

Application of the Oeko-Institut/WWF-US/ EDF 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

Sub-criterion:	1.3.1: Robustness of the general program principles and provisions for determining emission reductions and removals
Carbon crediting program:	CAR
Assessment based on carbon crediting program documents valid as of:	30 June 2021
Date of final assessment:	20 May 2022
Score:	Establishment of natural forest: 3.33 Landfill gas utilization: 3.13

Contact

info@oeko.de
www.oeko.de

Head Office Freiburg

P. O. Box 17 71
 79017 Freiburg

Street address

Merzhauser Straße 173
 79100 Freiburg
 Phone +49 761 45295-0

Office Berlin

Borkumstraße 2
 13189 Berlin
 Phone +49 30 405085-0

Office Darmstadt

Rheinstraße 95
 64295 Darmstadt
 Phone +49 6151 8191-0

Assessment

Indicator 1.3.1.1

Relevant scoring methodology provisions

“The program has quantification methodologies in place and available for use, as well as a process for developing new or updating existing quantification methodologies.”

Information sources considered

- 1 Program website. <https://www.climateactionreserve.org/how/protocols/>
- 2 Reserve Offset Program Manual, March 12th 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

Provision 1 Source 2, section 4, page 43: “The Reserve is committed to producing high quality GHG project accounting protocols, and to this end uses an intensive multi-stakeholder process to develop its protocols. This approach integrates extensive data collection and analysis with review and input from a diverse range of experts and stakeholders. Reserve staff guides this process to ensure that final protocols adhere to the principles outlined in Section 1.2. This process produces high quality, well-vetted, and credible protocols based on best practices from national and international standards. This section details the Reserve’s unique and rigorous protocol development process.”

Assessment outcome

Yes (2 Points).

Justification of assessment

The above documentation specifies that the indicator is fulfilled.

Indicator 1.3.1.2

Relevant scoring methodology provisions

“Approved methodologies (or general program provisions) address the following essential components:

- Applicability or eligibility criteria
- Determination of the project boundary
- Determination of additionality
- Establishing the baseline scenario

- Quantification of emission reductions
- Monitoring practices”

Information sources considered

- 1 Reserve Offset Program Manual, March 12th 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.4, page 6: “Eligibility criteria specify essential characteristics a project must have in order to register with the Reserve, as well as the conditions under which the Reserve will issue CRTs to a project. In Reserve protocols, eligibility criteria serve three main purposes:

1. To ensure that baseline estimation methods and emission factors prescribed by the protocol are relevant and appropriate. Reserve protocols use standardized baseline estimation methods that are calibrated to specific geographic regions; to be eligible, projects must be located in an appropriate geographic region.
2. To ensure that projects are “additional.” To test for additionality, the Reserve employs objective criteria designed to distinguish additional projects from those that would have happened anyway (i.e., in the absence of an offset market). These criteria fall into two categories: (1) a legal requirement test, and (2) a performance standard test. These tests are explained and described further below.
3. To ensure that projects adhere to all applicable laws and do not cause adverse environmental, social or economic impacts.

Generally, the Reserve seeks to specify eligibility criteria that are as standardized and objective as possible. This means that criteria will be designed to require a minimum amount of subjective judgment in determining whether a project is eligible.”

Provision 2 Source 1, section 2.5, page 14: “The GHG Assessment Boundary delineates the GHG sources, sinks, and reservoirs (SSRs) that must be assessed in order to determine the total net change in GHG emissions caused by a GHG reduction project. GHG Assessment Boundaries are defined for each type of project activity addressed in a Reserve protocol.”

Provision 3 Source 1, section 2.4.1, page 6: “The Reserve applies a standardized approach to determining additionality, where performance standards and other conditions or criteria that projects must meet in order to be considered additional are determined by the Reserve. These standards and criteria are established separately for each project type and are designed to exclude non-additional (or “business as usual”) projects from eligibility. In all cases, projects that are required by law or regulation are excluded. Other criteria and conditions are specified in each protocol.”

Provision 4 Source 1, section 2.6.2, page 16-17: “Baseline emissions are always subject to uncertainty because they are counterfactual, i.e., they are an estimate of GHG

emissions or removals that would have occurred in the absence of the project. Depending on the project type and SSRs involved, many methods can be used to try to estimate baseline emissions. The Reserve uses standardized baselines in its protocols to the extent possible, meaning that the same conservative assumptions, emission factors, and calculation methods are applied to all projects. Standardized baseline approaches seek to avoid case-by-case analysis of individual projects while maintaining overall levels of quantification accuracy and environmental integrity. Within Reserve protocols, however, project-specific calculations and emission factors may be used wherever necessary to ensure accuracy, or where standardized methods would result in estimates that are overly conservative in a large number of cases.

Standardized baselines are developed by considering broad trends (economic, technological, regulatory, and policy) in the industry or sector relevant to a project type and determining what future “business as usual” alternative activities are likely to be. To develop standardized baselines, the Reserve works with stakeholders to determine the most likely alternative technologies or practices. In many cases, a single practice, activity or technology is assumed to be the common baseline alternative for a class of project activities. In some cases, the performance threshold developed for additionality may also be used as an emissions baseline. After establishing a standard baseline alternative, the Reserve develops specific quantification steps, calculation methods, and formulas to estimate baseline emissions, incorporating site specific data where appropriate. Depending on the project type, baseline emission estimates may either be fixed at the outset of a project, or they may be regularly updated using actual data collected during the project’s operation (used to infer baseline conditions).”

Provision 5 Source 1, section 2.6.3, page 17: “Project GHG emissions are quantified based as much as possible on actual measurements of project activity performance. GHG emissions for each SSR may be measured directly, or calculated from measurements of parameters from which GHG emissions can be derived. For SSRs where direct or indirect measurements are too costly or infeasible, project GHG emissions may be estimated using standard assumptions or models.”

Provision 6 Source 1, section 2.7, page 18-19: “Monitoring of GHG projects is required in order to determine project performance, quantify actual GHG emissions, and in some cases, calibrate baseline emissions estimates. Under all Reserve protocols, GHG reductions are quantified only based on actual project monitoring data. Monitoring requirements are specified in each protocol and include provisions for:

- Monitoring GHG emissions or removals associated with SSRs within the GHG Assessment Boundary
- Monitoring other data related to assumptions underlying GHG emissions and/or carbon stock estimates
- Documenting data storage and quality assurance/quality control (QA/QC) measures
- Ensuring all project components are operated in a manner consistent with the manufacturer’s recommendations

- Ensuring all monitoring instruments are calibrated and maintained as specified by the manufacturer

The Reserve requires a monitoring plan to be established for all monitoring and reporting activities associated with a project.”

Assessment outcome

Yes (1 Point).

Justification of assessment

The above documentation specifies that the indicator is fulfilled.

Indicator 1.3.1.3

Relevant scoring methodology provisions

“The program requires that, as part of the approval process, new quantification methodologies undergo expert review by an independent technical panel or working group.”

Information sources considered

- 1 Reserve Offset Program Manual (March 12, 2021). Available: https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 4.2.1, page 44: “To initiate the protocol development process, the Reserve assembles a balanced multistakeholder voluntary workgroup, drawing from industry experts, state and federal agencies, environmental organizations, and other various stakeholders. Workgroups are assembled by invitation, but all parties are encouraged to express their interest in participating in the workgroup process. Throughout the protocol development process, the workgroup provides expert review and direct input into the development of the protocol.

Interested stakeholders that are not on the workgroup can still participate in the workgroup process as “observers.” Any individual is welcome to be an observer to a protocol development process. Observers can listen to workgroup meetings via conference call, but are not solicited for comments or feedback until the public review period.”

Assessment outcome

Yes (2 Points).

Justification of assessment

The above documentation specifies that the indicator is fulfilled.

Indicator 1.3.1.4

Relevant scoring methodology provisions

“The program requires that the approval of new quantification methodologies must include a public stakeholder consultation.”

Information sources considered

- 1 Reserve Offset Program Manual, March 12, 2021. Available: https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 4.2.4, page 45: “The revised draft protocol is posted on the Reserve’s website for a 30-day public comment period. The public is notified via the Reserve’s listserv database and other venues, and reviewers are asked to submit written comments. During the 30-day public review period, the Reserve also hosts a public workshop to solicit feedback and address concerns regarding the draft protocol in an open forum. After receiving written feedback, all comments are recorded and addressed. A final protocol is produced, taking into account public comments and any further workgroup feedback.”

Assessment outcome

Yes (2 Points)

Justification of assessment

The above documentation specifies that the indicator is fulfilled.

Indicator 1.3.1.5

“The program requires that all quantification methodologies be reviewed and updated at least every five years to verify that they continue ensuring environmental integrity. The program may provide for exceptions from this rule (e.g. in case of rarely used quantification methodologies or if the review is pending due to forthcoming decisions by other bodies such as governments or guidance setting institutions).”

Information sources considered

- 1 Reserve Offset Program Manual (March 12, 2021). https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 4.3, page 45-46: “After Board approval, the protocols are periodically revised in light of public comments, on-the-ground experience, and

technological, scientific, and regulatory developments. In addition, the Reserve may review and update performance standards and standardized baselines to ensure they continue to effectively screen projects for additionality and accurately represent “business as usual” emissions.”

Assessment outcome

No (0 Points).

Justification of assessment

The Reserve Offset Program Manual specifies that protocols are “periodically” revised. Periodic revisions are not in line with this indicator requiring methodology review at least every 5 years. The indicator is therefore not fulfilled.

Indicator 1.3.1.6

Relevant scoring methodology provisions

“The program has procedures in place to suspend the use of quantification methodologies in cases where new information, such as new scientific studies, indicate that emission reductions or removals are being over-estimated or that additionality may not be ensured.”

Information sources considered

- 1 Reserve Offset Program Manual, March 12, 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

- Provision 1 Source 1, section 4.3, page 45-46: “After Board approval, the protocols are periodically revised in light of public comments, on-the ground experience, and technological, scientific, and regulatory developments. In addition, the Reserve may review and update performance standards and standardized baselines to ensure they continue to effectively screen projects for additionality and accurately represent “business as usual” emissions. There are two types of revisions to protocols: policy revisions and program revisions.”
- Provision 2 Source 1, section 2.4.1.1, page 8: “In addition, Reserve protocols require project developers to review and determine whether federal, state or local regulations and other legal requirements (including local agency ordinances or rulings) require the implementation of their project. This review is always required at the time a project is registered and may be required each verification period thereafter depending on the protocol. Generally, Reserve protocols will stipulate the following:
- Project monitoring plans must include procedures that the project developer will follow to periodically ascertain and demonstrate that the project passes the legal requirement test.”

Assessment outcome

No (0 Points).

Justification of assessment

The program has procedures in place to periodically review and revise methodologies given new information or scientific study (Provision 1), but it does not have procedures for the suspension of methodologies determined to be flawed after initially being approved. Therefore the indicator is not fulfilled.

Indicator 1.3.1.7

Relevant scoring methodology provisions

“The program clearly defines that a carbon credit unit represents one metric ton of CO₂ equivalent of GHG emission reductions or removals and identifies the underlying GWP values used to calculate the CO₂ equivalence (e.g., the source of the GWP value and the time horizon used).”

Information sources considered

- 1 Reserve Offset Program Manual, March 12, 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 5, page 48: “The unit of offset credits used by the Climate Action Reserve. One Climate Reserve Tonne is equal to one metric ton of CO₂e reduced or sequestered.”

Assessment outcome

Yes (1 Point).

Justification of assessment

The above documentation specifies that the indicator is fulfilled.

Indicator 1.3.1.8

Relevant scoring methodology provisions

“The program requires in its general program provisions (rather than only in its specific quantification methodologies) that emission reductions or removals be determined in a conservative manner (rather than using the most accurate estimate) to ensure that emission reductions or removals are not overestimated (this prioritization of conservativeness over accuracy acknowledges that uncertainty exists with even the most accurate estimates)

OR

The program requires in its general program provisions (rather than only in its specific quantification methodologies) that emission reductions or removals be determined in a conservative manner (rather than using the most accurate estimate) to ensure that emission reductions or removals are not overestimated, unless emission reductions or removals can be determined with very high accuracy, in which case no conservativeness needs to be included in the quantification.”

Information sources considered

- 1 Reserve Offset Program Manual (March 12, 2021). https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

- Provision 1 Source 1, section 1.2, page 2: “Estimated GHG reductions should not be an artifact of incomplete or inaccurate emissions accounting. Methods for quantifying emission reductions should be conservative to avoid overstating a project’s effects. The effects of a project on GHG emissions must be comprehensively accounted for, including unintended effects (often referred to as “leakage”).”
- Provision 2 Source 1, section 2.2, page 5: “Accuracy: Uncertainties and bias should be reduced as far as is practical. Greater accuracy in estimating GHG emissions and reductions will help ensure credibility of GHG reduction claims. Reserve protocols require that quantification of GHG reductions and monitoring of GHG emissions and other variables be conducted within acceptable levels of uncertainty. All GHG reduction estimates must pass rigorous review by an independent verification body. Where accuracy is difficult to achieve, Reserve protocols will err on the side of being conservative with GHG reduction estimates.
- Conservativeness: Conservative assumptions, values, and procedures should be used to ensure that GHG reductions are not over-estimated. Reserve protocols employ conservative estimation methods whenever data and assumptions are uncertain and measures to reduce uncertainty would be impractical.”
- Provision 3 Source 1, section 2.6.4, page 17: “The Reserve develops methods to calculate baseline and project emissions that meet an acceptable level of accuracy. As a general rule, methods should ensure 95% confidence that actual emissions are within +/- 5% of measured or calculated values, although required levels of accuracy will often depend on the specific magnitudes involved and their materiality.”
- Provision 4 Source 1, section 2.6.4.1, page 17: “Where cost-effective methods for quantifying GHG emissions or carbon storage yield uncertain estimates (e.g., greater than a five percent range), it may not be possible to accurately quantify baseline or project emissions. In these cases, Reserve protocols must use conservative assumptions and/or parameter values that will tend to underestimate, rather than overestimate, total GHG reductions and removals.”
- Provision 5 Source 1, section 2.5, page 14: “In general, relevant SSRs will only be excluded from the GHG Assessment Boundary if:

1. Projects are likely to reduce GHG emissions (or increase removals) at a SSR, so that excluding the SSR would be conservative (i.e., doing so would result in an underestimation of total net GHG reductions for the project); or
2. The total increase in GHG emissions from all excluded SSRs is likely to be less than five percent of the total GHG reductions achieved by a project. [Footnote 11] If excluding SSRs is unavoidable for practical reasons, then calculation and estimation methods related to included SSRs must be made suitably conservative in order to avoid overestimating total net GHG reductions.”

Assessment outcome

The second of the two conditions applies (1 point).

Justification of assessment

The project documents include several provisions that emphasize the importance of conservativeness (Provision 1, Provision 2, and Provision 5). Provision 2 identifies the importance of prioritizing conservativeness over accuracy. However, Provisions 3 and 4 identify that a level of 5% uncertainty is determined to meet the accuracy threshold and therefore would not trigger any conservativeness adjustment to be included in this element of the project’s quantification. Therefore, the second of the two conditions is fulfilled.

Indicator 1.3.1.9

Relevant scoring methodology provisions

“The program requires in its general program provisions that, before approving a methodology, the level of uncertainty of emission reductions and removals is identified, or that a provision is included in the methodology requiring that each project applying the methodology must determine the level of uncertainty in quantifying the emission reductions or removals.”

Information sources considered

- 1 Reserve Offset Program Manual (March 12, 2021). https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.6.4, page 17: “The Reserve develops methods to calculate baseline and project emissions that meet an acceptable level of accuracy. As a general rule, methods should ensure 95% confidence that actual emissions are within +/- 5% of measured or calculated values, although required levels of accuracy will often depend on the specific magnitudes involved and their materiality.”

Assessment outcome

No (0 Points).

Justification of assessment

The CAR includes a general rule that methods should ensure 95% confidence that actual emissions are within +/- 5% of measured or calculated values at the programmatic level, applied to each methodology through the methodology approval process. However, this is a general objective and the program does not require that the level of uncertainty be quantified as part of the methodology approval process or for individual projects. The indicator is therefore fulfilled.

Indicator 1.3.1.10

Relevant scoring methodology provisions

“The program requires in its general program provisions (rather than only in its specific quantification methodologies) that the degree of conservativeness in quantifying emission reductions or removals be based on the magnitude of uncertainty in the estimation of emission reductions and removals (i.e., applying a larger degree of conservativeness in case of higher uncertainties).”

Information sources considered

- 1 Reserve Offset Program Manual, March 12 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf
- 2 Verification Program Manual, February 3 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/02/Verification_Program_Manual_February_2021.pdf

Relevant carbon crediting program provisions

- Provision 1 Source 1, section 2.2, page 5: “Uncertainties and bias should be reduced as far as is practical. Greater accuracy in estimating GHG emissions and reductions will help ensure credibility of GHG reduction claims. Reserve protocols require that quantification of GHG reductions and monitoring of GHG emissions and other variables be conducted within acceptable levels of uncertainty. All GHG reduction estimates must pass rigorous review by an independent verification body. Where accuracy is difficult to achieve, Reserve protocols will err on the side of being conservative with GHG reduction estimates.”
- Provision 2 Source 1, section 2.2, page 5: “Conservative assumptions, values, and procedures should be used to ensure that GHG reductions are not over-estimated. Reserve protocols employ conservative estimation methods whenever data and assumptions are uncertain and measures to reduce uncertainty would be impractical.”
- Provision 3 Source 1, section 2.6.4.1, page 17: “Where cost-effective methods for quantifying GHG emissions or carbon storage yield uncertain estimates (e.g., greater than a five percent range), it may not be possible to accurately quantify baseline or project emissions. In these cases, Reserve protocols must use conservative assumptions and/or parameter values that will tend to underestimate, rather than overestimate, total GHG reductions and removals.”

Provision 4 Source 2, section 2.3.1, page 7: “In an effort to maintain a balance of diligence, accuracy and conservativeness, the Reserve defines the quantitative materiality threshold for all projects as follows:

- Projects registering $\leq 25,000$ CRTs over a 12-month period shall achieve a $>95\%$ level of accuracy ($<5\%$ error) relative to the verification body’s calculated emission reductions
- Projects registering $>25,000$ CRTs but $\leq 100,000$ CRTs over a 12-month period shall achieve a $>97\%$ level of accuracy ($<3\%$ error) relative to the verification body’s calculated emission reductions
- Projects registering $> 100,000$ CRTs over a 12-month period shall achieve a $>99\%$ level of accuracy ($<1\%$ error) relative to the verification body’s calculated emission reductions”

Assessment outcome

No (0 Points).

Justification of assessment

Relevant provisions in the Reserve Offset Project Manual underscore the principles of conservativeness (Provisions 1 to 3) and the Verification Program Manual specifies different acceptable levels of accuracy for different project sizes (Provision 4). However, there is no provision which specifically requires that the degree of conservativeness should depend on the level of uncertainty. The indicator is therefore not fulfilled.

Indicator 1.3.1.11

Relevant scoring methodology provisions

“The program explicitly requires in its general program provisions (rather than only in its specific quantification methodologies) that existing government policies and legal requirements which lower GHG emissions (e.g., feed-in tariffs for renewable energy, minimum product efficiency standards, air quality requirements, or carbon taxes) must be included when determining the baseline emissions.”

Information sources considered

- 1 Reserve Offset Program Manual (March 12, 2021). https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf
- 2 Forest Project Protocol, Version 4.0 (June 28, 2017). <https://www.climateactionreserve.org/wp-content/uploads/2018/05/Forest-Project-Protocol-V4.0-package-05142018.pdf>
- 3 Landfill Project Protocol, Version 5.0 (April 2019). https://www.climateactionreserve.org/wp-content/uploads/2019/07/U.S._Landfill_Project_Protocol_V5.0.pdf

Relevant carbon crediting program provisions

- Provision 1 Source 1, section 2.6.2, page 17: “Standardized baselines are developed by considering broad trends (economic, technological, regulatory, and policy) in the industry or sector relevant to a project type and determining what future “business as usual” alternative activities are likely to be. To develop standardized baselines, the Reserve works with stakeholders to determine the most likely alternative technologies or practices.”
- Provision 2 Source 1, section 2.4.1.1, page 8: "In Reserve protocols, the specific provisions of the legal requirement test may differ depending on the project type. During protocol development, the Reserve performs a review of existing and pending regulations to identify any specific regulatory requirements that would mandate the implementation of project activities covered by the protocol. If such requirements are identified, then project activities in relevant jurisdictions may be categorically excluded from eligibility.”
- Provision 3 Source 2, section 6.1.1, page 47: “To estimate baseline carbon stocks for a Reforestation Project, the Project Operator must:
1. Provide a qualitative characterization of the likely vegetative conditions and activities that would have occurred without the project, taking into consideration any laws, statutes, regulations, or other legal mandates that would encourage or require reforestation on the Project Area. The qualitative assessment shall include an assessment of the commercial value of trees within the Project Area over the next 30 years. The qualitative assessment must be used as the basis for modelling baseline carbon stocks (step 3).”
- Provision 4 Source 3, section 3.4.3, page 8: “All projects are subject to a legal requirement test to ensure that the GHG reductions achieved by a project would not otherwise have occurred due to federal, state, or local regulations, or other legally binding mandates. Projects pass the legal requirement test when there are no laws, statutes, regulations, court orders, environmental mitigation agreements, permitting conditions, or other legally binding mandates requiring the destruction of landfill gas methane at the project site. To satisfy the legal requirement test, project developers must submit a signed Attestation of Voluntary Implementation form prior to the commencement of verification activities each time the project is verified. In addition, the project’s Monitoring Plan (Section 6) must include procedures that the project developer will follow to ascertain and demonstrate that the project at all times passes the legal requirement test.

As of the project start date, landfills collecting and destroying landfill gas to comply with regulations or other legal mandates – or that are required by regulation or legal mandate to install a landfill gas control system in the future – are not eligible to register new projects with the Reserve. Landfills collecting and destroying landfill gas to comply with regulations or other legal mandates are not eligible to register GHG reductions associated with the early installation of gas control systems during landfill expansion into new cells.

If an eligible project begins operation at a landfill that later becomes subject to a regulation, ordinance, or permitting condition that calls for the installation of a landfill

gas control system, GHG reductions may be reported to the Reserve up until the date that the installation of a landfill gas control system is legally required to be operational. If the landfill's methane emissions are included under an emissions cap (e.g., under a state or federal cap-and-trade program), emission reductions may likewise be reported to the Reserve until the date that the emissions cap takes effect."

Assessment outcome

Yes (2 Points)

Justification of assessment

The provisions of the Reserve Offset Program Manual stipulate that baselines are developed by considering broad trends (economic, technological, regulatory, and policy) in the industry or sector relevant to a project type and determining what future "business as usual" alternative activities are likely to be (Provision 1). This seems to indicate that relevant regulations and policies should be included when determining baseline emissions. This is further confirmed as both, the Forest Protocol as well as the Landfill Protocol, contain specific provisions that directly or indirectly require consideration of existing government policies and legal requirements in determining the baseline emissions (Provision 3 and Provision 4).

Indicator 1.3.1.12

Relevant scoring methodology provisions

"The program explicitly requires in its general program provisions (rather than only in its specific quantification methodologies) that new government policies and legal requirements which lower GHG emissions (e.g., feed-in tariffs for renewable energy, minimum product efficiency standards, air quality requirements, or carbon taxes) must be included when determining the baseline emissions, once they enter into force. This means that baseline emissions may need to be adjusted during the crediting period, and not only when a regular review of the baseline emissions is required (e.g., at the renewable of the crediting period).

Note: This indicator does not apply to announcements that have not yet been operationalized within the country, such as mitigation targets communicated in Nationally Determined Contributions (NDCs) or Low Emission Development Strategies (LEDS), or other similarly broad national goal-setting policies. However, the implementing policies developed to accomplish objectives within NDCs or LEDS would need to be considered (if relevant to the project in question)."

Information sources considered

- 1 Reserve Offset Program Manual, March 12, 2021. <https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve-Offset-Program-Manual-March-2021.pdf>
- 2 Forest Project Protocol, Version 4.0 June 28 2017. <https://www.climateactionreserve.org/wp-content/uploads/2018/05/Forest-Project-Protocol-V4.0-package-05142018.pdf>
- 3 Landfill Project Protocol Version 5.0, April 24, 2019. <https://www.climateactionreserve.org/wp-content/uploads/2019/07/U.S.-Landfill-Project-Protocol-V5.0.pdf>

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.6.2, page 17: “Standardized baselines are developed by considering broad trends (economic, technological, regulatory, and policy) in the industry or sector relevant to a project type and determining what future “business as usual” alternative activities are likely to be. To develop standardized baselines, the Reserve works with stakeholders to determine the most likely alternative technologies or practices.”

Assessment outcome

No (0 Points).

Justification of assessment

The CAR has no general provisions that directly require that *new* government policies and legal requirements which would lower GHG emissions in baseline emissions once enacted be applied to projects. Therefore, the indicator is not fulfilled.

Indicator 1.3.2.13

Relevant scoring methodology provisions

“The program has established procedures to invalidate and/or replace carbon credits under circumstances in which the emission reductions or removals are demonstrated to have been overestimated.”

Information sources considered

- 1 Reserve Offset Program Manual, March 12, 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 3.6.2, page 37: “In the event that the Reserve determines that GHG reductions or removals for a project were incorrectly quantified or reported, such that the number of CRTs issued to the project account holder was in excess of the correct number according to the requirements of the applicable protocol, it is primarily the project account holder’s responsibility to compensate for the overissuance of CRTs.

The Reserve will notify the project account holder of the over-issuance, including the basis for its determination, and the number of CRTs to be surrendered for cancellation or authorized to be withheld from issuance as further described below. The Reserve shall determine, at its sole discretion, which option or combination of options a project account holder may use; this will be determined on a case-by-case basis and detailed in the over-issuance notification.

Within 30 days, the project account holder must:

1. Surrender CRTs for cancellation; and/or

2. Provide written authorization to the Reserve to withhold CRTs from future issuances to the project.

If the project account holder fails to satisfy its obligations within 30 days, the Reserve may:

1. Cancel CRTs held by the project account holder;
2. Withhold from issuance CRTs otherwise issuable to the project account holder; and/or
3. Purchase CRTs from third parties at the project account holder's expense and cancel them.

The project account holder may dispute the over-issuance determination using the dispute resolution provisions set forth in Section 11(c) of the Climate Action Reserve Terms of Use."

Assessment outcome

Yes (1 Point).

Justification of assessment

The above documentation specifies that the indicator is fulfilled.

Indicator 1.3.1.14

Relevant scoring methodology provisions

"The maximum length of the sum of crediting periods is:

- a. up to 40 years for afforestation/reforestation projects and up to 10 years for all other project types
OR
- b. up to 60 years for afforestation/reforestation projects and up to 15 years for all other project types
OR
- c. up to 80 years for afforestation/reforestation projects and up to 20 years for all other project types
OR
- d. more than 80 years for afforestation/reforestation projects and more than 20 years for all other project types."

Information sources considered

- 1 Reserve Offset Program Manual, March 12 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf
- 2 Landfill Project Protocol, Version 5.0, April 24 2019. https://www.climateactionreserve.org/wp-content/uploads/2019/07/U.S._Landfill_Project_Protocol_V5.0.pdf
- 3 Forest Project Protocol, Version 4.0 (June 28, 2017). <https://www.climateactionreserve.org/wp-content/uploads/2018/05/Forest-Project-Protocol-V4.0-package-05142018.pdf>

Relevant carbon crediting program provisions

- Provision 1 Source 1, section 2.4.4, page 11: “The project “crediting period” defines the period of time over which a project’s GHG reductions are eligible to be verified as CRTs. In general, the start of a project’s crediting period will correspond to its start date.

The length of a project’s crediting period is defined in each protocol. For most non-sequestration projects registered with the Reserve, there is a 10-year crediting period that may be renewed one time for a maximum of two 10-year crediting periods. For sequestration projects, the crediting period may be up to 100 years. Refer to each protocol for specific details on allowable crediting periods. A non-forest project may end its crediting period at any time prior to the limit specified in the protocol, but must abide by any monitoring requirements necessary to ensure permanence, if applicable.”

- Provision 2 Source 2, section 3.3, page 5-6: “The Reserve will issue CRTs for GHG reductions quantified and verified using this protocol for an initial crediting period of ten years following the project start date. [...]

Projects will be eligible to apply for a second crediting period, provided the project meets the eligibility requirements of the most current version of the protocol at the time of such application. If a project developer wishes to apply for eligibility under a second, 10-year crediting period, they must do so no sooner than six months before the end date of the initial crediting period.”

- Provision 3 Source 3, section 3.4, page 12: “The baseline for any Forest Project registered with the Reserve under this version of the Forest Project Protocol is assumed to be valid for 100 years. This means that a registered Forest Project will be eligible to receive CRTs for GHG reductions and/or removals quantified using this protocol, and verified by Reserve-approved verification bodies, for a period of 100 years following the project’s start date.”

- Provision 4 Source 3, section 2.1, page 3: The Reserve will register the following types of Forest Project activities.

2.1.1 Reforestation A Reforestation Project involves restoring tree cover on land that is not at optimal stocking levels and has minimal short-term (30 years) commercial opportunities. A Reforestation Project is only eligible if:

1. The project involves tree planting or removal of impediments to natural reforestation, on land that:
 - a. Has had ten percent or less tree canopy cover for a minimum of ten years; or
 - b. Has been subject to a Significant Disturbance that has removed at least 20 percent of the Project Area's live biomass in trees.
2. No rotational harvesting of reforested trees or any harvesting of pre-existing carbon in live trees occurs during the first 30 years after the project start date unless such harvesting is needed to prevent or reduce an imminent threat of disease. Such harvesting may only occur if the Project Operator provides the Reserve with a written statement from the government agency in charge of forestry regulation in the state where the project is located stipulating that the harvesting is necessary to prevent or mitigate disease.
3. The tree planting, or removal of impediments to natural reforestation, does not follow a commercial harvest of healthy live trees that has occurred in the Project Area within the past ten years, or since the occurrence of a Significant Disturbance, whichever period is shorter.
4. The project does not employ broadcast fertilization.
5. The project does not take place on land that was part of a previously registered Forest Project, unless the previous Forest Project was terminated due to an Unavoidable Reversal (see Section 7).

A Reforestation Project may involve subsequent tree harvesting and other silvicultural activities.

Reforestation Projects may be eligible on both private and public lands. “

Provision 5 Source 3, section 3.4, page 11: “The baseline for any Forest Project registered with the Reserve under this version of the Forest Project Protocol is assumed to be valid for 100 years. This means that a registered Forest Project will be eligible to receive CRTs for GHG reductions and/or removals quantified using this protocol, and verified by Reserve-approved verification bodies, for a period of 100 years following the project's start date.”

Assessment outcome

Landfill gas utilization projects: The third condition applies (1 point).

Establishment of natural forest: The fourth condition applies (0 Points).

Justification of assessment

The maximum length of the sum of crediting periods for projects in sectors other than afforestation/reforestation is usually 20 years (Provision 1). The Landfill Project Protocol specifies a maximum length of 20 years (Provision 2) which corresponds to 1 point. The Forest Protocol specifies a maximum length of 100 years (Provision 5) which corresponds to 0 points.

Indicator 1.3.1.15

Relevant scoring methodology provisions

“The program provides guidance on the renewal of the crediting period, which must include a re-assessment of the baseline scenario.”

Information sources considered

- 1 Reserve Offset Program Manual, March 12, 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf
- 2 Landfill Project Protocol Version 5.0, April 24, 2019. https://www.climateactionreserve.org/wp-content/uploads/2019/07/U.S._Landfill_Project_Protocol_V5.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.4.4, page 11: “If a project wishes to apply for eligibility under a renewed crediting period, it must do so by resubmitting project submittal forms no sooner than six months before the end of the project’s ongoing crediting period and paying the project submittal fee. The project must meet all of the eligibility requirements of the most current version of the applicable protocol at the time of resubmittal to be eligible for a renewed crediting period.

Note that projects registered under early protocol versions that do not have provisions for a second crediting period can apply for one under the most current version of the protocol, if the most current version allows for a second crediting period.

Notwithstanding any pre-defined crediting period, projects that become required by law will not be eligible to receive CRTs for the reductions they generate, unless otherwise specified in the protocol. Thus, in most cases, if a project becomes subject to a regulation, ordinance or permitting condition that effectively requires its implementation, the project can no longer be considered additional and its crediting period will be terminated. The crediting period will likewise be terminated if the emission sources affected by a project are included under an emissions cap (e.g., under a state or federal cap-and-trade program) or GHG emissions from the project/project site are directly regulated by a local, state or federal agency. As specified in each protocol, emission reductions may be reported to the Reserve until the date that a regulation or emissions cap takes effect.

Details on the allowable crediting period as well as crediting period renewals for each type of project recognized by the Reserve are contained in each protocol.”

Provision 2 Source 2, section 3.4.1, page 6: “If a project upgrades to a newer version of the protocol for a subsequent verification, it must meet the performance standard test requirements of that version of the protocol, applied as of the original project start date. If a project is submitted for a second crediting period, it is subject to the performance standard test in the most current version of the protocol at that time, applied as of the original project start date.”

Assessment outcome

Yes (1 Point).

Justification of assessment

CAR applies standardized baselines in all of its methodologies and requires that for a project to renew its crediting period, it must meet the eligibility requirements (Provision 1) and the performance standard test (Provision 2) of the most current methodology. The eligibility requirements and performance standard test determine whether a project may appropriately apply the standardized baseline and therefore be eligible to, in this case, begin a second crediting period. This requirement to re-evaluate eligibility to apply the methodology effectively re-evaluates the applicability of the standardized baseline to the project. The indicator is therefore fulfilled.

Indicator 1.3.1.16

Relevant scoring methodology provisions

“In the case of project types where the baseline scenario is the continuation of the current situation (i.e. not undertaking any investment), the program requires the re-assessment of additionality at the renewal of the crediting period.” (See methodology for further explanation)

Information sources considered

- 1 Reserve Offset Program Manual, March 12, 2021. https://www.climateactionreserve.org/wp-content/uploads/2021/03/Reserve_Offset_Program_Manual_March_2021.pdf
- 2 Landfill Project Protocol Version 5.0, April 24, 2019. https://www.climateactionreserve.org/wp-content/uploads/2019/07/U.S._Landfill_Project_Protocol_V5.0.pdf
- 3 Forest Project Protocol, Version 4.0, June 28, 2017. Available: <https://www.climateactionreserve.org/wp-content/uploads/2018/05/Forest-Project-Protocol-V4.0-package-05142018.pdf>

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.4.4, page 11: “If a project wishes to apply for eligibility under a renewed crediting period, it must do so by resubmitting project submittal forms no sooner than six months before the end of the project’s ongoing crediting period and paying the project submittal fee. The project must meet all of the eligibility requirements of the most current version of the applicable protocol at the time of resubmittal to be eligible for a renewed crediting period.

Note that projects registered under early protocol versions that do not have provisions for a second crediting period can apply for one under the most current version of the protocol, if the most current version allows for a second crediting period.

Notwithstanding any pre-defined crediting period, projects that become required by law will not be eligible to receive CRTs for the reductions they generate, unless otherwise specified in the protocol. Thus, in most cases, if a project becomes subject

to a regulation, ordinance or permitting condition that effectively requires its implementation, the project can no longer be considered additional and its crediting period will be terminated. The crediting period will likewise be terminated if the emission sources affected by a project are included under an emissions cap (e.g., under a state or federal cap-and-trade program) or GHG emissions from the project/project site are directly regulated by a local, state or federal agency. As specified in each protocol, emission reductions may be reported to the Reserve until the date that a regulation or emissions cap takes effect.

Details on the allowable crediting period as well as crediting period renewals for each type of project recognized by the Reserve are contained in each protocol.”

Provision 2 Source 2, section 3.4.1, page 6: “If a project upgrades to a newer version of the protocol for a subsequent verification, it must meet the performance standard test requirements of that version of the protocol, applied as of the original project start date. If a project is submitted for a second crediting period, it is subject to the performance standard test in the most current version of the protocol at that time, applied as of the original project start date.”

Assessment outcome

Yes (2 Points).

Justification of assessment

CAR applies standardized assessments of additionality in all of its methodologies and requires that for a project to renew its crediting period, it must meet the eligibility requirements (Provision 1) and the performance standard test (Provision 2) of the most current methodology. The eligibility requirements and performance standard test determine whether a project is eligible to apply the methodology because it is additional. Additionality is therefore assessed before a project may initiate a second crediting period. This requirement to re-evaluate eligibility to apply the methodology effectively re-evaluates the applicability of the standardized methodology and the additionality of the project. Projects that establish natural forest are not permitted to renew their crediting period (Source 3). The indicator is therefore fulfilled.

Scoring results

According to the above assessment, the carbon crediting program achieves a total point score of 16 for the project type establishment of natural forest and a total point score of 15 for landfill gas utilization. Applying the scoring approach of the methodology, this results in a score of 3.33 (establishment of natural forest) and 3.13 (landfill gas utilization) respectively for the sub-criterion.