Application of the CCQI methodology for assessing the quality of carbon credits

This document presents results from the application of version 3.0 of a methodology, developed by Oeko-Institut, World Wildlife Fund (WWF-US) and Environmental Defense Fund (EDF), for assessing the quality of carbon credits. The methodology is applied by Oeko-Institut with support by Carbon Limits, Greenhouse Gas Management Institute (GHGMI), INFRAS, Stockholm Environment Institute, and individual carbon market experts. This document evaluates one specific criterion or sub-criterion with respect to a specific carbon crediting program, project type, quantification methodology and/or host country, as specified in the below table. Please note that the CCQI website Site terms and Privacy Policy apply with respect to any use of the information provided in this document. Further information on the project and the methodology can be found here: www.carboncreditquality.org

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Sub-criterion:	**1.3.2: Robustness of the quantification methodologies applied to determine emission reductions or removals**
Carbon crediting program:	**Hydropower (dams)** **Hydropower (run-of-river)**
Quantification methodology:	**Clean Development Mechanism (CDM) AMS-I.D, Version 18.0**
Assessment based on carbon crediting program documents valid as of:	**15 May 2022**
Date of final assessment:	**12 September 2023**
Score:	**2**

Assessment

Relevant scoring methodology provisions

The methodology assesses the robustness of the quantification methodologies applied by the carbon crediting program to determine emission reductions or removals. The assessment of the quantification methodologies considers the degree of conservativeness in the light of the uncertainty of the emission reductions or removals. The assessment is based on the likelihood that the emission reductions or removals are under-estimated, estimated accurately, or over-estimated, as follows (see further details in the methodology):

Assessment outcome	Score
It is very likely (i.e., a probability of more than 90%) that the emission reductions or removals are underestimated, taking into account the uncertainty in quantifying the emission reductions or removals	5
It is likely (i.e., a probability of more than 66%) that the emission reductions or removals are underestimated, taking into account the uncertainty in quantifying the emission reductions or removals OR The emission reductions or removals are likely to be estimated accurately (i.e., there is about the same probability that they are underestimated or overestimated) and uncertainty in the estimates of the emission reductions or removals is low (i.e., up to ±10%)	4
The emission reductions or removals are likely to be estimated accurately (i.e., there is about the same probability that they are underestimated or overestimated) but there is medium to high uncertainty (i.e., ±10-50%) in the estimates of the emission reductions or removals OR It is likely (i.e., a probability of more than 66%) or very likely (i.e., a probability of more than 90%) that the emission reductions or removals are overestimated, taking into account the uncertainty in quantifying the emission reductions or removals, but the degree of overestimation is likely to be low (i.e., up to ±10%)	3
The emission reductions or removals are likely to be estimated accurately (i.e., there is about the same probability that they are underestimated or overestimated) but there is very high uncertainty (i.e., larger than ±50%) in the estimates of the emission reductions or removals OR It is likely (i.e., a probability of more than 66%) or very likely (i.e., a probability of more than 90%) that the emission reductions or removals are overestimated, taking into account the uncertainty in quantifying the emission reductions or removals, and the degree of overestimation is likely to be medium (±10-30%)	2
It is likely (i.e., a probability of more than 66%) or very likely (i.e., a probability of more than 90%) that the emission reductions or removals are overestimated, taking into account the uncertainty in quantifying the emission reductions or removals, and the degree of overestimation is likely to be large (i.e., larger than ±30%)	1

Information sources considered

1 CDM methodology AMS-I.D, Version 18.0

2 CDM methodology ACM0002, Version 20.0

3 CDM TOOL07, Version 7.0

Further relevant information sources are listed in the evaluation of CDM methodology ACM0002.

Assessment outcome

The quantification methodology is assigned a score of 2.

Justification of assessment

The small-scale methodology uses the same approaches as the large-scale methodology ACM0002. The assessment should therefore be read in conjunction with the assessment of ACM0002.

One difference is that the small-scale methodology allows, next to the use of CDM TOOL07, one additional option to determine the grid emission factor: the use of the weighted average emissions (in t CO2/MWh) of the current generation mix. In this case, the data of the year in which project generation occurs must be used. This option is rather similar to the method (d) – the average operating margin (OM) – in TOOL07, with the main differences to ACM0002 being that in this case:

(a) no build margin (BM) is required; and

(b) the actual generation data from the same year is used, rather than a historical year.

Overall, this approach provides further flexibility. We assume that it is mostly used where it provides a higher emission factor than with TOOL07. In this regard, it would not address the shortcomings identified with TOOL07 in the assessment of methodology ACM0002. Therefore, based on the detailed assessment of ACM0002, a score of 2 is also assigned to this methodology.