall not raise a FAR that relates to the Article 6.4 mechanism rules and requirements for registration of the project.

30. The DOE shall resolve or "close out" CARs and CLs only if the activity participants rectify the project design and/or the PDD, or provide additional explanations or evidence that satisfy the DOE's concerns. If this is not done, the DOE shall not submit a request for registration of the proposed A6.4 project.

31. The DOE shall report on all CARs, CLs and FARs in its validation report. This reporting shall explain the issues raised, the responses provided by the activity participants, the means of validation of such responses and references to any resulting changes in the PDD or its supporting documents.

6.2. Validation of compliance with specific requirements for registration

6.2.1. General

32. The DOE shall determine, by following the general validation requirements referred to in sections 5 and 6.1 above, whether the proposed A6.4 project complies with all relevant requirements for registration as contained in the "Article 6.4 mechanism activity standard for projects", including the requirements on:

(a) Notification of prior consideration of the Article 6.4 mechanism;

(b) Compliance with the host Party's indication of activity types that it would approve;

(c) Description of the project;

(d) Avoidance of double or revived registration;

(e) Selection of methodologies and standardized baselines and their applicability to the project;

(f) Deviation from, or revision of, the selected methodology or methodological tool, if applicable;

(g) Application of methodologies and standardized baselines, including in terms of:

(i) Definition of the project boundary, identification of sources, sinks and GHGs included in the project boundary, and identification of leakage;

(ii) Identification of baseline scenario;

(iii) Demonstration of additionality;

(iv) Assessment of the risk of non-permanence of GHG emission reductions or net GHG removals and measures to address reversals if they occur;

(v) Estimation of GHG emission reductions or net GHG removals;

(vi) Monitoring plan;

(h) Specification of start date, crediting period type and duration;

(i) Analysis of environmental and social impacts and sustainable development of cobenefits;

(j) Undergoing local or subnational stakeholder consultation;

(k) Undergoing global stakeholder consultation;

(l) Approval of the project by the host Party;

(m) Authorization of activity participants by the host Party and other participating Parties;

(n) Preparation of modalities of communication statement.

33. When validating the compliance of the proposed A6.4 project with the requirements for registration referred to in paragraph 32 above, the DOE shall additionally follow the specific guidance on validation regarding some of these requirements provided in sections 6.2.2–6.2.11 below.

6.2.2. Avoidance of double or revived registration

34. The DOE shall determine the compliance with the requirement based on the publicly available information and/or the information provided by the activity participants upon its request.

6.2.3. Selection of methodologies and standardized baselines

35. If the DOE, based on local and sectoral knowledge, is aware that comparable information is available from credible sources other than that used in the PDD, it shall cross-check the PDD against such other sources to confirm that the A6.4 project meets the applicability conditions of the selected methodologies, the selected standardized baselines and the other applied methodological regulatory documents.

36. [The DOE shall determine whether the proposed A6.4 project has selected the standardized baselines where their selection is mandatory.]

37. If the DOE cannot determine the applicability of a selected methodology, methodological tool and/or standardized baseline to the proposed A6.4 project, the DOE shall request a clarification on the applicability in accordance with the “Procedure: Development, revision and clarification of methodologies and methodological tools” and/or the “Procedure: Development, revision, clarification and update of standardized baselines”.

6.2.4. Deviation from methodology or methodological tool

38. The DOE may seek a clarification from the Supervisory Body on the acceptability of a deviation from the selected approved methodology or methodological tool in accordance with the "Procedure: Development, revision and clarification of baseline and monitoring methodologies and methodological tools" prior to the submission of a request for registration, if the DOE, when performing validation of the proposed A6.4 project, or upon request from the activity participants, finds that, due to a project-specific[9] issue implying that a revision of the methodology and/or methodological tool would not be required to address the issue, the project deviated from:

    (a) The selected methodology or methodological tool; or

    (b) Sections in the selected methodology or methodological tool that are not standardized by the selected standardized baselines, if the proposed A6.4 project applies standardized baselines.

39. The DOE shall submit an assessment of the case including demonstration that the deviation does not require revision of the selected methodology or methodological tool, and shall include a description of the impact of the deviation on GHG emission reductions or net GHG removals by the proposed A6.4 project.

40. Alternatively, if the DOE considers that a revision of the selected methodology or methodological tool would be required to address the project situation, then the DOE shall submit, or shall request the activity participants to submit, a request for revision of the selected methodology or methodological tool in accordance with the "Procedure: Development, revision and clarification of methodologies and methodological tools".

[9] Examples of project-specific issues include, but are not limited to, the following:

(a) The methodology requires measurements using instrumentation of certain specifications or using a certain method. The activity participants of the proposed A6.4 project face a difficulty in acquiring the specified instrumentation or a difficulty in implementing the measurement method; however, they can achieve comparable accuracy of measured parameters using an alternative instrumentation or measurement method;

(b) A proposed A6.4 project does not have an access to the data sources specified by the methodology for a certain parameter; a different source of data can be accessed by the project to estimate the parameter with equal reliability and accuracy;

(c) A minor deviation is sought for a project-specific situation, which is well justified and conservative. For example: a methodology requires limiting production in the project scenario between +/- 5% of rated capacity, if the historical baseline is to be applied. Due to government restrictions, the plant has never been operated at its rated capacity but at a capacity which is much below its rated capacity (20% below the rated capacity). A deviation can be presented specifying conservative approaches to calculate the emission reduction in such a project-specific case;

(d) A conservative estimation technique or default factor suggested addressing uncertainties related to project-specific situations, which are not addressed in the methodology. For example, a well-justified conservative uncertainty factor proposed to be used in equations of baseline emissions to address uncertainties in the real-life situation during the crediting period.

6.2.5. Application of methodologies and standardized baselines

6.2.5.1. Project boundary, sources, leakage and greenhouse gases

41. If the applied methodologies and the applied standardized baselines allow the activity participants to choose whether a source or gas is to be included within the project boundary, the DOE shall determine whether the activity participants have justified that choice and whether the justification provided is reasonable.

42. If the DOE identifies emission sources that will be affected by the implementation of the proposed A6.4 project and which are expected to contribute more than 1 per cent of the overall expected average annual GHG emission reductions or net GHG removals, and are not addressed by the applied methodologies or the applied standardized baselines, the DOE shall request a clarification of, revision to, or deviation from, the methodologies or the standardized baselines, as appropriate, in accordance with the "Procedure: Development, revision and clarification of baseline and monitoring methodologies and methodological tools" or the "Procedure: Development, revision, clarification and update of standardized baselines".

6.2.5.2. Baseline scenario

43. If the applied methodologies require several alternative scenarios to be considered in the identification of the most plausible baseline scenario, the DOE shall, based on its expertise and local and sectoral knowledge, determine whether all scenarios that are considered by the activity participants and any scenarios that are supplementary to those required by the methodologies, are realistic and credible in the context of the proposed A6.4 project and that no alternative scenario has been excluded.

44. The DOE shall determine whether the most plausible baseline scenario identified is reasonable by validating the assumptions, calculations and rationales used in the PDD.

45. [Notwithstanding of paragraphs 43–44 above, if the proposed A6.4 project applies an approved standardized baseline that standardizes the baseline scenario, the DOE shall determine whether the baseline scenario for the project is the scenario specified by the applied standardized baseline.]

6.2.5.3. Demonstration of additionality

46. The DOE shall determine whether the additionality of the proposed A6.4 project is demonstrated in accordance with the applied methodologies, the applied standardized baselines and the applied methodological tools for demonstration of additionality, if any, by verifying the reliability and credibility of all data used, and rationales, assumptions and justifications provided by the activity participants, and critically assessing the evidence presented, using local knowledge and sectoral and financial expertise.

47. [Notwithstanding of paragraph 46 above, if the proposed A6.4 project applies an approved standardized baseline that standardizes additionality, the DOE shall determine whether the project meets the additionality criteria (e.g. positive lists of technologies) in the applied standardized baseline.]

6.2.5.4. Estimation of emission reductions or net removals

48. Where the applied methodologies, the applied standardized baselines or the other applied methodological regulatory documents allow for selection between options for equations or

parameters, the DOE shall determine whether adequate justification has been provided (based on the choice of the baseline scenario, context of the proposed A6.4 project and other evidence provided) and that the correct equations and parameters have been used, in accordance with the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents.

49. The DOE shall verify the justification given in the PDD for the choice of data and parameters used in the equations as follows:

    (a) **Data and parameters fixed ex ante**: If data and parameters will not be monitored throughout the crediting period of the proposed A6.4 project but have already been determined and will remain fixed throughout the crediting period, the DOE shall determine whether all data sources and assumptions are appropriate and calculations are correct as applicable to the proposed A6.4 project, and will result in an accurate or otherwise conservative estimate of GHG emission reductions or net GHG removals. If the applied methodologies require that any of these data and parameters be determined in accordance with the "Standard for sampling and surveys for Article 6.4 activities", the DOE shall determine whether the sampling efforts were undertaken in accordance with this standard;

    (b) **Data and parameters to be monitored**: If data and parameters will be monitored or estimated on implementation and hence become available only after validation of the proposed A6.4 project, the DOE shall determine whether the estimates provided in the PDD for these data and parameters are reasonable;

    (c) If the applied methodologies require that any of the data, parameters or estimates be determined based on sampling in accordance with the "Standard for sampling and surveys for Article 6.4 mechanism activities", the DOE shall determine whether the sampling efforts were undertaken in accordance with such standard.

6.2.5.5. Monitoring plan

50. The DOE shall determine whether the monitoring plan is feasible to implement, including the feasibility of the monitoring arrangements, and whether the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that GHG emission reductions or net GHG removals can be reported ex post and verified.

51. If the activity participants chose to delay the submission of the monitoring plan for the proposed A6.4 project in accordance with the "Article 6.4 mechanism activity standard for projects", the DOE shall confirm and document that the submission of the monitoring plan is delayed.

6.2.6. Local and subnational stakeholder consultation

52. The DOE shall request the designated national authority (DNA) of the host Party of the proposed A6.4 project to forward to the DOE complaints received by the DNA from stakeholders on the handling of the outcome of the local or subnational stakeholder consultation (hereinafter collectively referred to as local stakeholder consultation), if any. In this case, the DOE shall promptly forward such complaints to the activity participants and subsequently determine whether the activity participants have taken due account of the complaints and modify the PDD as appropriate.

6.2.7. Global stakeholder consultation

53. The DOE shall determine whether authentic and relevant comments submitted in the global stakeholder consultation and published on the UNFCCC website in accordance with the "Article 6.4 mechanism activity cycle procedure for projects" have been taken into due account in the PDD of the proposed A6.4 project.

6.2.8. [*Placeholder for possible section on integrity safeguards*]

6.2.9. Approval and authorization

54. The DOE shall determine whether the DNA of the host Party of the proposed A6.4 project has provided an approval of the project to the Supervisory Body through the dedicated interface on the UNFCCC website in accordance with the "Article 6.4 mechanism activity cycle procedure for projects".

55. The DOE shall determine whether each activity participant of the proposed A6.4 project listed in the PDD has been authorized to participate in the project by the host Party or other participating Party through the dedicated interface on the UNFCCC website in accordance with the "Article 6.4 mechanism activity cycle procedure for projects".

6.2.10. Modalities of communication

56. The DOE shall validate the corporate identity of all activity participants and focal points included in the Modalities of Communication (MoC) statement prepared in accordance with the "Article 6.4 mechanism activity cycle procedure for projects", as well as the personal identities, including specimen signatures and employment status, of their authorized signatories through:

    (a) Directly checking evidence of corporate and personal identities and other relevant documentation;

    (b) Notarized documentation; or

    (c) Written confirmation from the activity participant that submits the MoC statement that all corporate and personal details, including specimen signatures, are valid and accurate, ensuring that:

        (i) The MoC statement is received from the activity participant with whom the DOE has a contractual relationship;

        (ii) The official who submits the MoC statement to the DOE and the official who signed the written confirmation (if a different person) are duly authorized to do so on behalf of the respective activity participant.

57. If the DOE is unable to validate the requirements by applying subparagraphs 56(a)–(c), the DOE may perform further validation activities in order to confirm that the corporate and personal details, employment status and specimen signatures included in the MoC statement are valid and accurate, and comply with the requirements in this section.

58. The DOE shall confirm that the activity participants' authorized signatories signing the MoC statement correspond to the activity participants' authorized signatories included in its annex.

6.2.11. [*Placeholder for specific validation requirements for carbon dioxide capture and storage projects*]

6.3. Validation report

59. The DOE shall report the results of its assessment in the validation report, including the following:

    (a) An executive summary of the validation process and its conclusions;

    (b) Details of the validation team, technical experts and internal technical reviewers involved, together with their roles in the validation activity and, where conducted in accordance with paragraph 23 or 24 above, details of who conducted the on-site inspection;

    (c) A list of interviewees, documents reviewed, sampling approaches used by the DOE and, where conducted in accordance with paragraph 23 or 24 above, outline of the on-site inspection. If the DOE applied a sampling approach to the on-site inspection, the DOE shall include a description of how the sample size was determined and how the field check was carried out;

    (d) Results of the dialogue between the DOE and the activity participants, as well as any adjustments made to the project design following the local and global stakeholder consultations;

    (e) The applied approach, finding and conclusion in the assessment of compliance with each requirement for registration conducted in accordance with sections 6.16.2 above, including the CARs, CLs or FARs issued to the activity participants and how they have been addressed by them;

    (f) Information on quality control within the team and in the validation process;

    (g) A validation opinion, providing:

        (i) A summary of the validation method and the process used and the validation criteria applied;

        (ii) A summary of the validation conclusions;

        (iii) A statement on the validation of the estimated GHG emission reductions or net GHG removals;

        (iv) A statement on whether the proposed A6.4 project meets all applicable Article 6.4 mechanism rules and requirements, including reasons.

60. The DOE shall notify the activity participants the validation outcome, containing:

    (a) A positive validation opinion and the date of submission of the validation report as part of the request for registration of the proposed A6.4 project to the secretariat; or

    (b) A negative validation opinion, including the reasons for the proposed A6.4 project, as documented, having been determined as not complying with the relevant requirements for registration.

7. Validation of post-registration changes

7.1. General requirements

7.1.1. Overarching requirement

61. The DOE shall determine whether the proposed or actual post-registration change to the registered A6.4 project complies with the relevant requirements in the "Article 6.4 mechanism activity standard for projects" on post-registration changes.

7.1.2. Other requirement

62. If the revised PDD is prepared using a later valid version of the PDD form than the version used for the registered PDD, the DOE shall determine whether the information that is not affected by the post-registration change has been transferred to the later valid version of the form and is materially the same as that in the registered PDD.

7.2. Validation of compliance with specific requirements for post-registration changes

7.2.1. General

63. The DOE shall determine, by following the general validation requirements referred to in sections 5 and 6.1 above mutatis mutandis and section 7.1 above, whether the proposed or actual post-registration change to a registered A6.4 project falls within one of the following types of changes that may be allowed and complies with the respective requirements for post-registration changes contained in the "Article 6.4 mechanism activity standard for projects":

    (a) Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents;

    (b) Permanent changes:

        (i) Corrections;

        (ii) Inclusion of monitoring plan;

        (iii) Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents;

        (iv) Changes to the project design.

64. When validating the compliance of the proposed or actual post-registration change with the relevant requirements for post-registration change, the DOE shall additionally follow the specific guidance on validation for some types of post-registration changes provided in sections 7.2.2–7.2.3 below.

7.2.2. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

65. The DOE shall determine whether there is a temporary deviation from the monitoring plan in the registered PDD (hereinafter referred to as the registered monitoring plan), the

applied methodologies, the applied standardized baselines, or the other applied methodological regulatory documents and, if there is, the DOE shall determine whether the temporary deviation complies with the relevant requirements in the "Article 6.4 mechanism activity standard for projects".

66. If the deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines is applicable to the monitoring period under verification and part of the previous or subsequent monitoring period, the DOE shall determine the exact period to which the deviation applies.

7.2.3. Permanent changes

7.2.3.1. Corrections

67. If the activity participants have made corrections to project information or parameters fixed at registration of the A6.4 project as described in the registered PDD, the DOE shall determine whether:

    (a) The corrected information is an accurate reflection of actual project information; and/or

    (b) The corrected parameters are in accordance with the applied methodologies, the registered monitoring plan, the applied standardized baselines and the other applied methodological regulatory documents.

7.2.3.2. Inclusion of monitoring plan

68. If the activity participants chose to omit a monitoring plan at registration of the A6.4 project and wish to include it thereafter, the DOE shall determine whether the design of the monitoring plan complies with the relevant requirements in the "Article 6.4 mechanism activity standard for projects" in accordanc with the relevant requirements related to validation of a monitoring plan contained in section 6.2.5.5 above.

7.2.3.3. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

69. The DOE shall determine whether the permanent change to the registered monitoring plan described in the revised PDD are in compliance with the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents.

70. The DOE shall determine whether the permanent change to the registered monitoring plan or the permanent deviation of the monitoring from the applied methodologies, the applied standardized baselines, or the other applied methodological regulatory documents is likely to lead to a reduction in the accuracy of the calculation of GHG emission reductions or net GHG removals, and if so, the DOE shall request the activity participants to apply conservative assumptions or discount factors to the calculations to the extent required to ensure that GHG emission reductions or net GHG removals will not be over-estimated as a result of the permanent change or the permanent deviation.

7.2.3.4. Changes to the project design

71. In case of an actual change, the DOE shall, in its judgement, by means of an on-site inspection or remote inspection and review of the revised PDD submitted by the activity participants that describes the nature and extent of the actual change, determine whether this description accurately reflects the implementation, operation and monitoring of the modified A6.4 project.

72. The DOE shall, by means of an on-site inspection or remote inspection, assess the impacts of the actual change on the monitoring plan, the level of accuracy of the monitoring activity, the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents.

73. The DOE shall, by means of reviewing the revised PDD against applicable methodological requirements, determine whether the proposed or actual change would adversely affect the conclusions of the validation report of the registered PDD with regard to:

    (a) The applicability and application of the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents with which the A6.4 project has been registered;

    (b) The project boundary and any implications on the inclusion or exclusion of emission sources or removal sinks and leakage emissions;

    (c) The compliance of the monitoring plan with the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents;

    (d) The level of accuracy and completeness of the monitoring compared with the requirements contained in the registered monitoring plan, including the frequency of measurements, the quality of monitoring equipment (e.g. calibration requirements, the quality assurance and quality control procedures);

    (e) The additionality of the project,

74. If the proposed or actual change affects the additionality of the registered A6.4 project, the DOE shall confirm that [*Placeholder to reflect additionality requirements under the Article 6.4 mechanism*].

75. [Notwithstanding of paragraph 74 above, if the registered A6.4 project applies an approved standardized baseline that standardizes additionality and if the proposed or actual changes affect the additionality of the project, the DOE shall determine whether the project with the changes meets the additionality criteria (e.g. positive list of technologies) in the applied standardized baseline.]

76. The DOE shall determine whether the revised PDD complies with all the requirements of the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents.

77. If the applied methodologies and/or standardized baselines have been updated to a later valid version of them, or changed to other methodologies or standardized baselines, the DOE shall confirm that the revised PDD meets all requirements of the updated/changed methodologies, including the standards, methodological tools and guidelines applied in accordance with the updated/changed methodologies, and/or the updated/changed standardized baselines.

78. The DOE shall confirm the date when the change occurred, the reasons for the change, whether the change would have been known prior to the registration of the A6.4 project, and determine how the change would impact on the overall operation/ability of the A6.4 project to deliver GHG emission reductions or net GHG removals as stated in the registered PDD, and whether the revised estimation of GHG emission reductions or net GHG removals due to the change takes into account the applicable limits in accordance with the "Article 6.4 mechanism standard for projects".

79. In validating the revised PDD containing the proposed or actual change, and in preparing the validation report, the DOE shall include information on how the findings of previous verification and certification reports, if any, have been taken into account.

7.3. Validation report

80. In its validation report for the post-registration changes, the DOE shall:

    (a) Report on all items listed in paragraph 59 above except for paragraph 59(e) above;

    (b) Provide all its applied approaches, findings and conclusion on the assessment of:

        (i) Whether the revised PDD is prepared using the valid version of the applicable form and following the instructions therein, as applicable;

        (ii) Whether the information transferred to the later valid version of the PDD is materially the same as that in the registered PDD, as applicable;

        (iii) Whether the revised PDD is prepared in both track-change and clean versions;

        (iv) The compliance of the proposed or actual post-registration change with the requirement for post-registration change conducted in accordance with sections 7.1–7.2 above, including the CARs, CLs or FARs issued to the activity participants and how they have been addressed by them.

81. The DOE shall notify the activity participants the validation outcome, containing:

    (a) A positive validation opinion and the date of submission of the validation report as part of the request for approval of post-registration change to the secretariat; or

    (b) A negative validation opinion, including the reasons for the post-registration change as documented having been determined as not complying with the relevant requirements for post-registration changes.

8. Verification of implementation and monitoring

8.1. General requirements

8.1.1. Overarching requirements

82. The DOE shall:

    (a) Determine whether the registered A6.4 project has been implemented and is operating in accordance with the registered PDD;

(b) Determine whether GHG emission reductions or net GHG removals have been monitored in accordance with the registered monitoring plan.

8.1.2. Other requirements

83. The DOE shall assess both quantitative and qualitative information on GHG emission reductions or net GHG removals provided in the monitoring report.[10]

84. In addition to the monitoring documentation, the DOE shall review:

(a) The registered PDD, including the registered monitoring plan and/or the changes from the registered PDD, and the corresponding validation opinion;

(b) The validation report;

(c) Previous verification and certification reports, if any;

(d) The applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents;

(e) The monitoring results of sustainable development co-benefits of the registered A6.4 project;

(f) Any other information and references relevant to the GHG emission reductions or net GHG removals by the registered A6.4 project (e.g. IPCC reports, data on electricity generation in the national grid or laboratory analysis and national regulations).

85. In addition to reviewing the monitoring documentation, the DOE shall determine whether the activity participants have addressed the FARs identified during validation or previous verification(s).

8.1.3. Quality of evidence

86. When verifying the reported GHG emission reductions or net GHG removals, the DOE shall confirm that there is an audit trail that contains the evidence and records that validate or invalidate the stated figures. The audit trail shall include the source documents that form the basis for assumptions and other information underlying the GHG data.

87. When assessing the audit trail, the DOE shall:

(a) Address whether there is sufficient evidence available, both in terms of frequency (time period between evidence) and coverage (in covering the full monitoring period);

(b) Address the source and nature of the evidence (external or internal, oral or documented);

(c) Cross-check the monitoring report against other sources such as comparable information, where available, from sources other than those used in the monitoring report to determine whether the stated figures are correct.

[10] Quantitative information comprises the reported numbers in the monitoring report. Qualitative information comprises information on internal management controls, calculation procedures, procedures for transfer of data, frequency of the monitoring reports, and review and internal audit of calculations.

88. The DOE shall only certify GHG emission reductions or net GHG removals that are based on verifiable evidence.

8.1.4. Application of materiality

8.1.4.1. General

89. The concept of materiality is applicable to the verification of monitored GHG emission reducstions or net GHG removals achieved by all types of registered A6.4 projects. It is not applicable to:

    (a) Uncertainties related to measurement;

    (b) Addressing temporary deviations and permanent changes to the registered monitoring plan, the applied methodologies or the applied standardized baselines, regardless of whether corresponding GHG emission reductions or net GHG removals are above or below materiality thresholds.

90. A DOE that plans and conducts verification using the concept of materiality shall achieve a reasonable level of assurance that the reported GHG emission reductions or net GHG removals are free from material errors, omissions or misstatements in accordance with paragraphs 91− 101 below.

91. An omission, misstatement, or erroneous reporting of information is material if it might lead, at an aggregated level, to an overestimation of the total GHG emission reductions or net GHG removals achieved by a registered A6.4 project equal to or higher than the following thresholds:

    (a) 0.5 per cent of the emission reductions or removals for projects achieving a total emission reduction or removal equal to or more than 500,000 t CO_2 eq per year;[11]

    (b) 1 per cent of the emission reductions or removals for projects achieving a total emission reduction or removal of between 300,000 and 500,000 t CO_2 eq per year;

    (c) 2 per cent of the emission reductions or removals for projects achieving a total emission reduction or removal of 300,000 t CO_2 eq per year or less.

92. Recognizing that circumstances may exist that could cause the information reported by activity participants to be materially misstated, the DOE should plan and perform verifications with an attitude of professional scepticism and rely on its professional judgement when applying the concept of materiality.

93. The application of the concept of materiality and reasonable level of assurance implies that some data or information may not be checked. However, the DOE should design its verification and sampling plans to detect all material errors, omissions or misstatements, and any unchecked data or information should not contain any material errors, omissions or misstatements. A DOE's verification opinion applies to 100 per cent of the data and information, even if the DOE may not have checked the entire data set and information.

94. Applying the concept of materiality does not mean that identified errors are not corrected; if an error, omission or misstatement is identified by the DOE, regardless of whether it is material or not, the DOE shall request activity participants to address it.

[11] A year refers to a period of 12 consecutive months.

8.1.4.2. Consideration of materiality in planning verification

95. The DOE should:

    (a) Identify the materiality threshold referred to in paragraph 91 above that corresponds to the amount of GHG emission reductions or net GHG removals that the specific registered A6.4 project will achieve;

    (b) Understand the environment in which the registered A6.4 project operates, the sources of project emissions within the project boundary and the leakage, the monitoring activities, the equipment used to monitor or measure project data, the origin and application of data used to calculate or measure the emissions, the data flow, the internal quality control system, and the overall organization with respect to monitoring and reporting;[12]

    (c) Conduct a risk assessment to identify and assess the risks of individual or aggregated material errors, omissions or misstatements that may occur within the threshold based on elements in subparagraphs (a) and (b) above;

    (d) Design verification plans, audit procedures[13] and sampling plans whose type, timing[14] and extent are based on and are responsive to the assessed risks of material errors, omissions or misstatements.

96. The materiality thresholds apply to the total GHG emission reductions or net GHG removals actually achieved. When planning verification, the DOE should apply the applicable materiality threshold to the reported total emission reductions or removals. If, as a result of the verification, the initial reported total emission reductions or removals is revised, the DOE should reapply the materiality threshold to the revised total emission reductions or removals and, if needed, make adjustments to its verification plans and sampling plans.

8.1.4.3. Consideration of materiality in conducting verification

97. The DOE should:

    (a) Apply verification plans, audit procedures and sampling plans;

    (b) Assess potential errors, omissions and misstatements against the materiality threshold to determine whether they are material individually or in aggregate and whether further audit procedures are needed.

98. If an error, omission or misstatement is detected, the DOE should be aware that it may not be an isolated occurrence and may be a systemic reoccurring error. For example, other errors may exist if the DOE identifies that the error, omission or misstatement arose from a breakdown in the activity participants' internal quality control and quality assurance system.

[12] Adapted from European Union. 2007. *Commission Decision of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council.*

[13] In accordance with section 8.1.5.

[14] For example, timing may refer to the specific time intervals for which the DOE may draw its samples.

99. If an immaterial error, omission or misstatement is detected, the DOE shall request the activity participants to address it and should determine whether additional audit procedures should be conducted in order to reach a reasonable level of assurance that the claimed GHG emission reductions or net GHG removals are free from material error, omission or misstatement.

100. If a material error, omission or misstatement is detected, the DOE may, depending on the circumstances of the error, immediately request the activity participants to address it, or conduct additional audit procedures to confirm or determine the context and magnitude of the error, omission or misstatement and then shall request the activity participants to address it.

101. If further audit procedures are necessary, the DOE may consider whether the overall verification plans and sampling plans need to be revised.

8.1.5. Standard auditing techniques

102. The DOE shall assess the information provided by the activity participants.

103. In assessing the information, the DOE shall apply the means of verification specified throughout this standard and, where appropriate, standard auditing techniques, including but not limited to:

(a) Document review, involving:

(i) A review of data and information;

(ii) A review of the registered monitoring plan, the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;

(iii) An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of GHG emission reductions or net GHG removals;

(b) Follow-up actions (e.g. on-site inspection and teleohpne or e-mail interviews), including:

(i) An assessment of the implementation and operation of the registered A6.4 project as per the registered PDD or latest approved revised PDD;

(ii) A review of information flows for generating, aggregating and reporting the monitoring parameters;

(iii) Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the registered monitoring plan;

(iv) Cross checks between the information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;

(v) A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the

registered monitoring plan, the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents;

(vi) A review of calculations and assumptions made in determining the GHG data and GHG emission reductions or net GHG removals;

(vii) An identification of quality control and quality assurance procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters;

(c) Sampling approach in accordance with the "Standard for sampling and surveys for Article 6.4 mechanism activities", including:

(i) A random sampling for cases where the activity participants did not apply a sampling approach for monitoring;

(ii) An acceptance sampling or another sampling approach for cases where the activity participants applied a sampling approach for monitoring.

104. It is mandatory for the DOE to conduct an on-site inspection at verification for the registered A6.4 project if:

(a) It is the first verification for the DOE with regard to this project;

(b) More than three years have elapsed since the last on-site inspection conducted for verification for the project; or

(c) The project has achieved more than 300,000 t CO_2 eq of GHG emission reductions or net GHG removals since the last verification when an on-site inspection was conducted.

105. For cases that are not referred to in paragraph 104 above, it is optional for the DOE to conduct an on-site inspection at verification. If the DOE does not conduct an on-site inspection as a means of verification, it shall describe the alternative means used and justify that they are sufficient for the purpose of verification. If the DOE conducts a remote inspection as an alternative means to an on-site inspection, the DOE should follow the guidance contained in appendix 1.

106. If any issue related to the project design, including those attributable to the lack of on-site inspection at previous verification, is identified at the verification, the DOE that detected the issue shall rectify it through the post-registration change process in accordance with the "Article 6.4 mechanism activity cycle procedure for projects".

107. Where no specific means of verification is specified, the DOE should apply the standard auditing techniques described in paragraph 103 above.

8.1.6. Corrective action requests, clarification requests and forward action requests

108. If the DOE identifies issues that require further elaboration, research or expansion in order to determine whether the implementation or the operation of the registered A6.4 project, or the monitoring of GHG emission reductions or net GHG removals meets the relevant Article 6.4 mechanism rules and requirements, the DOE shall ensure that these issues are accurately identified, formulated, discussed and concluded in the verification and certification report.

109. The DOE shall raise a CAR if one of the following situations occurs:

    (a) Non-compliance with the registered monitoring plan, the applied methodologies, the applied standardized baselines or the other applied methodological regulatory documents is found in monitoring and reporting, and has not been sufficiently documented by the activity participants, or if the evidence provided to prove conformity is insufficient;

    (b) Modifications to the implementation or operation of the registered A6.4 project, or the monitoring or GHG emission reductions or net GHG removals, has not been sufficiently documented by the activity participants;

    (c) Mistakes have been made by the activity participants in applying assumptions, data or calculations of GHG emission reductions or net GHG removals that will impact the quantity of emission reductions or removals;

    (d) Issues identified in a FAR during the validation or the previous verification(s) have not been resolved by the activity participants.

110. The DOE shall raise a CL if the information provided by the activity participants is insufficient or not clear enough to determine whether the applicable Article 6.4 mechanism rules and requirements have been met.

111. The DOE shall raise a FAR if issues related to monitoring and reporting that require attention and/or adjustment at the next verification are identified.

112. The DOE shall resolve or "close out" CARs and CLs only if the activity participants rectify the monitoring report, or provide additional explanations or evidence that satisfy the DOE's concerns. If this is not done, the DOE shall not submit a request for issuance of A6.4ERs.

113. The DOE shall report on all CARs, CLs and FARs in its verification and certification report. This reporting shall explain the issues raised, the responses provided by the activity participants, the means of verification of such responses and references to any resulting changes in the monitoring report or its supporting documents.

8.2. Verification of compliance with specific requirements for issuance

8.2.1. General

114. The DOE shall determine, by following the general verification requirements referred to in sections 5 and 8.1 above, whether the monitoring complies with all relevant requirements for monitoring as contained in the "Article 6.4 mechanism activity standard for projects", including the requirements on:

    (a) General requirements, including on:

        (i) Implementation and operation of the project as per the description in the registered PDD;

        (ii) Continuous monitoring;

        (iii) Coverage of the monitoring period;

        (iv) Presentation of monitoring results by year of occurrence of GHG emission reductions or net GHG removals;

(v) Preparation of monitoring reports in chronological order and separation by crediting periods;

(vi) Application of appropriate GWPs;

(vii) Maintenance of monitoring results;

(b) Avoidance of double issuance;

(c) Description of implemented registered project;

(d) Description of monitoring system;

(e) Provision of data and parameters used;

(f) Calculation of GHG emission reductions or net GHG removals.

115. When verifying the compliance of the implementation and the operation of the registered A6.4 project and monitoring of GHG emission reductions or net GHG removals with the requirements for implementation, operation and monitoring referred to in paragraph 114 above, the DOE shall additionally follow the specific guidance on validation regarding some of these requirements provided in sections 8.2.2–8.2.9 below.

8.2.2. Project implementation and operation

116. The DOE shall identify any concerns related to the conformity of the implemented A6.4 project and its operation with the registered PDD and determine whether:

(a) The project has been implemented and is operating in accordance with the description contained in the registered PDD; or

(b) Any deviation or the proposed or actual changes in the implementation or operation of the project comply with the relevant requirements in the “Article 6.4 mechanism activity standard for projects”.

117. By means of an on-site inspection or other means of verification in accordance with – 104 or 105 above, the DOE shall assess that all physical features (technology, project equipment, and monitoring and metering equipment) of the registered A6.4 project specified in the registered PDD are in place and that the activity participants are operating the project as per the registered PDD or latest approved revised PDD.

118. For each monitoring period, the DOE shall report:

(a) The implementation status of the registered A6.4 project. For a project that consists of more than one site, the DOE shall describe the status of implementation and the starting date of operation for each site. For a project with phased implementation, the DOE shall state the progress of the project achieved in each phase under verification. If the phased implementation is delayed, the DOE shall describe the reasons and present the expected implementation dates;

(b) The actual operation of the registered A6.4 project;

(c) The information (data and variables) provided in the monitoring report that is different from that stated in the registered PDD or any latest approved revised PDD, and has caused an increase in the estimates of GHG emission reductions or

net GHG removals in the current monitoring period or is highly likely to increase the estimates in the future monitoring periods;[15]

(d) An opinion on the cause of any increase in the actual GHG emission reductions or net GHG removals achieved by the registered A6.4 project in the current monitoring period that was reported in monitoring report.

8.2.3. Monitoring plan

119. The DOE shall determine whether the registered monitoring plan is in accordance with the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents based on the actual implementation of the project.

120. For monitoring aspects that are not specified in the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents, the DOE should highlight issues which may enhance the level of accuracy and completeness of the registered monitoring plan.

8.2.4. Monitoring activities

121. The DOE shall determine whether:

(a) The registered monitoring plan has been properly implemented and followed by the activity participants;

(b) All parameters stated in the registered monitoring plan have been monitored and updated as applicable;

(c) The equipment used for monitoring is controlled and calibrated in accordance with the registered monitoring plan, the applied methodologies, the applied standardized baselines, the other applied methodological regulatory documents, local/national standards, or as per the manufacturer's specification;

(d) Monitoring results are consistently recorded as per the approved frequency;

(e) Quality assurance and quality control procedures have been applied in accordance with the registered monitoring plan.

122. If the activity participants applied a sampling approach to determining data and parameters monitored, the DOE shall assess the compliance of the sampling efforts and surveys with the validated sampling plan in accordance with the "Standard: Sampling and surveys for CDM project activities and programme of activities".

123. The DOE shall list each parameter required by the registered monitoring plan and state how it verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the values in the monitoring report.

[15] Discrepancies may include higher water availability than expected in the PDD, which may increase the electricity output from a hydropower plant, or a higher plant load factor owing to higher bagasse availability during the crushing season, which increases the production of steam and electricity.

8.2.5. Calibration frequency for measuring instruments

124. The DOE shall determine whether the calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net GHG removals is conducted by the activity participants at the frequency specified in the applied methodologies, the applied standardized baselines, the other applied methodological regulatory documents or the registered monitoring plan.

125. If, during the verification for a certain monitoring period, the DOE identifies that the calibration has been delayed and the calibration has been implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available), referring to the illustrative examples in appendix 2, the DOE may conclude its verification, provided the following conservative approach is adopted in the calculation of GHG emission reductions or net GHG removals:

    (a) Applying the maximum permissible error[16] of the instrument to the measured values taken during the period between the scheduled date of calibration and the actual date of calibration, if the results of the delayed calibration do not show any errors in the measuring equipment, or if the error is smaller than the maximum permissible error; or

    (b) Applying the error identified in the delayed calibration test, if the error is beyond the maximum permissible error of the measuring equipment.

126. The DOE shall confirm that the error has been applied:

    (a) In a conservative manner, such that the adjusted measured values of the delayed calibration shall result in fewer claimed GHG emission reductions or net GHG removals;

    (b) For all measured values taken during the period between the scheduled date of calibration and the actual date of calibration.

127. If the results of the delayed calibration are not available, or the calibration has not been conducted at the time of the verification, the DOE, prior to finalizing the verification, shall request the activity participants to conduct the required calibration and shall determine whether the activity participants have calculated GHG emission reductions or net GHG removals conservatively using the approach mentioned in paragraph 125 above.

128. If the DOE determines that it is not possible for the activity participants to conduct the calibration at the frequency specified in the applied methodologies, the applied standardized baselines, the other applied methodological regulatory documents, or the registered monitoring plan due to reasons beyond the control of the activity participants,[17] the DOE shall follow the applicable requirements related to post-registration changes in section 7 above.

129. If neither the applied methodologies, the applied standardized baselines, the other applied methodological regulatory documents, nor the registered monitoring plan specify any requirements for calibration frequency for the measuring equipment, the DOE shall determine whether the equipment is calibrated either in accordance with the specifications

[16] The maximum permissible errors of all the measuring instruments are specified by the respective manufacturers as part of their technical specifications.

[17] For example, due to the contractual terms between the activity participant and purchasing/selling entities.

of the local/national standards, or as per the manufacturer's specification. If neither local/national standards nor the manufacturer's specification are available, the DOE shall determine whether the equipment is calibrated in accordance with the specifications of the international standards.

8.2.6. Data and calculation of emission reductions or net removals

130. The DOE shall assess the data and calculations of GHG emission reductions or net GHG removals achieved by the registered A6.4 project and determine whether:

(a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall assess whether:

(i) The most conservative values approach is applied to the parameters for the entire non-monitoring period in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the "Article 6.4 mechanism activity standard for projects"; or

(ii) Alternative monitoring arrangements for the non-monitoring period are described, whether they apply conservative assumptions or discount factors to the calculations, and whether the alterative monitoring arrangements have been approved by the Supervisory Body under the prior-approval track or to be approved by the Supervisory Body under the issuance track in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the "Article 6.4 mechanism activity standard for projects" and the "Article 6.4 mechanism activity cycle procedure for projects;

(b) The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;

(c) The calculations of baseline GHG emissions or baseline net GHG removals, project GHG emissions or actual net GHG removals, and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents;

(d) Any assumptions used in emission or removal calculations have been justified;

(e) Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied;

(f) [If the project applies an approved standardized baseline that standardizes baseline emissions, the standardized values of the parameters have been applied using the correct version of the applied standardized baseline in accordance with the "Article 6.4 mechanism activity standard for projects".]

131. The DOE shall provide:

(a) An indication of whether a complete set of data for the monitoring period was not available because activity levels or non-activity parameters were not monitored in accordance with the registered monitoring plan, and if so, whether the most conservative values approach was applied or alternative monitoring arrangements were proposed or have been approved by the Supervisory Body;

(b) A description of how the DOE cross-checked reported data;

(c) A confirmation that appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals, project GHG emissions or actual net GHG removals and leakage GHG emissions have been followed;

(d) An opinion on whether assumptions, emission factors and default values that were applied in the calculations have been justified.

8.2.7. Sustainable development co-benefits

132. The DOE shall determine whether:

(a) The monitoring of sustainable development co-benefits has been carried out in accordance with the monitoring plan of sustainable development co-benefits of the A6.4 project prepared in accordance with the "Article 6.4 mechanism sustainable development tool";

(b) The reported monitoring results correspond to the sustainable development co-benefits of the project as observed by the DOE.

8.2.8. Continuous stakeholder engagement

133. The DOE shall determine whether relevant comments on the A6.4 project have been submitted from Parties, stakeholders or UNFCCC-admitted observer organizations after its registration through the process of continuous engagement of stakeholders in accordance with the "Article 6.4 mechanism activity cycle procedure for projects", and if so, determine whether the activity participants have taken into account the comments in their actions in the Article 6.4 mechanism activity cycle, as appropriate.

8.2.9. [*Placeholder for specific verification requirements for carbon dioxide capture and storage projects*]

8.3. Verification and certification report

134. The DOE shall report the results of its assessment in the verification and certification report, including the following:

(a) An executive summary of the verification process and its conclusions;

(b) Details of the verification team, technical experts, internal reviewers involved, together with their roles in the verification activity and, where conducted in accordance with paragraph 104 or 105 above, details of who conducted the on-site inspection;

(c) A list of interviewees, documents reviewed, sampling approaches used by the DOE and, where conducted in accordance with paragraph 104 or 105 above, outline of

the on-site inspection. If the DOE applied a sampling approach to the on-site inspection, the DOE shall include a description of how the sample size was determined and how the field check was carried out;

(d) Results of the dialogue between the DOE and the activity participants, as well as any adjustments made to the monitoring report following the continuous engagement of stakeholders;

(e) The applied approach, finding and conclusion in the assessment of compliance with each requirement for issuance conducted in accordance with sections 8.1–8.2 above, including the CARs, CLs or FARs issued to the activity participants and how they have been addressed by them;

(f) A list of each parameter specified by the registered monitoring plan and a statement on how the values in the monitoring report have been verified;

(g) A statement on whether any post-registration changes to the registered PDD have been approved by the Supervisory Body or will be submitted together with the request for issuance of A6.4ERs;

(h) An assessment of remaining issues from the previous verification period, if appropriate;

(i) Information on quality control within the team and in the verification process;

(j) A verification opinion, providing:

(i) A summary of the verification method and the process used and the verification criteria applied;

(ii) A conclusion on the verified amount of GHG emission reductions or net GHG removals achieved.

135. Where the DOE applied the concept of materiality in planning and conducting verification for the registered A6.4 project in accordance with section 8.1.4 above, it shall report:

(a) The risks, the risk assessment undertaken and how the verification plans and sampling plans were designed to respond to these risks and ensure that all material errors, omissions or misstatements were detected;

(b) Whether and how the verification plans and sampling plans were revised to take into account the need for further audit procedures due to the nature/type of errors, omissions or misstatements detected;

(c) How the concept of materiality was applied in determining whether a detected error, omission or misstatement was material or immaterial either individually or in aggregate.

136. The DOE shall describe all documentation supporting the verification and make it available on request.

137. The DOE shall, based on its verification, certify in writing, that the registered A6.4 project achieved the verified amount of GHG emission reductions or net anthropogenic GHG

removals during the specified monitoring period that would not have occurred in the absence of the project.[18]

138. The DOE shall notify the activity participants of the verification outcome, containing:

(a) A positive verification opinion with verified amount of GHG emission reductions or net GHG removals, and the date of submission of the verification and certification report as part of the request for issuance of A6.4ERs to the secretariat; or

(b) A negative verification opinion, including the reasons for the monitoring results, as documented, having been determined as not complying with the relevant requirements for issuance.

9. Validation for renewal of crediting period

9.1. General requirements

9.1.1. Overarching requirement

139. The DOE shall determine whether the activity participants have updated the PDD in accordance with the relevant requirements for renewal of the crediting period in the "Article 6.4 mechanism activity standard for projects".

9.1.2. Other requirement

140. If the activity participants used a later valid version of the PDD form for the updated PDD than the version of the form of the registered PDD, the DOE shall determine whether the information transferred to the later valid version of the PDD form is materially the same as that in the registered PDD.

9.2. Validation of compliance with specific requirements for renewal

9.2.1. General

141. The DOE shall determine, by following the general validation requirements referred to in sections 5 and 6.1 above mutatis mutandis and section 9.1 above, whether the proposed renewal of the crediting period of a registered A6.4 project complies with all relevant requirements for renewal contained in the "Article 6.4 mechanism activity standard for projects", including the requirements on:

(a) Application of valid version of the methodologies and methodological tools;

(b) [Application of an approved standardized baseline;]

(c) Validity of the original baseline or its update;

(d) Update of MoC statement;

(e) Combination of post-registration change at renewal, if applicable.

[18] The certification report constitutes a request to the Supervisory Body for issuance of A6.4ERs equal to the verified amount of GHG emission reductions or net GHG removals.

9.2.2. Application of valid version of the methodologies and methodological tools

142. If the activity participants selected another methodology, methodological tool and/or standardized baseline for the purpose of renewal of the crediting period of the registered A6.4 project due to the inapplicability of the valid version of the methodology (including a consolidated methodology thereof), methodological tool and/or standardized baseline applied to the registered PDD, the DOE shall assess whether the updated PDD complies with all the requirements of the selected methodology, methodological tool and/or standardized baseline.

143. If the activity participants deviated from the valid version of the methodology (including a consolidated methodology thereof) and/or methodological tool applied in the registered PDD, or from any other selected methodology and/or methodological tool for the purpose of renewal of the crediting period of the registered A6.4 project, paragraphs 38–39 above shall apply mutatis mutandis.

9.2.3. Validity of original baseline or its update

144. The DOE shall assess the validity of the original baseline or its update through an assessment of the following issues:

    (a) [The impact of the latest nationally determined contribution of the host Party, new relevant national and/or sectoral policies, regulations and circumstances on the baseline, taking into account the "Article 6.4 mechanism activity standard for projects" and any other relevant guidance from the Supervisory Body with regard to renewal of the crediting period of a registered A6.4 project, at the time of requesting renewal of the crediting period of the project;]

    (b) The correctness of the application of the approved methodologies and, where applicable, the approved standardized baselines and the other methodological regulatory documents for the determination of the continued validity of the baseline or its update, and the estimation of GHG emission reductions or net GHG removals for the applicable crediting period of the registered A6.4 project.

145. [The requirement contained in paragraph 144(a) above shall not apply to a registered A6.4 project applying the valid version of an applicable approved standardized baseline that standardizes the baseline scenario.]

9.2.4. Update of modalities of communication statement

146. The DOE shall confirm that the names of the activity participants included in the updated PDD are consistent with the names of the activity participants in the latest version of the MoC statement.

9.2.5. [*Placeholder for specific validation requirements for carbon dioxide capture and storage projects*]

9.2.6. Combination of post-registration change at renewal

147. If the activity participants requested approval of post-registration changes together with the request for renewal of the crediting period of the registered A6.4 project, the DOE shall also validate the post-registration changes in accordance with the relevant requirements in section 7 above and the "Article 6.4 mechanism activity cycle procedure for projects", and shall submit a request for approval of post-registration changes together with the

request for renewal of the crediting period of the project in accordance with the relevant requirements in the “Article 6.4 mechanism activity cycle procedure for projects”.

9.3. Validation report

148. In its validation report for renewal of the crediting period, the DOE shall:

(a) Report on all items listed in paragraph 59 above except for paragraph 59(e) above;

(b) Provide all its applied approaches, findings and conclusions on the assessment of:

(i) Whether the revised PDD is prepared using the valid version of the applicable form and following the instructions therein, as applicable;

(ii) The compliance of the updated project design with the requirements for renewal of the crediting period conducted in accordance with sections 9.1–9.2 above, including the CARs, CLs or FARs issued to the activity participants and how they have been addressed by them;

(c) State whether there are any proposed post-registration changes effective from the start date of the next crediting period in the request for renewal of the crediting period of the project, if the validation is primarity for the latter.

Appendix 1. Guidance on remote inspection as an alternative means to an on-site inspection

1. In this document, a remote inspection for the purpose of validation or verification refers to the activities where the validation or verification team of the designated operational entity (DOE) carries out the same activities as in a physical on-site inspection through information and communication technologies (ICT) tools.

2. There are risks posed by remote inspections, including in the use of ICT tools. In order to ensure a level of assurance of the validation or verification as comparable as in an on-site inspection, there needs to be measures in place to reduce these risks.

3. The DOE should identify risks pertaining to the remote inspection for each validation or verification activity and establish and implement measures to eliminate or reduce those risks. A DOE should also integrate this risk assessment process into its quality management systems.

4. The DOE should implement the following actions at different stages of a validation or verification activity:

    (a) Risk assessment stage: The feasibility of conducting a remote inspection depends on the risk level and whether measures to eliminate or reduce the risks are adequate for the validation or verification. Therefore, a risk assessment to be conducted by the DOE should cover the aspects below:

        (i) Identifying and assessing the risks inherent in a remote inspection. The risks may be at different levels and could cover different aspects; hence the risk identification and assessment should cover:

            a. Risks related to organizational and procedural aspects, which include generic risks. These risks could relate to the following: the quality of the internet connection; the quality of ICT tools such as good camerawork to ensure a reasonably good view for the validation or verification team; the amount of documentation to be reviewed remotely; whether relevant data flows can be accessed remotely; what record-keeping system is established; the maintaining of confidentiality and personnel data protection; and the required competence and resources of the validation or verification team;

            b. Risks related to the project and its configuration, which present project-specific risks: The risks could relate to the following: whether the boundary and features of the project can be evaluated remotely; whether the remote inspection would enable the DOE to observe any sources of emissions that are not included in the project; how control activities are carried out; and how calculations are tracked and cross-checked;

            c. Risks related to monitoring aspects: The risks could relate to the following: the complexity of the monitoring parameters and the monitoring plan; data processing and reporting; whether a fiscal metering method is applied; the sampling or surveys conducted at

household level; what status of the monitoring period is being verified; and whether data and information have been thoroughly checked during previous verifications or whether such data and information can be checked subsequently without an on-site inspection;

(ii) Establishing measures to eliminate or reduce the identified risks. The DOE should establish measures to eliminate or reduce each identified risk at different levels described in subparagraph (i) above;

(iii) The risk assessment pertaining to the remote inspection may be done in the context of the application of materiality following the relevant provisions in this standard;

(b) Planning stage: Based on risk assessment outcomes, the DOE should plan the validation or verification activity as follows:

(i) Composing a validation or verification team with sufficient members that have the knowledge, skill and solid professional judgement required in an on-site inspection in conjunction with additional competence in applying ICT tools;

(ii) Conducting a desk review to gain a prior understanding of records and documentation control processes of the project participants;

(iii) Establishing a validation or verification plan to clearly define the tasks to be done during the remote inspection, taking into account the established measures to eliminate or reduce the identified risks. This includes a detailed allocation of responsibilities by different validation or verification team members with the required knowledge and specific time zones to ensure the team members audit separately and make the best use of time;

(iv) Determining ICT tools to be used with the activity participants and conducting a test on the agreed ICT tools before the remote inspection to ensure that there is a stable connection and understanding of how to use such ICT tools. The DOE should also ensure that there is a backup plan in case there is a connection issue;

(c) Implementation stage: During the remote inspection, the DOE should implement measures it has established to mitigate the identified risks, while conducting the validation or verification following the relevant requirements of this standard. At this stage, the DOE may decide to extend or terminate the remote inspection if it finds during the remote inspection that the actual risks are higher than initially assessed.

(d) Post-remote inspection stage: the DOE should:

(i) Assess whether another round of remote inspection is needed while reviewing the activity participants' response to clarification requests, corrective action requests and/or forward action requests;

(ii) Ensure that its technical review process is able to identify any risks that were not identified during risk assessment stage.

Appendix 2. Calibration

1. The following provides an illustrative example for applying the provisions in paragraph 125(a) and (b) of this standard.

2. An electricity energy meter with a maximum permissible error (±5%), which may be used for measuring the electricity export for baseline emissions and electricity import for project emission calculations, is required to be calibrated every year. If the calibration is delayed and instead of after one year it is conducted after one and a half years, and the result of the delayed calibration is available at the time of verification, to account for the delayed calibration the measured values shall be corrected as demonstrated in the following Table 1 and Table 2 for situations stipulated in paragraph 125(a) and (b) of this standard.

Table 1. Sample calculation for the cases where the error identified in the delayed calibration is smaller than the maximum permissible error

Measured value	Parameter	Error identified during delayed calibration	Corrected values
100 MWh	Electricity export	±2%	100 (1-max. permissible error%/100) = 95 MWh
100 MWh	Electricity import	±2%	100 (1+max. permissible error%/100) = 105 MWh

Table 2. Sample calculation for the cases where the error identified in the delayed calibration is larger than the maximum permissible error

Measured value	Parameter	Error identified during delayed calibration	Corrected values
100 MWh	Electricity export	±7%	100 (1-error%/100) = 93 MWh
100 MWh	Electricity import	±7%	100 (1+error%/100) =107 MWh

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