ARTICLE 6.4 MECHANISM

A6.4-STAN-AC-003

Standard

Article 6.4 validation and verification standard for projects

Version 02.0

United Nations
Framework Convention on
Climate Change

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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, to among others, 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 several elements of the RMPs relating to the operation of the activity cycle of the Article 6.4 mechanism.[3]

3. The Supervisory Body, at its eighth meeting, adopted the "Article 6.4 validation and verification standard for projects" (hereinafter referred to as this standard) that sets out the requirements relating to validation and verification for Article 6.4 projects (A6.4 projects).

4. The Supervisory Body, at its fourteenth meeting, adopted the "Standard: Application of the requirements of Chapter V.B (Methodologies) for the development and assessment of Article 6.4 mechanism methodologies"[4] (hereinafter referred to as the methodologies standard), the "Standard: Requirements for activities involving removals under the Article 6.4 mechanism"[5] (hereinafter referred to as the removals standard) and the "Tool: Article 6.4 sustainable development tool" (hereinafter referred to as the A6.4 SD Tool). The two standards set out the requirements for the development and assessment of Article 6.4 mechanism methodologies and the requirements for activities involving removals and emission reduction activities with reversal risks under the Article 6.4 mechanism, whereas the A6.4 SD Tool provides means for activity participants to demonstrate that they have met the mandatory requirements for identifying and addressing social and environmental risks, as well as for assessing and enhancing the contributions of A6.4 activities to sustainable development in line with sustainable development objectives and priorities of the host Party and the sustainable development goals (SDGs).

5. The Supervisory Body, at its fifteenth meeting, adopted the "Standard: Demonstration of additionality for mechanism methodologies" (hereinafter referred to as the additionality standard) that sets out the requirements for mechanism methodologies with regard to demonstrating additionality.

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[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

[4] Available at: https://unfccc.int/sites/default/files/resource/A6.4-STAN-METH-001.pdf .

[5] Available at https://unfccc.int/sites/default/files/resource/A6.4-STAN-METH-002.pdf .

1.2. Objectives

6. The objective of this 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

7. This standard provides designated operational entities (DOEs) with minimum requirements for validation of a proposed or registered A6.4 project and 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

8. This document enters into force on 16 May 2025.

3. Terms and definitions

9. 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;

   (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

10. The following principles[6] guide the preparation, execution, and reporting of validation and verification activities.

4.2. Impartiality

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

[6] 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.

4.3. Evidence-based approach

12. 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

13. 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

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

4.6. Conservativeness

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

5. General validation and verification requirements

5.1. Validation and verification approach

16. The DOE shall select a competent team to perform the validation or verification for the A6.4 project in accordance with the “Article 6.4 accreditation standard”.

17. 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;[7]

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

    (c) Determine whether each proposed or registered A6.4 project complies with all applicable Article 6.4 mechanism rules and requirements, including those specified in the “Article 6.4 activity standard for projects” (hereinafter referred to as the activity standard), 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 “other applied methodological regulatory documents’’);

[7] For more information on the quality management system, see “Standard: Article 6.4 accreditation”, A6.4-STAN-ACCR-001, Section 13.

(d) Assess the accuracy, conservativeness, relevance, completeness, consistency and transparency of the information provided by the activity participants;[8]

(e) Determine whether information provided by the activity participants is reliable and credible;[9]

(f) Apply consistent validation or verification criteria to:

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

(ii) 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) Expert judgements, both 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;

(k) Conduct an independent and thorough assessment in accordance with the applicable Article 6.4 mechanism rules and requirements.

5.2. Use of and compliance with applicable standards

18. 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, A6.4 SD Tool, guidelines and other regulatory documents adopted by the CMA or the Supervisory Body.

5.3. Use of applicable forms

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

[8] These principles can also be found in the “Standard: Article 6.4 activity standard for projects”.

[9] 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.

20. 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[10] and following the instructions therein.

21. 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[11] and following the instructions therein.

5.4. Use of applicable global warming potentials

22. The DOE shall determine whether the global warming potentials (GWPs) were correctly applied in both the project design document (PDD) and the monitoring report, in accordance with relevant requirements of the activity standard.

6. Validation for registration of projects

6.1. General requirements

6.1.1. Overarching requirement

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

6.1.2. Standard auditing techniques

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

25. When 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:

        (i) Reviewing of data and information;

        (ii) Crosschecking the information provided in the PDD against independent sources of information not used to determine the reliability of information in the PDD. This may include where available, sectoral or local expertise of the DOE; and, if necessary, conducting independent background investigations;

    (b) Conducting 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;

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

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

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

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

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

(e) Applying sampling approach in accordance with the standard for sampling and surveys for Article 6.4 mechanism activities to be developed by the Supervisory Body.

26. 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 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 implementation of the project;

(c) The project is deemed to have high risk of uncertainty in terms of the achievement of GHG emission reductions or net GHG removals as estimated in the PDD, to be determined in accordance with the relevant guidance to be provided by the Supervisory Body.

27. For cases that are not referred to in paragraph 26 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.

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

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

29. 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.

30. 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 may 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.

31. 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.

32. 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.

33. The DOE shall resolve or "close out" CARs and CLs only if the activity participants take appropriate actions, such as rectifying the project design and/or the PDD, or providing 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.

34. 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, in accordance with paragraph 33 above.

6.2. Validation of compliance with specific requirements for registration

6.2.1. General

35. 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 activity standard, 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) Defining of the project boundary and identifying of sources, sinks and GHGs included in the project boundary, and identifying of leakage;

(ii) Identifying of baseline scenario;

(iii) Demonstrating of additionality;

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

(v) Estimating GHG emission reductions or net GHG removals;

(vi) Developing a monitoring plan;

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

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

(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 the modalities of communication statement.

36. When validating the compliance of the proposed A6.4 project with the requirements for registration referred to in paragraph 35 above, the DOE shall additionally follow the specific guidance on validation regarding some of these requirements provided in sections 6.2.2−6.2.12 below.

6.2.2. Treatment of double or revived registration

37. The DOE shall determine the compliance with the requirements relating to double or revived registration contained in the activity standard, based on publicly available information and/or information provided by the activity participants upon the DOE's request.

6.2.3. Selection of methodologies and standardized baselines

38. The DOE shall determine whether the selected methodologies, the selected standardized baselines and the other applied methodological regulatory documents are compatible with the methodological requirements that may be specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable.

39. If, based on local and sectoral knowledge, the DOE 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.

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

41. 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

42. 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 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[12] 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, in cases where the proposed A6.4 project applies standardized baselines.

43. 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. The DOE shall include a description of the impact of the deviation on GHG emission reductions or net GHG removals by the proposed A6.4 project.

44. 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".

[12] 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 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. Host Party methodological requirements

45. The DOE shall determine whether the selected methodologies, the selected standardized baselines and other applied methodological regulatory documents are applied in a way to comply with the methodological requirements that may be specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable.

6.2.5.2. Project boundary, sources, leakage and greenhouse gases

46. 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.

47. 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 these sources 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 methodologies and methodological tools" or the "Procedure: Development, revision, clarification and update of standardized baselines".

6.2.5.3. Baseline scenario

48. 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. The DOE shall assess whether a more ambitious baseline requirement, as determined by the host Party and approved by the Supervisory Body, has been applied in the identification of the most plausible baseline scenario, if applicable.

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

50. Notwithstanding of paragraphs 48 and 49 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.

6.2.5.4. Business-as-usual scenario or benchmark

51. The DOE shall assess whether the identification and the description in the PDD of the business-as-usual (hereinafter referred to as BAU) scenario or reference benchmark emissions comply with the requirements of the activity standard, applied methodologies and other applied methodological regulatory documents.

6.2.5.5. Demonstration of additionality

52. 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.

53. The DOE shall determine whether the additionality is demonstrated for the A6.4 project in its entirety and not separately demonstrated for different parts of the A6.4 project,[13] unless the different parts can be separately implemented at one site and do not affect each other.[14]

54. Notwithstanding paragraph 52 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.

6.2.5.6. Addressing non-permanence for projects involving removals and emission reduction projects with reversal risks

55. The DOE shall determine whether the risks of reversals were identified and assessed in compliance with the requirements of the activity standard, provisions of the removals standard and other applied methodological regulatory documents.

56. The DOE shall determine whether the risk assessment was conducted in accordance with the applied methodologies and other applied methodological regulatory documents.

57. The DOE shall assess the revised risk assessment every five years from the start of the first crediting period and in any of the following circumstances:

    (a) The DOE or the Supervisory Body identifies the need to revise the monitoring plan based on any concerns identified with the monitoring plan and the risk assessment plan;

    (b) Additional risk factors are identified following a reversal that are not included or are not adequately addressed in the monitoring plan and the risk assessment plan;

    (c) The applicable national or regional regulations require the consideration of risk factors that are not included or are not adequately assessed in the monitoring plan and the risk assessment plan.

6.2.5.7. Estimation of emission reductions or net removals

58. 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

[13] For example, if a project involves the capture of landfill gas combined with use of the landfill gas for energy generation, additionality should be demonstrated for both parts together, and not separately for the landfill gas capture part and for the energy generation part.

[14] For example, if a project involves the implementation of energy efficiency improvements and the catalytic abatement of nitrous oxide (N_2O) emissions at a nitric acid production plant.

(based on the choice of the baseline scenario, the 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.

59. 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;

    (b) **Data and parameters to be monitored**: For data and parameters that 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 to be developed by the Supervisory Body, the DOE shall determine whether the sampling efforts were undertaken in accordance with such standard.

60. For projects involving removals that also result in emission reductions, the DOE shall assess whether the estimation of removals and emission reductions is separated and was undertaken in accordance with the applied methodology(ies).

61. The DOE shall determine whether the correct approach was applied for the estimation of BAU emissions, baseline emissions, project emissions and leakage emissions in accordance with the relevant provisions of the activity standard and applied methodology(ies).

62. The DOE shall assess whether the difference between the baseline emissions and BAU emissions as an annual and total amount with respect to the crediting period was estimated correctly.

63. The DOE shall assess whether the downwards adjustment of the baseline, if applicable, was applied in compliance with the requirements of the activity standard and the respective provisions of the methodologies standard, applied methodologies and other applied methodological regulatory documents.

64. The DOE shall determine whether the leakage emissions were identified, described and calculated in accordance with the activity standard and relevant applied methodologies and other applied methodological regulatory documents.

65. The DOE shall also assess whether the leakage emissions are avoided or minimized and accounted for in line with the respective requirements of the activity standard, applied methodologies and other applied methodological regulatory documents.

6.2.5.8. Monitoring plan

66. The DOE shall determine whether the monitoring plan is in accordance with the requirements of the activity standard and 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.

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

68. For projects involving removals and emission reduction projects with reversal risks, the DOE shall assess the revised monitoring plan every five years from the start of the first crediting period and in any of the circumstances included in paragraph 57 above.

6.2.6. Start date, crediting period type, and duration

69. The DOE shall determine whether the start date of the project is on or after 1 January 2021 and whether it has been determined in accordance with the relevant requirements of the activity standard.

70. The DOE shall determine whether the type (i.e. renewable or fixed) and the length of the crediting period of the proposed A6.4 project are in line with those that may be specified by the host Party in accordance with paragraph 27(b) of the RMPs, if applicable.

71. In cases where the DNA specified conditions that ensure that the total length of the crediting period(s) is shorter than the lifetime of the technology implemented including any replacements undertaken during the crediting period, the DOE shall determine whether the crediting period(s) was/were adjusted accordingly.

6.2.7. Environmental impacts, social impacts and sustainable development impacts

72. The DOE shall determine the appropriateness, relevance, and sufficiency of the information provided in the A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form, and A6.4 Sustainable development impact form,[15] as reported in the PDD, by:

    (a) Step1: Reviewing stakeholder consultation documents [inputs/comments];

    (b) Step 2: Conducting interviews with local stakeholders;

    (c) Step 3: Reviewing relevant host Party documentation;

    (d) Step 4: Providing a validation opinion by employing professional judgement.

73. The DOE shall validate:

    (a) Both quantitative and qualitative information provided, to assess the adequacy of the identification of environmental and/or social risks caused by the A6.4 activity.

[15] Available at: https://unfccc.int/sites/default/files/resource/A6.4-FORM-AC-015.xlsx; https://unfccc.int/sites/default/files/resource/A6.4-FORM-AC-016.xlsx; and https://unfccc.int/sites/default/files/resource/A6.4-FORM-AC-017.xlsx .

The validation should be done by taking the four steps referred to in paragraph 72 above, in order to:

(i) Validate the risk assessment and risk mitigation plan presented in the A6.4 Environmental and social safeguards risk assessment form and A6.4 Environmental and social management plan form, as per the relevant provisions of the A6.4 SD Tool;

(ii) Validate that the activity-level environmental and social indicators defined in the A6.4 Environmental and social management plan form ensure that the A6.4 activities do not cause harm to the environment and stakeholders if risks are identified in the A6.4 Environmental and social safeguards risk assessment form;

(b) That the outcome of the A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form, and A6.4 Sustainable development impact form, have been shared during the local stakeholder consultation and that inputs received from the consultation are reflected in the completed form;

(c) That there is an established continuous engagement of local stakeholders in accordance with the A6.4 activity cycle procedure and A6.4 activity standard.

(d) The appropriateness, relevance, and sufficiency of the information provided in the A6.4 Sustainable development impact form by taking the four steps referred to in paragraph 72 above in order to:

(i) Determine that the sustainable development (SD) objectives and/or criteria of the host Party documented in A6.4 Sustainable development impact form are in line with the host Party's definition, if applicable;

(ii) Determine that the A6.4 activity-level SD indicators defined in the A6.4 Sustainable development impact form are universally applicable to the activity type and significant, recurring/lasting for at least the entire crediting period of the A6.4 project, and impacting the primary stakeholders and/or local environment in a direct and measurable way, resulting in a primary benefit;

(iii) Validate that the description of the A6.4 activity-level SD indicators is accurately reflected in A6.4 Sustainable development impact form.

6.2.8. Local and subnational stakeholder consultation

74. 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 modified the PDD as appropriate. If the DNA has not forwarded any such complaints to the DOE within 30 days of the request, the DOE shall conclude that there is no such complaint.

6.2.9. Global stakeholder consultation

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

6.2.10. Integrity safeguards

76. The DOE shall determine whether the activity participants prepared a declaration that the development, implementation or operation of the proposed A6.4 activity do not involve any illegal activities, including money laundering, tax evasion, fraud, bribery and criminal activities.

6.2.11. Approval and authorization

77. 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 activity cycle.

78. 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 activity cycle procedure.

6.2.12. Modalities of communication

79. The DOE shall validate the corporate identity of all activity participants and focal points[16] included in the Modalities of Communication (MoC) statement prepared in accordance with the activity cycle procedure, 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.

80. If the DOE is unable to validate the requirements by applying subparagraphs 79(a)–(c), the DOE may perform further validation activities in order to confirm that the corporate and

[16] See "Procedure: Article 6.4 activity cycle procedure for projects".

personal details, employment status and specimen signatures included in the MoC statement are valid and accurate, and comply with the requirements in this section.

81. 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.

6.3. Validation report

82. 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[17] involved, together with their roles in the validation activity and, where conducted in accordance with paragraph 26 or 27 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 26 or 27 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 6.1 and 6.2 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, based on the A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form, the A6.4 activity results in no harm and contributes to SD;

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

[17] For definitions, see "Standard: Article 6.4 accreditation".

83. If the DOE identifies the presence of unavoidable negative impacts that exceed the environmental and social safeguards elements and criteria and cannot be remediated by consultation or mitigation, the DOE shall issue a negative validation opinion or submit a deviation request to the Supervisory Body prior to submitting a request for registration.

84. The DOE shall notify the activity participants of the validation outcome, which will be one of the following:

    (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

85. 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 activity standard on post-registration changes.

7.1.2. Other requirements

86. 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

87. 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 all relevant requirements for post-registration changes as contained in the activity standard:

    (a) Temporary deviations from the registered monitoring plan in the registered PDD (thereinafter referred to as the registered monitoring plan), the A6.4 SD Tool forms (A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form), applied methodologies, standardized baselines or other methodological regulatory documents, including the A6.4 SD Tool;

    (b) Permanent changes, including:

(i) Corrections;

(ii) Changes to the start date of the crediting period;

(iii) Inclusion of a monitoring plan;

(iv) Permanent changes to the registered monitoring plan and/or the A6.4 SD Tool forms (the A6.4 Environmental and social safeguards risk assessment form, the A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form), or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents, including the A6.4 SD Tool;

(v) Changes to the project design;

(c) Registration under, or overlap with, other crediting scheme.

88. 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 and/or the A6.4 SD Tool forms (the A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form), applied methodologies, standardized baselines or other methodological regulatory documents, including the A6.4 SD Tool

89. The DOE shall determine whether there is a temporary deviation from the monitoring plan in the registered PDD, the A6.4 SD Tool forms (the A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form), the applied methodologies, the applied standardized baselines, or the other applied methodological regulatory documents, including the A6.4 SD Tool and, if there is, the DOE shall determine whether the temporary deviation complies with the relevant requirements in the activity standard.

90. If the deviation from the registered monitoring plan, the A6.4 SD Tool forms (the A6.4 Environmental and social safeguards risk assessment form, the A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form), the applied methodologies, the A6.4 SD Tool 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

91. 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

92. 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 and other sections of the PDD comply with the relevant requirements in the activity standard in accordance with section 6.2.5 above.

7.2.3.3. Changes to the start date of the crediting period

93. The DOE shall determine whether there has been no request for issuance having been submitted for the A6.4 project based on the information on the UNFCCC website and whether the change is within the allowable limit specified in the activity standard.

94. If the DOE determines that both conditions referred to in paragraph 93 above are met, the DOE shall further determine whether the change would require full review and possible change to the selection and the application of methodologies and standardized baselines in accordance with the activity standard, and conduct validation accordingly.

7.2.3.4. Permanent changes to the registered monitoring plan and/or A6.4 SD Tool forms (the A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form), or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents, including the A6.4 SD Tool

95. The DOE shall determine whether the permanent changes 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.

96. The DOE shall determine whether the permanent changes 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.

97. The DOE shall determine whether the permanent changes to the A6.4 SD Tool forms (the A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form), provided as part of the revised PDD, are in compliance with the A6.4SD Tool and relevant provisions of the activity standard.

98. For projects involving removals and emission reduction projects with reversal risks, the DOE shall determine whether the monitoring plan and the risk assessment plan were reviewed and updated in accordance with relevant provisions of the activity standard,

removals standard and other applied methodology regulatory documents every five years and in the circumstances specified in paragraph 57 above.

7.2.3.5. Changes to the project design

99. 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 description in the revised PDD submitted by the activity participants of 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.

100. 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, and compliance with the applied methodologies, the applied standardized baselines and other applied methodological regulatory documents.

101. 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;

(f) Compliance with the A6.4 SD Tool.

102. For projects that demonstrate additionality through investment analysis for which the PDD was submitted for validation prior to the start date of the project, and for which the updated investment analysis is submitted as a post-registration change, the DOE shall determine whether the investment analysis has been updated based on the data and information for the investment analysis available at the start date of the project in accordance with the relevant provisions of the activity standard and other applied methodological regulatory documents.

103. If the proposed or actual change affects the additionality of the registered A6.4 project, the DOE shall confirm that the project is still additional after the change.

104. Notwithstanding paragraph 103 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.

105. 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.

106. 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.

107. The DOE shall confirm the date when the change occurred, the reasons for the change and 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 activity standard.

108. 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.

109. If the changes to the project design affect the identification, assessment or monitoring of environmental, social or sustainable development impacts, the DOE shall assess whether the impacts caused by the changes were assessed and revised versions of the A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form (if applicable) and A6.4 Sustainable development impact form were provided. The DOE shall assess, prior to or as part of the first verification of emission reductions or net removals, whether the revised A6.4 SD Tool forms are in compliance with the requirements of the A6.4 SD Tool.

7.2.4. Registration under or overlap with other crediting scheme

110. The DOE shall determine the compliance with the requirements relating to registration under or coverage by a programme, under any other international, regional, national, or subnational or sector-wide GHG mitigation crediting scheme contained in the activity standard based on the publicly available information and/or the information provided by the activity participants upon its request.

7.3. Validation report

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

(a) Report on all items listed in paragraph 82 above except for subparagraph 82(e);

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

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

(iv) Whether the revised A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form are prepared using the valid version of the applicable forms and following the instructions therein, as applicable;

(v) Whether the proposed or actual post-registration change complies with each 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.

112. The DOE shall notify the activity participants of the validation outcome, which will be one of the following options:

(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

113. 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

114. The DOE shall assess both quantitative and qualitative information on GHG emission reductions or net GHG removals provided in the monitoring report.[18]

115. 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;

[18] 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.

(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 environmental impacts, social impacts and sustainable development impacts 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).

116. 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

117. 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.

118. 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, where available, such as comparable information from sources other than those used in the monitoring report to determine whether the stated figures are correct.

119. 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

120. The concept of materiality is applicable to the verification of monitored GHG emission reductions or net GHG removals achieved by all types of registered A6.4 projects. However, 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.

121. 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 122−132 below.

122. 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;[19]

(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.

123. 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.

124. 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.

125. Applying the concept of materiality does not mean that identified errors do not need to be 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.

8.1.4.2. Consideration of materiality in planning verification

126. The DOE should:

(a) Identify the materiality threshold referred to in paragraph 122 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

[19] A year refers in this paragraph to a period of 12 consecutive months.

flow, the internal quality control system, and the overall organization with respect to monitoring and reporting;[20]

(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[21] and sampling plans whose type, timing[22] and extent are based on and are responsive to the assessed risks of material errors, omissions or misstatements.

127. 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

128. 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.

129. 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.

130. 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.

131. If a material error, omission or misstatement is detected, the DOE shall, 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 request the activity participants to address it.

[20] 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.*

[21] In accordance with section 8.1.5.

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

132. 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

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

134. 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 telephone 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 to determine whether the information in the monitoring report is reliable;

(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 to be developed by the Supervisory Body, 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.

135. 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.

136. For cases that are not referred to in paragraph 135 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.

137. 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 activity cycle procedure.

138. Where no specific means of verification is specified, the DOE should apply the standard auditing techniques described in paragraph 134 above.

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

139. 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.

140. 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 may 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.

141. 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.

142. 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.

143. 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.

144. 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

145. 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 activity standard, 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) Reversal related actions for projects involving removals and emission reduction projects with reversal risks;

(f) Provision of data and parameters used;

(g) Environmental impacts, social impacts and sustainable development impacts;

(h) Calculation of GHG emission reductions or net GHG removals.;

(i) Continuous engagement of stakeholders.

146. 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 145 above, the DOE shall additionally follow the specific guidance on verification regarding some of these requirements provided in sections 8.2.2−8.2.10 below.

147. The DOE shall ensure, before submitting the request for first issuance for the project, that the host Party statement of authorization of the use of A6.4ERs was provided.

8.2.2. Avoidance of double issuance

148. The DOE shall determine whether the A6.4 project is also registered, or covered by a programme, under any other international, regional, national, or subnational GHG mitigation crediting scheme prior to the request for issuance based on the confirmation from any other crediting scheme, if applicable, publicly available information and/or the other information obtained from the activity participants.

149. If the DOE determines that the A6.4 project is registered, or covered by a programme, under other crediting scheme, the DOE shall additionally determine whether the activity participants have obtained a confirmation from the other crediting scheme that the same GHG emission reductions or net GHG removals being requested for issuance of A6.4ERs have not been or will not be credited under the other crediting scheme.

8.2.3. Project implementation and operation

150. 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 activity standard.

151. By means of an on-site inspection or other means of verification in accordance with paragraphs 135 or 136 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.

152. 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 future monitoring periods, if appliable;[23]

(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, if applicable.

153. For projects that demonstrate additionality through investment analysis for which the PDD was submitted for validation prior to the start date of the project, and for which the investment analysis was not updated through the submission of a request for approval of post-registration changes, the DOE, at the first verification, shall determine whether the investment analysis has been updated based on the data and information for the investment analysis available at the start date of the project in accordance with the relevant provisions of the activity standard and other applied methodological regulatory documents.

8.2.4. Monitoring plan

154. 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.

155. 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.

8.2.5. Monitoring activities

156. 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;

[23] 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.

(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.

157. 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 for sampling and surveys for Article 6.4 mechanism activities to be developed by the Supervisory Body.

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

159. For projects involving removals and emission reduction projects with reversal risks, the DOE shall determine whether the monitoring report includes the following specific elements as per the activity standard and the respective provisions of the removals standard and any applied methodological regulatory documents:

(a) Description of the monitoring activities and methods used;

(b) Estimated GHG emission reductions and/or net removals occurring during the monitoring period, together with the associated uncertainty;

(c) Data collected, including the remote sensing data, or if the data set is too large, a summary of the data and an indication of how the full data set can be accessed;

(d) Records and logs of the observed events of GHG release that potentially could have led to the reversal of removals and/or emission reductions along with a summary of the GHG release notifications that were submitted during the period covered by the monitoring report;

(e) Information on how the risks of reversal were assessed and addressed, consistent with the risk mitigation measures described in the registered PDD;

(f) Information on how any negative environmental and social impacts have been assessed, mitigated, and managed, consistent with the measures described in the registered PDD.

8.2.6. Calibration frequency for measuring instruments

160. 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.

161. 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[24] 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.

162. 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.

163. 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 161 above.

164. 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,[25] the DOE shall follow the applicable requirements related to post-registration changes in section 7 above.

165. 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 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.

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

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

8.2.7. Reversal related actions for projects involving removals and emission reduction projects with reversal risks

166. In cases of any observed event involving the release of stored GHGs that could potentially lead to reversal, the DOE shall determine on the basis of transparent and verifiable evidence whether the event as per the preliminary assessment report, prepared in accordance with the requirements of the activity standard, respective provisions of the removals standard on reversal-related actions and any other relevant applied methodological regulatory documents, results in an actual reversal or not.

167. If the Supervisory Body does not approve the preliminary assessment report, or if the preliminary assessment report concludes that the observed event has resulted in an actual reversal and a monitoring report is prepared, the DOE shall determine whether the monitoring report is in compliance with requirements of the activity standard, respective provisions of the removals standard, and any other relevant applied methodological regulatory documents.

168. The DOE shall also assess whether the monitoring report accurately estimates the magnitude of reversals and correctly characterizes it as avoidable or unavoidable.

169. The DOE shall also assess whether, following the submission of the monitoring report:

(a) The risk assessment of the activity has been updated and the risk rating of the activity has been revised;

(b) The compliance with requirements and safeguards contained in the Article 6.4 SD Tool, taking into account any negative environmental and social impacts caused by the reversal and plans developed to prevent the recurrence of such negative environmental and social impacts, has been reviewed.

8.2.8. Data and calculation of emission reductions or net removals

170. 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 is 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 activity standard; 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 activity standard and the activity cycle procedure;

(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) Where projects involving removals also result in emission reductions, the accounting of removals and emission reductions has been separated in the monitoring report in accordance with the methodologies applicable to the activity;

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

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

(g) 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 activity standard.

171. 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.

8.2.9. Environmental impacts, social impacts and sustainable development impacts

172. The DOE shall verify the appropriateness, relevance and sufficiency of information provided in the monitoring of the environmental and social indicators in the A6.4 Environmental and social management plan form and the A6.4 activity-level SD indicators in the A6.4 Sustainable development impact form, as reported in a monitoring report.

173. If the DOE observes any deviation from the information in the A6.4 Environmental and social management plan form and the A6.4 Sustainable development impact form that were validated at registration, it shall provide its opinion to the activity participants on the

observed deviation, indicating whether the A6.4 activity is still within the social and environmental impact and/or SD impact defined in the A6.4 Environmental and social safeguards risk assessment form, A6.4 Environmental and social management plan form and A6.4 Sustainable development impact form.

174. The DOE shall review any input and comments received via the continuous engagement of local stakeholders in accordance with the activity standard, conduct interviews with local stakeholders and employ professional judgement in the evaluation of the ex-post fulfilment of risk assessment and SD impacts due to the activity.

175. The DOE shall confirm that the activity participants have measured, monitored, and reported parameters established in the A6.4 Environmental and social management plan form and the A6.4 Sustainable development impact form submitted at the registration stage.

176. For projects that successfully transitioned from the clean development mechanism (CDM) and that prepared a "Sustainable development co-benefits description report" in accordance with the "Sustainable development co-benefits tool" at the time of transition, the DOE shall determine whether the monitoring report includes the outcome of the monitoring of the sustainable development co-benefits of the project based on the document describing how the activity participant monitors sustainable development co-benefits of the activity, including the frequency of reporting of monitoring results, in accordance with relevant provisions of the "Standard: Transition of CDM activities to the Article 6.4 mechanism".

8.2.10. Continuous engagement of stakeholders

177. If the activity participants have received comments on the implementation or operation of the A6.4 project from local stakeholders after its registration through the process of continuous engagement of stakeholders in accordance with the activity standard, the DOE shall determine whether the activity participants have addressed the issues raised in the comments in the implementation or operation of the project, as appropriate.

178. The DOE shall also determine whether comments on the compliance of the registered A6.4 project with applicable Article 6.4 mechanism rules and regulations have been submitted from Parties, stakeholders and UNFCCC-admitted observer organizations and published on the UNFCCC website in accordance with the activity cycle procedure, and if so, determine whether the activity participants have addressed the issues raised in the comments.

8.3. Verification and certification report

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

(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 135 or 136 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 135 or 136 above, an 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.

180. 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.

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

182. 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.[26]

183. If the DOE identifies unavoidable negative impacts that exceed the parameters established in the A6.4 Environmental and social management plan form and the A6.4 Sustainable development impact form and cannot be remediated by consultation or mitigation, the DOE shall issue a negative verification opinion or submit a deviation request to the Supervisory Body prior to submitting a request for issuance.

184. The DOE shall notify the activity participants of the verification outcome, which will be one of the following options:

(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

185. 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 activity standard.

9.1.2. Other requirements

186. 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

187. 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 activity standard, including the requirements on:

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

(b) Application of an approved standardized baseline;

[26] 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.

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

(d) Update of the BAU scenario and emissions, the baseline scenario and emissions, and the difference between the baseline and BAU emissions;

(e) Update of the downwards adjustment;

(f) Update of the regulatory analysis for the additionality;

(g) Update of the estimated GHG emissions and net GHG removals (if applicable);

(h) Update of the monitoring plan (if applicable);

(i) Update of the A6.4 SD Tool forms;

(j) Updated risk assessment and monitoring plan for projects involving removals and emission reduction projects with reversal risks;

(k) Update of the crediting period;

(l) Update of MoC statement;

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

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

188. 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.

189. 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 42–43 above shall apply mutatis mutandis.

9.2.3. Validity of original baseline or its update

190. The DOE shall assess the validity of the original baseline or its update through an assessment of 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.

9.2.4. Update of modalities of communication statement

191. 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. Combination of post-registration change at renewal

192. 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 activity cycle procedure, 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 activity cycle procedure.

9.3. Validation report

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

(a) Report on all items listed in paragraph 82 above except for subparagraph 82(e);

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

(i) Whether the revised PDD was 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 primarily 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' responses 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 the risk assessment stage.

Appendix 2. Calibration

1. The following provides an illustrative example for applying the provisions in paragraph 161(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 161(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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Document information

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