



The American Carbon Registry[®] Standard

The American Carbon Registry's[®] requirements and specifications for the quantification, monitoring, reporting, verification, and registration of project-based emissions reductions and removals.

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Table of Contents

ACRONYM LIST	3
INTRODUCTION	4
CHAPTER 1: ACR BASICS	7
A. DESCRIPTION OF THE ACR	7
B. OBJECTIVES	7
C. GEOGRAPHIC SCOPE	7
D. SCOPE: GREENHOUSE GASES	7
E. SCOPE: PROJECT TYPES	8
F. LANGUAGE	9
G. UNIT OF MEASURE	9
H. UNIT OF EXCHANGE	10
I. NO FORWARD CREDITING	10
J. ADOPTION OF AND REVISIONS TO ACR STANDARDS	10
K. CONFLICT OF INTEREST POLICY	10
CHAPTER 2: ACCOUNTING AND DATA QUALITY PRINCIPLES	11
A. GUIDING PRINCIPLES FOR GHG ACCOUNTING	11
B. BOUNDARY SELECTION	12
C. RELEVANCE AND COMPLETENESS	12
D. UNCERTAINTY, ACCURACY AND PRECISION	13
E. CONSERVATIVENESS	14
F. EMISSIONS FACTORS	14
G. MANAGING DATA QUALITY	14
CHAPTER 3: PROJECT ELIGIBILITY REQUIREMENTS	15
CHAPTER 4: ADDITIONALITY	22
A. THREE-PRONG ADDITIONALITY TEST	22
B. PERFORMANCE STANDARD APPROACHES	25
CHAPTER 5: PERMANENCE	27
A. ASSESSMENT OF RISK	27
B. PRIMARY RISK MITIGATION MECHANISM: THE ACR BUFFER POOL	27
C. ALTERNATE RISK MITIGATION MECHANISMS	28
CHAPTER 6: PROJECT DEVELOPMENT TRAJECTORY	29
A. PROJECTS USING AN ACR-PUBLISHED OR ACR-APPROVED METHODOLOGY	29
B. PROJECTS MODIFYING AN EXISTING APPROVED METHODOLOGY	30
C. PROJECTS PROPOSING A NEW METHODOLOGY FOR ACR APPROVAL	31
D. INFORMATION IN A GHG PROJECT PLAN	33
E. PROJECT DEVIATIONS	34
F. PROJECT MONITORING REPORTS	34
G. AGGREGATION AND PROGRAM OF ACTIVITIES	35
G.1 AGGREGATION	35
G.2 PROGRAM OF ACTIVITIES	35
H. COMMERCIALLY SENSITIVE INFORMATION	36
I. ADDITIONAL REQUIRED DOCUMENTATION FOR ELIGIBILITY SCREENING	36
J. CREDITING PERIOD RENEWAL	37
CHAPTER 7: METHODOLOGIES AND TOOLS	39
A. GHG MEASUREMENT TOOLS AND METHODOLOGIES	39
B. ACR’S INTERNAL REVIEW, PUBLIC CONSULTATION AND PEER REVIEW PROCESS	40
C. UPDATES TO ACR-APPROVED METHODOLOGIES AND TOOLS	41
D. ROLES OF THE ACR TECHNICAL COMMITTEE(S)	41

E.	METHODOLOGIES AND TOOLS FOR SOCIAL AND ENVIRONMENTAL IMPACT ASSESSMENT	42
	CHAPTER 8: VALIDATION AND VERIFICATION	43
A.	DEFINITIONS.....	43
B.	VALIDATION AND VERIFICATION INTERVAL.....	43
C.	VALIDATION/VERIFICATION BODY REQUIREMENTS.....	44
D.	VERIFICATION REPORT AND STATEMENT	44
E.	VERIFICATION ACCEPTANCE	45
F.	ROTATION OF VERIFICATION BODIES	45
	CHAPTER 9: LINKAGES TO OTHER GHG REGISTRIES AND EMISSION TRADING SYSTEMS	46
A.	PREVIOUS PARTICIPATION IN ANOTHER VOLUNTARY GHG REGISTRY.....	46
B.	PREVIOUS PARTICIPATION IN A BINDING GHG SYSTEM.....	46
C.	PROJECTS IN A NON-ANNEX I COUNTRY.....	47
D.	PREVIOUS REJECTION BY A GHG SYSTEM.....	47
	REFERENCES	48
	APPENDIX A: DEFINITIONS	50
	APPENDIX B: NORMATIVE REFERENCES	58
	CONTACT INFORMATION	60

ACRONYM LIST

ACR	American Carbon Registry®
AFOLU	Agriculture, Forestry and Other Land Use
ANSI	American National Standards Institute
AR4	Fourth Assessment Report of the Intergovernmental Panel on Climate Change
CCBA	Climate, Community and Biodiversity Alliance
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CH ₄	Methane
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide-equivalent
DNA	Designated National Authority
ERT	Emission Reduction Tonne
GHG	Greenhouse Gas
GIS	Geographic Information System
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
ISO	International Organization for Standardization
NPV	Net Present Value
N ₂ O	Nitrous Oxide
ODS	Ozone-depleting Substances
OTC	Over-the-counter
PFCs	Perfluorocarbons
PoA	Program of Activities
QA/QC	Quality Assurance / Quality Control
REC	Renewable Energy Credit or Renewable Energy Certificate
RPS	Renewable Portfolio Standard
SAR	Second Assessment Report of the Intergovernmental Panel on Climate Change
SF ₆	Sulfur Hexafluoride
USEPA	United States Environmental Protection Agency
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute

INTRODUCTION

The American Carbon Registry® (ACR) is a leading carbon offset program with two decades of unparalleled carbon market experience in the development of rigorous, science-based offset standards and methodologies as well as operational experience in the oversight of offset project verification, registration, offset issuance and retirement reporting through ACR's online registry system. ACR is a non-profit enterprise of Winrock International. Winrock International works with people in the U.S. and around the world to empower the disadvantaged, increase economic opportunity, and sustain natural resources. Key to this mission is building capacity for climate change mitigation and adaptation and leveraging the power of environmental markets. Since the 1990s, Winrock has been a leader in developing science-based GHG measurement and monitoring methods and protocols.

ACR was founded in 1996 as the GHG Registry by the Environmental Resources Trust, and joined Winrock International in 2007. As the first private greenhouse gas registry in the world, ACR has set the bar for offset quality that is the market standard today and continues to lead carbon market innovation.

In 2012 ACR was approved by the California Air Resources Board to serve as an Offset Project Registry (OPR) and Early Action Offset Program (EAOP) for the California cap-and-trade market. ACR's work as a California OPR is governed by the California cap-and-trade regulation and compliance offset protocols approved by the Air Resources Board.¹ The *ACR Standard* governs only the registration of voluntary projects registered under ACR-approved methodologies.

The ACR Standard

The *ACR Standard* details ACR's requirements and specifications for the quantification, monitoring, and reporting of project-based GHG emissions reductions and removals, verification, project registration, and issuance of offsets. The *Standard* establishes the quality level that every project must meet in order for ACR to register its GHG emissions reductions and removals as tradable environmental assets.

ACR aims to maximize flexibility and usability for Project Proponents, while maintaining the environmental integrity and scientific rigor necessary to ensure that projects developed against its standards and methodologies are recognized as being of the highest quality, whether used for voluntary or pre-compliance early action purposes.

¹ The California cap and trade regulation (Subchapter 10 Climate Change, Article 5, Sections 95800 to 96023, Title 17, California Code of Regulations) and currently approved compliance offset protocols are available at <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>.

Adherence to this *Standard*, relevant sector-specific standards, and associated methodologies will ensure that project-based offsets represent emissions reductions and removals that are real, measurable, permanent, in excess of regulatory requirements and common practice, additional to business-as-usual, net of leakage, verified by a competent independent third party, and used only once.

Applicability

Project Proponents wishing to develop a project for registration on ACR shall follow this *Standard* and any relevant ACR sector standard, and must apply an ACR-approved methodology (as defined below).

The *ACR Standard v4.0* supersedes the *ACR Standard v3.0 (February 2014)*. Any project listed or registered subsequent to **January 1, 2015** must follow all requirements of the *ACR Standard v4.0*. Projects currently listed or registered, or listed or registered prior to January 1, 2015, may be validated and verified according to *ACR Standard v3.0* through the end of the Crediting Period.

Project Proponents and other interested parties should refer to www.americancarbonregistry.org for the latest version of the *ACR Standard*, sector standards, methodologies, tools, document templates, and other guidance.

Chapter Guide

Chapter 1 provides basics on ACR, followed in Chapter 2 by general accounting and data quality principles for offset projects.

Chapter 3 summarizes project eligibility requirements.

Chapter 4 details the ACR's tests to ensure that offset projects are additional to business-as-usual.

Chapter 5 describes ACR's approach to ensuring permanence of GHG reductions and removals.

Chapter 6 summarizes the process for Project Proponents to develop and register a project, which varies slightly depending on whether the project uses a pre-existing or proposes a new methodology.

Chapter 7 summarizes the processes for ACR acceptance of pre-existing methodologies and approval of new methodologies.

Chapter 8 summarizes ACR requirements for validation and verification of all projects by a competent independent third-party verifier, which are addressed in greater detail in the *ACR Verification Guideline for GHG Projects*.

Chapter 9 addresses linkages to other GHG emission trading systems.

Appendix A provides definitions of terms used throughout this document. Appendix B provides a list of normative references on which the *ACR Standard* is based.

The *ACR Standard* does not detail legal responsibilities of ACR and ACR members with regard to the use of the registry, which are provided for in the ACR Member Agreement. A project-specific contract between ACR and Project Proponents governs the operation of a buffer account to mitigate the risk of reversals in certain types of projects.

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CHAPTER 1: ACR BASICS

A. Description of the ACR

The American Carbon Registry®, a nonprofit enterprise of Winrock International, is a leading carbon offset program that operates in both the voluntary and the regulated California carbon markets. Founded in 1996 as the first private voluntary GHG registry in the world, ACR has two decades of unparalleled carbon market experience in the development of rigorous, science-based offset standards and methodologies as well as operational experience in the oversight of offset project verification, registration, offset issuance and retirement reporting.

ACR operates a transparent online registry system for members to register projects and record the issuance, transfer and retirement of serialized, project-based and independently verified offsets, branded as Emission Reduction Tons (“ERTs”). ACR’s registry system records transactions directly negotiated between buyer and seller and is not an exchange. Offset transactions take place outside of ACR, over-the-counter (OTC) or on exchanges, and are tracked on ACR through the unique serial numbers assigned to every ERT.

B. Objectives

ACR’s objectives are to:

- Encourage voluntary action to manage GHG emissions;
- Provide guidance, infrastructure, and quality standards to foster eventual acceptance of early reductions in a possible future GHG emissions trading market;
- Support best practices in project-level GHG accounting;
- Commercialize innovative new methodologies;
- Encourage broad adoption of climate change-mitigating practices with significant community, economic and environmental benefits;
- Enhance public confidence in market-based action for GHG reduction;
- Support convergence of international and U.S. carbon markets.

C. Geographic Scope

ACR accepts projects from locations worldwide, provided they follow an ACR-approved methodology. Some methodologies prescribe a narrower geographic scope (e.g., United States only).

D. Scope: Greenhouse Gases and Particulate Matter

ACR registers emission reductions and/or removal enhancements of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride

(SF₆) and black carbon. ACR's scope also includes destruction of Ozone-Depleting Substances (ODS) listed in Annexes A, B, C and E of the Montreal Protocol.²

E. Scope: Project Types

ACR accepts all projects validated and verified against an ACR-approved methodology, provided they comply with the current versions of the *ACR Standard* and relevant sector standard if applicable. ACR-approved methodologies include:

- Methodologies developed by ACR and approved through the public consultation and scientific peer review process;
- Methodologies approved by the Clean Development Mechanism (CDM) Executive Board, provided that the project is implemented in a non-Annex I country and adheres to requirements of the *ACR Standard*;
- Methodologies approved by the CDM Executive Board, provided that if the project will be implemented in the United States or another Annex I country, the Project Proponent must first have ACR review and approve the CDM methodology for consistency with ACR requirements;
- Methodologies approved under other GHG programs, provided such methodologies have been approved by ACR through the public consultation and peer review process;
- Modifications of existing methodologies, provided such modifications have been approved by ACR;
- New methodologies developed by external authors and approved by ACR through the public consultation and scientific peer review process.

With the exception of hydropower, ACR accepts renewable energy projects 100 MW and under and energy efficiency projects where the baselines include indirect emissions, only if the project activity takes place in the developing world.³ For hydropower, ACR accepts run-of-river projects up to 10 MW.

ACR will register GHG reductions from renewable energy and energy efficiency projects in the United States only if *all* of the following criteria are met:

- The project displaces *direct* emissions by reducing the consumption of fossil fuels at a facility that the Project Proponent owns or controls, or for which the facility owner has assigned the Project Proponent clear and uncontested offsets title. Examples are biomass co-firing with coal, biogas used to displace natural gas, energy efficiency projects that reduce natural gas use, etc.;
- The project meets additionality and other requirements of the *ACR Standard*;

² See http://ozone.unep.org/Publications/MP_Handbook.

³ Under the Kyoto Protocol's Clean Development Mechanism (CDM), the governments of developing countries (non-Annex 1 countries), by approving emission reduction projects from renewable energy projects, provide a *de facto* assignment of emission reduction property rights to Project Proponents instead of owners of fossil fuel power plants. By contrast, renewable energy Project Proponents in Annex 1 countries (industrialized countries) do not have an assignment of emissions reduction property rights by the government, and thus do not have an unambiguous and uncontested ownership claim to the emission reductions.

- The GHG reductions have not been used to meet a regulatory compliance obligation under a binding limit;
- Under a possible future U.S. regulated GHG emissions market, the project does not take place at a regulated source;
- The project has not been counted toward a mandatory Renewable Portfolio Standard (RPS) obligation or claimed Renewable Energy Credits (RECs), unless regulations in the relevant jurisdiction clearly allow separation (“unbundling”) of RECs and GHG attributes.

ACR’s scope excludes:

- Projects that do not meet all ACR eligibility criteria, including projects which convert and/or clear native ecosystems to generate carbon offsets;
- Renewable energy and energy efficiency projects in the U.S., unless meeting all criteria above. Projects that displace indirect emissions at a source not owned or controlled by the Proponent (e.g., grid-connected renewable power generation) do not meet these criteria because of the lack of unambiguous and uncontested ownership of the emission reductions, lack of clear additionality, potential for double-counting of offsets and RECs in markets where regulations do not clearly allow for unbundling of RECs and GHG attributes, and potential for double-counting of offsets and entity-level emissions reductions;
- Energy or life-cycle GHG accounting-based indirect emissions reductions and removals from projects originating in Annex I countries.

F. Language

The operating language of ACR is English. All GHG Project Plans, methodologies, tools, verification statements, and other documents required by ACR shall be in English.

G. Unit of Measure

Project Proponents shall calculate, quantify, and report all GHG reductions and removal enhancements in metric tons, converting each metric ton to its CO₂ equivalent (CO₂e) using calculations based on the 100-year Global Warming Potential (GWP) factors listed in the IPCC *Fourth Assessment Report (AR4)*, Working Group 1, Chapter 2, Table 2.14.⁴

⁴ See http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html.

H. Unit of Exchange

The ACR unit of exchange is a verified emissions reduction, serialized and registered as an Emission Reduction Ton (ERT), denominated in metric tons of CO₂e. ERTs include both emission reductions and removal enhancements (i.e. enhanced sequestration).

I. No Forward Crediting

A project-based offset is the result of a defined and eligible project action that yields after-the-fact, quantifiable and verifiable GHG emissions reductions/removals. ACR will not issue ERTs for GHG emissions reductions or removals that have not yet occurred or are not yet verified. ACR requires that an offset exist prior to issuance and does not forward issue or forward register a projected stream of offsets.

J. Adoption of and Revisions to ACR Standards

All ACR standards, including the *ACR Standard* and sector-specific standards, will be posted for public comment for at least 30 days before adoption. ACR will prepare responses to all submitted comments and post the comments and responses along with the new version of the standard.

From time to time ACR may update the *ACR Standard* and any sector-specific standards. Such updates occur when significant changes to GHG accounting best practice or the legislative and/or regulatory context justify an update; when new provisions or requirements originating in methodologies make ACR aware of higher-level requirements or clarifications that should be made at the *ACR Standard* or sector standard level; or for other reasons.

K. Conflict of Interest Policy

As a non-profit organization that values its reputation for integrity, Winrock International maintains a strict policy against engaging in activities that present a conflict of interest. Accordingly, each director, officer, and staff member of Winrock, including ACR staff, sign an annual affirmation of that they are in compliance with this policy, that they avoid all conflicts of interest and take reasonable action to avoid circumstances that create the appearance of a conflict of interest.

In addition to its internal conflict of interest policy, ACR also requires that all approved Validation and Verification Bodies (VVBs) execute an Attestation of Validation/Verification Body, which defines the VVB role and responsibilities and ensures technical capabilities of all staff and no conflicts of interest. ACR Approved VVBs must also execute a project-specific conflict of interest form for each project validated and/or verified, which is reviewed and approved by ACR.

CHAPTER 2: ACCOUNTING AND DATA QUALITY PRINCIPLES

The accounting and data quality principles summarized here are designed to ensure that the assumptions, values, and procedures used by Project Proponents and Validation/Verification Bodies (VVBs) result in a fair and true accounting of GHG emission reductions and removals.

A. Guiding Principles for GHG Accounting

ACR affirms a set of guiding principles, based on the ISO 14064 Part 2 (2006) specifications. These are summarized in Table 1.

Table 1 – Core GHG Accounting Principles

Relevance	Select the GHG sources, GHG sinks, GHG reservoirs, data and methodologies appropriate to the needs of the intended user (ISO 14064-2:2006, clause 5.6).
Completeness	Include all relevant GHG emissions and removals. Include all relevant information to support criteria and procedures (ISO 14064-2:2006, clause 5.3).
Consistency	Enable meaningful comparisons in GHG-related information. Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, boundary, methods, or any other relevant factors.
Accuracy	Reduce bias and uncertainties as far as is practical. Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with confidence as to the integrity of the reported information (WRI/WBCSD, Corporate Inventory Guidance, 2007).
Transparency	Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence. Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used. (WRI/WBCSD, Corporate Inventory Guidance, 2007).

Conservativeness	Use conservative assumptions, values and procedures to ensure that GHG emission reductions or removal enhancements are not overestimated (ISO 14064-2:2006, clause 3.7).
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B. Boundary Selection

GHG project boundaries include a project’s physical boundary or implementation area, the GHG sources, sinks and reservoirs (or pools) considered, and the project duration.

Approved methodologies establish criteria for the selection of relevant GHG sources, sinks and reservoirs for regular monitoring or estimation. The Project Proponent shall justify in the GHG Project Plan the exclusion from regular monitoring of any relevant GHG source, sink or reservoir.

In accordance with ISO 14064-2:2006, approved methodologies establish criteria and procedures for quantifying GHG emissions and/or removals for selected GHG sources, sinks and/or reservoirs. The Project Proponent shall quantify GHG emissions and/or removals separately for each relevant GHG for each GHG source, sink and/or reservoir identified in the methodology as being relevant for the project and for the baseline scenario.

The Project Proponent shall provide a detailed description of the geographic boundary of project activities. The project activity may contain more than one facility or discrete area of land, but each facility or land area must have a unique geographical identification, and each land area must meet the land eligibility requirements of the relevant ACR sector standard, if applicable. For Agriculture, Forestry and Other Land Use (AFOLU) projects, the Project Proponent shall provide maps, Geographic Information System (GIS) shapefiles, or other relevant information to delineate the project boundary.

ACR sector standards specify the required Minimum Project Term for particular project types.

C. Relevance and Completeness

Consistent with ISO 14064 Part 2, Project Proponents shall consider all relevant information that may affect the accounting and quantification of GHG reductions and removals, including estimating and accounting for any decreases in carbon pools and/or increases in GHG emission sources.

Concerns of practicality and cost dictate that GHG emission sources/sinks meeting certain criteria may be excluded from measurement and monitoring. Project Proponents may omit from accounting:

- Any pool or emission source whose exclusion is conservative, i.e. the exclusion of which will tend to underestimate GHG emission reductions and removal enhancements.

- If exclusion of a pool or source is not conservative, Project Proponents may apply a significance tool⁵ to determine whether the pool or source may be considered *de minimis*. *De minimis* pools and sources may be excluded if all combined pools and sources thus excluded represent less than 3% of the *ex-ante* calculation of emission reductions/removal enhancements.
- Pools and sources considered insignificant *a priori*, as stipulated in the applicable ACR sector standard or methodology, may be omitted without significance testing.

A pool or source not initially considered *de minimis* in *ex ante* calculations, but found to be *de minimis* in monitoring, may be omitted from subsequent monitoring and verification if the Project Proponent presents evidence that the pool or source is likely to remain indefinitely below the *de minimis* threshold (i.e., that the monitoring event in which an individual pool or source was *de minimis* was not merely a temporary condition with the pool or source likely to return to significant levels).

D. Uncertainty, Accuracy and Precision

The Project Proponent shall reduce, as far as is practical, uncertainties related to the quantification of GHG emission reductions or removal enhancements.

For methodologies based on statistical sampling (for instance, methodologies in the forestry or land use sectors often employ statistical sampling requirements), ACR requires that in order to be allowed to report the mean of the estimated emission reduction/removal, the 90% statistical confidence interval of sampling must be no more than 10% of the mean. If the Project Proponent cannot meet the targeted $\pm 10\%$ of the mean at 90% confidence, then an uncertainty deduction is required. Project-specific methodologies provide guidance how to calculate this uncertainty deduction. Methodologies submitted for ACR approval shall include methods for estimating uncertainty relevant to the project and baseline scenario.

ACR leaves to the Project Proponent the decision whether the potential additional revenues from reporting the mean without an uncertainty deduction justify the additional costs of more intensive sampling to achieve precision of $\pm 10\%$ of the mean at 90% confidence.

The use of biogeochemical or process models must also include an estimate of structural uncertainty related to the inadequacy of the model, model bias, and model discrepancy. This should be quantified using the best available science, and can include Monte Carlo analyses, uncertainty estimates from peer reviewed literature, and/or consulting model experts who have either developed or worked directly with the model in an academic setting.

⁵ Such as the CDM Tool for Testing Significance of GHG Emissions in A/R CDM Project Activities, at http://cdm.unfccc.int/EB/031/eb31_repan16.pdf.

E. Conservativeness

The Project Proponent shall select assumptions and values to ensure that GHG emission reductions and removals are not overestimated, particularly in the event that the Proponent relies on uncertain data and information. For GHG sources, sinks and reservoirs not selected for regular monitoring, the Project Proponent shall estimate GHG emissions and/or removals by the sources, sinks and reservoirs relevant for the project and those relevant for the baseline scenario.

When reporting emissions data to ACR for offset issuance the following rules shall be applied:

- a. Claimed emissions reductions shall be rounded down to the nearest whole number;
- b. Calculated buffer pool contributions shall be rounded up to the nearest whole number.

F. Emissions Factors

Where needed to estimate GHG emission reductions or removal enhancements in the project or baseline scenario, the Project Proponent shall select or develop GHG emissions or removal factors that:

- Derive from a scientific peer-reviewed origin;
- Are appropriate for the GHG source or sink concerned;
- Are current at the time of quantification;
- Take account of the quantification uncertainty;
- Yield accurate and reproducible results; and
- Are consistent with the intended use of the monitoring report.

G. Managing Data Quality

The Project Proponent shall establish and apply quality assurance and quality control (QA/QC) procedures to manage data and information, including the assessment of uncertainty in the project and baseline scenarios. QA/QC procedures shall be outlined in the GHG Project Plan.

CHAPTER 3: PROJECT ELIGIBILITY REQUIREMENTS

Table 2 details ACR eligibility criteria for all projects, provides a definition of each criterion, and articulates ACR requirements. Eligibility requirements for specific project types are summarized in the relevant ACR sector standard and/or methodology. Project Proponents shall address, in their GHG Project Plan, each of the criteria below.

Table 2 – Eligibility Requirements for Offset Projects

Criterion	Definition	ACR Requirement
<p>Start Date</p>	<p>ACR defines the Start Date for all projects other than AFOLU as the date on which the project began to reduce GHG emissions against its baseline.</p> <p>ACR defines the Start Date for AFOLU projects as the date on which the Project Proponent began the activity on project lands, with more specific guidance in the relevant ACR sector standard and methodology.</p>	<p>Both AFOLU and non-AFOLU projects with a Start Date of 01 January, 2000 or later are eligible for registration.</p> <p>Projects whose Start Date is more than two years prior to the date of listing must provide documentation that GHG mitigation was an objective as of the Start Date. This documentation must provide evidence based on official, legal or other corporate documentation that was available to third parties at or prior to the Start Date of the Project Activity, that GHG mitigation and/or the sale or retirement of carbon credits was considered in the decision to proceed with the Project Activity.</p>
<p>Minimum Project Term</p>	<p>The minimum length of time for which a Project Proponent commits to project continuance, monitoring and verification.</p>	<p>The Minimum Project Term for specific project types is specified in the relevant ACR sector standard and/or methodology. Project types with no risk of reversal subsequent to crediting have no required Minimum Project Term.</p>

Criterion	Definition	ACR Requirement
<p>Crediting Period</p>	<p>Crediting Period is the finite length of time for which a GHG Project Plan is valid, and during which a project can generate offsets against its baseline scenario.</p> <p>Crediting Periods are limited in order to require Project Proponents to reconfirm, at intervals appropriate to the project type, that the baseline scenario remains realistic and credible, the Project Activity remains additional, and GHG accounting best practice is being used. This is important since once a project has demonstrated its additionality, it is not required to do so again until applying to renew the Crediting Period.</p>	<p>The Crediting Period for non-AFOLU projects shall be ten (10) years. AFOLU projects may have longer Crediting Periods, as specified in the relevant ACR sector standard or methodology.</p> <p>A Project Proponent may apply to renew the Crediting Period by complying with all then-current ACR requirements, re-evaluating the baseline scenario, and using emission factors, tools and methodologies in effect at the time of Crediting Period renewal. Except where specified in a methodology, ACR does not limit the allowed number of renewals.</p> <p>Projects that are deemed to meet all ACR additionality criteria are considered additional for the duration of their Crediting Period. If regulations or common practice change during the Crediting Period, this may make the project non-additional and thus ineligible for renewal, but does not affect its additionality during the current Crediting Period.</p>
<p>Real</p>	<p>A real offset is the result of a project action that yields after-the-fact, quantifiable and verifiable GHG emissions reductions and/or removals.</p>	<p>GHG reductions and removals shall exist prior to issuance. ACR will not forward issue nor forward register a projected stream of future offsets.</p>

Criterion	Definition	ACR Requirement
<p>Emission or Removal Origin</p>	<p>An emission or removal is direct if it originates from sources or sinks over which the Project Proponent has control.</p> <p>An emission or removal is indirect if it originates at sources or sinks over which the Project Proponent does not have control.</p>	<p><i>For Projects reducing or removing direct emissions, the following requirement applies:</i></p> <p>Project Proponent shall own, have control, or document effective control over the GHG sources/sinks from which the emissions reductions or removals originate. If the Project Proponent does not own or control the GHG sources or sinks, the Proponent shall document that effective control exists over the GHG sources and/or sinks from which the reductions/removals originate.</p> <p><i>For Projects that reduce or remove energy-related indirect emissions, eligible projects must be located in the developing world.</i></p> <p><i>For Projects reducing or removing non-energy indirect emissions,⁶ the following requirement applies:</i></p> <p>Project Proponent shall document that no other entity may claim GHG emission reductions or removals from the project activity (i.e. that no other entity may make an ownership claim to the emission reductions or removals for which credits are sought).</p>

⁶ ACR will not consider projects or methodologies for indirect emissions reductions/removals based on life-cycle GHG accounting methods.

Criterion	Definition	ACR Requirement
Offset Title	Offset title is a legal term representing rights and interests in an offset, a future stream of offsets, or a project delivering offsets.	<p>Project Proponent shall provide documentation and attestation of undisputed title to all offsets prior to registration, including chain of custody documentation if offsets have ever been sold in the past. Title to offsets shall be clear, unique, and uncontested.</p> <p>If the Project Proponent (ACR Account Holder) does not own the lands or facilities from which the GHG reductions or removals originate, the Project Proponent shall provide documentation that the owner of those lands or facilities has transferred offset title to the Project Proponent. ACR will only issue ERTs into the account of a Project Proponent with clear, unencumbered and uncontested offset title.</p>
Land Title	Land title is a legal term representing rights and interests in project lands.	<p>For U.S. projects, Project Proponent shall provide documentation of clear, unique, and uncontested land title. For international projects, Proponent shall provide documentation and/or attestation of land title; ACR may require a legal review by an expert in local law.</p> <p>Land title may be held by a person or entity other than the Project Proponent, provided the Project Proponent has clear, unique, and uncontested offsets title.</p>
Additional	GHG emission reductions and removal enhancements are additional if they exceed those that would have occurred in the absence of the Project Activity and under a business-as-usual scenario.	Every project shall use <i>either</i> an ACR-approved performance standard and pass a regulatory surplus test, <i>or</i> pass a three-pronged test of additionality in which the project must: 1) exceed regulatory/legal requirements; 2) go beyond common practice; and 3) overcome at least one of three implementation barriers: institutional, financial or technical.

Criterion	Definition	ACR Requirement
Regulatory Compliance	Adherence to all laws, regulations, and other legally-binding mandates directly related to project activities.	Projects must maintain material regulatory compliance. In order to maintain material regulatory compliance, a project must complete all regulatory requirements at required intervals. Project Proponents are required to provide a regulatory compliance attestation to a verification body at each verification. This attestation must disclose all violations or other instances of non-compliance with laws, regulations, or other legally-binding mandates directly related to project activities.
Permanent	<p>Permanence refers to the longevity of removal enhancements and the risk of reversal, i.e., the risk that atmospheric benefit will not be permanent.</p> <p>Reversals may be unintentional or intentional.</p>	<p>For projects with a risk of reversal of GHG removal enhancements, Project Proponents shall assess risk using an ACR-approved risk assessment tool.</p> <p>Project Proponents shall mitigate reversal risk by contributing ERTs from the project itself to the ACR buffer pool; contributing ERTs of another type or vintage to the ACR buffer pool; providing evidence of sufficient insurance coverage with an ACR-approved insurance product to recover any future reversal; or using another ACR-approved risk mitigation mechanism.</p> <p>ACR requires geologic sequestration Project Proponents to use approved methodologies that assure permanence including ongoing QA/QC and long-term monitoring. Details are provided in relevant methodologies.</p>

Criterion	Definition	ACR Requirement
Net of Leakage	Leakage is an increase in GHG emissions or decrease in sequestration outside the project boundaries that occurs because of the project action.	ACR requires Project Proponents to assess, account for, and mitigate certain types of leakage, as summarized in relevant sector standards and approved methodologies. Project Proponents must deduct leakage that reduces the GHG emissions reduction and/or removal benefit of a project in excess of any applicable threshold specified in the methodology.
Independently Validated and Verified	<p>Validation is the systematic, independent and documented process for the evaluation of a GHG Project Plan against applicable requirements of the ACR Standard, sector standard and approved methodology.</p> <p>Verification is the systematic, independent and documented assessment by a qualified and impartial third party of the GHG assertion for a specific reporting period.</p>	<p>ACR requires third-party validation and verification, by an ACR-approved Validation/Verification Body (VVB), at specified intervals in order to issue ERTs. Governing documents for validation and verification are the <i>ACR Standard</i>, relevant sector standard, relevant methodology, and the <i>ACR Validation and Verification Guideline</i>.</p> <p>Verification is only required prior to issuance of ERTs (i.e. not necessarily at project registration).</p> <p>Validation and verification may occur simultaneously, and be conducted by the same ACR-approved verifier.</p> <p>ACR requires verifiers to provide a reasonable (as opposed to limited) level of assurance that the GHG assertion is without material discrepancy. ACR's materiality threshold is $\pm 5\%$.</p>

Criterion	Definition	ACR Requirement
<p>Community & Environmental Impacts</p>	<p>Projects have the potential to generate both positive and negative community and environmental impacts.</p>	<p>ACR requires community and environmental impacts to be net positive overall. Project Proponents shall document in the GHG Project Plan a mitigation plan for any foreseen negative community or environmental impacts, and shall disclose in their Annual Attestations any negative environmental or community impacts or claims of negative environmental and community impacts.</p> <p>ACR requires community and environmental impact assessment, and provides tools that may be used to assist in that assessment, but does not mandate a particular process or tool be used.</p> <p>ACR reserves the right to refuse a project based on community or environmental impacts that have not or cannot be mitigated, or present a significant risk of future negative environmental or community impacts.</p>

CHAPTER 4: ADDITIONALITY

ACR's additionality requirements are intended to ensure that credited offsets exceed the GHG reductions and removals that would have occurred under current laws and regulations, current industry practices, and without carbon market incentives. Project Proponents must demonstrate that the GHG emission reductions and removals from an offset project are above and beyond the "business as usual" scenario. To qualify as additional, ACR requires every project:

- *Either* to exceed an approved performance standard, as defined in the applicable methodology, and a regulatory additionality test;
- *Or* to pass a three-prong test of additionality as described below.

A. Three-Prong Additionality Test

This approach combines three tests that help determine whether GHG emission reductions and removals from an offset project are above and beyond the "business as usual" scenario. This does not mean the project activity delivers no financial or other benefits other than GHG reduction; it simply attempts to ascertain whether GHG reduction was a driving factor.

The three-prong test requires projects to demonstrate that they exceed currently effective and enforced laws and regulations; exceed common practice in the relevant industry sector and geographic region; and face at least one of three implementation barriers – financial, technological, or institutional. The three-prong test is described in Table 3. The GHG Project Plan must present a credible demonstration, acceptable to ACR and the VVB, that the project passes these tests.

Some ACR-approved methodologies require application of an additionality tool to assist Project Proponents in demonstrating additionality. ACR does not require all methodologies to mandate application of an additionality tool, but if the relevant methodology requires an additionality tool, its use is required.⁷

⁷ An example is some CDM methodologies approved by ACR.

Table 3 – Three-Prong Additionality Test

Test	Key Questions
Regulatory Surplus	<p>Is there an existing law, regulation, statute, legal ruling, or other regulatory framework in effect as of the project Start Date that mandates the project activity or effectively requires the GHG emissions reductions?</p> <p>Yes = Fail; No = Pass</p>
Common Practice	<p>In the field or industry/sector, is there widespread deployment of this project, technology, or practice within the relevant geographic area?</p> <p>Yes = Fail; No = Pass</p>
Implementation Barriers	<p><i>Choose one of the following three:</i></p> <p>Financial Does the project face capital constraints that carbon revenues can potentially address; <i>or</i> is carbon funding reasonably expected to incentivize the project's implementation; <i>or</i> are carbon revenues a key element to maintaining the project action's ongoing economic viability after its implementation?</p> <p>Yes = Pass; No = Fail</p> <p>Technological Does the project face significant technological barriers such as R&D deployment risk, uncorrected market failures, lack of trained personnel and supporting infrastructure for technology implementation, or lack of knowledge on practice/activity, and are carbon market incentives a key element in overcoming these barriers?</p> <p>Yes = Pass; No = Fail</p> <p>Institutional Does this project face significant organizational, cultural, or social barriers to implementation, and are carbon market incentives a key element in overcoming these barriers?</p> <p>Yes = Pass; No = Fail</p>
<p><i>If the project passes the Regulatory Surplus and Common Practice tests, and at least one Implementation Barrier test, ACR considers the project additional.</i></p>	

1. Regulatory Surplus Test

The regulatory surplus test requires the Project Proponent to evaluate existing laws, regulations, statutes, legal rulings, or other regulatory frameworks that directly or indirectly affect GHG emissions associated with a project action or its baseline candidates, and which require technical, performance, or management actions. These legal requirements may require the use of a specific technology, require meeting a certain standard of performance (e.g., new source performance standards), or require managing operations according to a certain set of criteria or practices (e.g., forest management rules). In determining whether an action is surplus to regulations, the Project Proponent need not consider voluntary agreements without an enforcement mechanism, proposed laws or regulations, optional guidelines, or general government policies.

Projects that are deemed regulatory surplus are considered surplus for the duration of their Crediting Period. If regulations change during the Crediting Period, this may make the project non-additional and thus ineligible for renewal, but does not affect its additionality during the current Crediting Period, unless otherwise specified in the project-specific methodology.

2. Common Practice Test

The common practice test requires the Project Proponent to evaluate the predominant technologies or practices in use in a particular industry, sector, and/or geographic region, as determined by the degree to which those technologies or practices have penetrated the market, and demonstrate that the proposed project activity is not common practice and will reduce GHG emissions below levels produced by common technologies or practices within a comparable environment (e.g., geographic area, regulatory framework, investment climate, access to technology/financing, etc.).

The level of penetration that represents common practice may differ between sectors and geographic areas, depending on the diversity of baseline candidates. The common practice penetration rate or market share for a technology or practice may be quite low if there are many alternative technologies and practices. Conversely, the common practice penetration rate or market share may be quite high if there are few alternative technologies or practices. Projects that are “first-of-its-kind” are not common practice.

Projects that are deemed to go beyond common practice are considered beyond common practice for the duration of their Crediting Period. If common practice adoption rates of a particular technology or practice change during the Crediting Period, this may make the project non-additional and thus ineligible for renewal, but does not affect its additionality during the current Crediting Period.

Note that the common practice test, a component of the three-prong test, is distinct from a performance standard. For some but not all activities, the data used to define common practice in a particular industry, sector or region may be functionally equivalent to the data required to establish an acceptable

practice-based performance standard. In such cases, Project Proponents may elect the option to demonstrate additionality by defining a practice-based performance standard and demonstrating that the project activity both exceeds this standard and is surplus to regulations.

3. Implementation Barriers Test

An implementation barrier represents any factor that would prevent the adoption of the project activity proposed by the Project Proponent. Generally, there are no barriers to the continuation of current activities, with the exception of regulatory or market changes that force a shift in a project activity, or the end of equipment's useful lifetime.

Under the implementation barriers test, Project Proponents shall choose at least one of three barrier assessments: i) financial, ii) technological, or iii) institutional. Project Proponents may demonstrate that the project activity faces more than one implementation barrier, but are not required to address more than one barrier.

- *Financial* - Financial barriers can include high costs, limited access to capital, or an internal rate of return in the absence of carbon revenues that is lower than the Proponent's established and documentable minimum acceptable rate. Financial barriers can also include high risks such as unproven technologies or business models, poor credit rating of project partners, and project failure risk. If electing the financial implementation barrier test, Project Proponents shall include solid quantitative evidence such as net present value (NPV) and internal rate of return (IRR) calculations.
- *Technological* - Technological barriers can include R&D deployment risk, uncorrected market failures, lack of trained personnel and supporting infrastructure for technology implementation, and lack of knowledge on practice/activity.
- *Institutional* - Institutional barriers can include institutional opposition to technology implementation, limited capacity for technology implementation, lack of management consensus, aversion to upfront costs, and lack of awareness of benefits.

B. Performance Standard Approaches

In lieu of the three-prong test, ACR also recognizes the "performance standard" approach in which additionality is demonstrated by showing that a proposed project activity is (1) surplus to regulations, and (2) exceeds a performance standard as defined in an approved methodology.

Project Proponents must first establish regulatory additionality per the requirements in section A.1 of this chapter.

Second, under the performance standard approach projects are required to achieve a level of performance that, with respect to emission reductions or removals, or technologies or practices, is significantly better than average compared with similar recently undertaken practices or activities in a relevant geographic area.⁸ The performance threshold may be:

- *Practice-based*: developed by evaluating the adoption rates or penetration levels of a particular practice within a relevant industry, sector or sub-sector. If these levels are sufficiently low that it is determined the project activity is not common practice, then the project activity is considered additional. Specific thresholds may vary by industry, sector, geography and practice, and are specified in the relevant methodology.
- *Technology standard*: installation of a particular GHG-reducing technology may be determined to be sufficiently uncommon that simply installing the technology is considered additional. Also termed a “positive list” approach.
- *Emissions rate or benchmark* (e.g., tonnes of CO₂e emission per unit of output): with examination of sufficient data to assign an emission rate that characterizes the industry, sector, subsector, or typical land management regime, the net GHG emissions/removals associated with the project activity, in excess of this benchmark, may be considered additional and credited.

Performance standard baselines specific to particular project types, activities and regions will be detailed in the relevant ACR-approved methodologies.

⁸ Adapted from the U.S. Environmental Protection Agency Climate Leaders offset methodologies at <http://www.epa.gov/stateply/resources/optional-module.html>.

CHAPTER 5: PERMANENCE

In GHG methodologies, the issue of permanence arises from the potential for reversal of GHG removal enhancements subsequent to issuance of credits. Impermanence is not an issue for some project types for which the GHG reductions or avoidance are not reversible once they occur. However terrestrial and geologic sequestration projects have the potential for GHG reductions and removals to be reversed upon exposure to risk factors, including unintentional reversals (e.g., fire, flood, insect infestation etc. for terrestrial projects; unanticipated releases of CO₂ for geologic projects) and intentional reversals (e.g., landowners or Project Proponents choosing to discontinue project activities).

A. Assessment of Risk

To assess the risk of reversals, Project Proponents of terrestrial and geologic sequestration projects must conduct a risk assessment addressing both general and project-specific risk factors. General risk factors include financial failure, technical failure, management failure, rising land opportunity costs, regulatory and social instability, and natural disturbances. Project-specific risk factors vary by project type.

Project Proponents shall conduct their risk assessment using the risk analysis tool specified in the applicable methodology. The output from a risk analysis tool will be a risk classification that is translated into a percentage or number of offsets that must be deposited in the ACR buffer pool to mitigate the risk of reversal (unless the Proponent elects another ACR-approved risk mitigation mechanism, if allowed by the applicable methodology).

The Project Proponent shall conduct this risk assessment and propose a corresponding buffer contribution. The risk assessment, overall risk category, and proposed buffer contribution shall be included in the GHG Project Plan. ACR evaluates the proposed overall risk category and corresponding buffer contribution. The VVB evaluates whether the risk assessment has been conducted correctly.

If no reversals occur, the project's risk category and buffer percentage (if applicable) remain unchanged for five years. The risk analysis must be re-evaluated every five years, coincident with the interval of required site visit verification. An exception is in the event of a reversal, in which case the project baseline, risk category and buffer contribution (if applicable) shall be re-assessed and re-verified immediately.

B. Primary Risk Mitigation Mechanism: the ACR Buffer Pool

Proponents of projects with a reversal risk must choose a risk mitigation mechanism. For Project Proponents choosing the ACR buffer pool, the project contributes the number of offsets as determined by the project-specific risk assessment to a buffer account held by ACR in order to replace unforeseen

losses. ACR has sole management and operational control over the offsets in the buffer pool. In the event of a reversal, ACR retires from the buffer pool an adequate number of offsets to compensate for the reversal.

To provide flexibility to Project Proponents, contributions to the buffer pool need not come from the project itself whose risk is being mitigated. Through adherence to ACR standards all ERTs are fungible, i.e., one metric ton GHG reduction or removal from any project is of equal benefit to the atmosphere as any other project. Therefore, a Project Proponent may make its buffer contribution in ERTs of any type and vintage.

Relevant sector standards (e.g., the *ACR Forest Carbon Project Standard*) provide further detail on the operation of the ACR buffer pool, including retirement of offsets to mitigate reversals, requirements for replenishing the buffer in the event of a reversal, return of buffer tons to the Project Proponent over time in the event of no reversals, and the possibility for buffer contributions to increase or decrease over time as a project undergoes periodic verification and re-assessment of risk.

C. Alternate Risk Mitigation Mechanisms

In lieu of making a buffer contribution in project ERTs or purchased ERTs of other type and/or vintage, Project Proponents may propose an insurance product for ACR approval as an alternate risk mitigation mechanism. Insurance may be a financial product based on an actuarial analysis of project risk, considering the region, threats, mitigating factors etc., similar to the assessment done for property insurance.

The Project Proponent may provide insurance, bonds, letters of credit or other financial assurances to ACR in amounts, and in form and substance, satisfactory to ACR in ACR's sole and absolute discretion. Such financial products must assure provision of sufficient funds to ACR, in the event a project suffers an unintentional or intentional reversal of sequestered carbon, to purchase and retire a number of ERTs sufficient to offset such reversal. There may be no hidden costs, exclusions, or unanticipated liabilities. ACR must approve the proposed alternative following due diligence by ACR at the Project Proponent's or insurance provider's expense.

CHAPTER 6: PROJECT DEVELOPMENT TRAJECTORY

ACR requires every project submitted for registration to use an ACR-approved methodology. This Chapter focuses mainly on the project development steps subsequent to methodology approval – optional listing, GHG Project Plan submission, eligibility screening, registration, validation and verification, and issuance of ERTs – which are described with reference to the three most common methodology scenarios (i.e., Project Proponent is using an already approved methodology, proposing a modification to an approved methodology, or bringing a new methodology to ACR for approval).

GHG Project Plans are screened by ACR against the *ACR Standard*, any relevant sector standard, and the relevant methodology. A successful eligibility screening results in ACR’s non-binding determination that the GHG Project Plan complies with all applicable requirements. The eligibility screening does not include a detailed review of project data and does not take the place of nor reduce the scope of validation and verification by an ACR-approved independent third-party VVB. Validation and verification may occur simultaneously and need only occur prior to issuance of ERTs, which may be significantly later than the project Start Date and/or registration. Upon acceptance by ACR of the verification statement, ACR registers the project, posts project documents, and issues serialized ERTs to the Project Proponent’s account. The next steps (sale, retirement, etc.) are at the discretion of Project Proponents and counterparties.

The steps in this process are outlined below and presented graphically in Figure 1.

A. Projects Using an ACR-published or ACR-approved Methodology

A Project Proponent using an ACR-approved methodology shall proceed directly to the steps described below.

1. (*Optional*) Project Proponent lists the project with ACR by submitting a listing form. Once listed with ACR, projects must register⁹ on ACR within two years. If a project submits a listing form but does not register within two years, it must resubmit a listing form and update to the most recent version of the ACR Standard and applicable methodology.
2. Project Proponent submits a GHG Project Plan using the ACR-published or ACR-approved methodology. The Proponent shall at this point also submit any additional required documentation as listed in Section F below.

⁹ A project is considered to be “registered” in the ACR Registry platform upon a successful eligibility screening which means that the project may proceed to validation and verification.

3. ACR screens the GHG Project Plan, at fees per the currently published ACR fee schedule,¹⁰ against the *ACR Standard*, relevant sector standard, and methodology. This screening results in (a) approval to proceed to validation/verification, (b) requests for clarifications or corrections, or (c) rejection because the project is ineligible or does not meet requirements of the *ACR Standard*. If the ACR screening includes requests for clarifications or corrections, the Project Proponent may re-submit the GHG Project Plan for further eligibility screening. One re-submittal is allowed without additional fee; subsequent re-submittals require an additional eligibility screening fee. Upon a successful eligibility screening, a project is considered to be registered in the ACR.
4. Having conducted the eligibility screening and received approval to proceed to validation/verification, the Project Proponent hires an ACR-approved independent third-party VVB to validate the GHG Project Plan and verify GHG assertions. Validation and verification may occur simultaneously and need only occur prior to issuance of ERTs. Fees for validation and verification are as agreed between the Project Proponent and verifier. This results in submission to ACR of a validation report, verification report and verification statement.
5. ACR reviews the validation and verification documents. This results in a) acceptance, b) acceptance contingent on requested corrections or clarifications, or c) rejection. See *ACR Validation and Verification Guideline* for further detail.
6. Upon acceptance of the verification statement, ACR makes public the GHG Project Plan, verification statement and any other non-commercially sensitive information on the ACR registry.
7. ACR issues to the Project Proponent's account serialized ERTs for the relevant reporting period, in the amount listed in the verification statement. In the case of a terrestrial or geologic sequestration project, ACR simultaneously deposits the appropriate number of ERTs into the ACR buffer pool, if this is the risk management option chosen by the Project Proponent.
8. Next steps are at the Project Proponent's discretion – offset transfer, retirement, etc. – with activation, transaction, cancellation and retirement fees per currently published ACR fee schedule.

B. Projects Modifying an Existing Approved Methodology

Project Proponents proposing to modify an existing ACR-approved methodology (or CDM methodology) shall take the following steps:

1. Project Proponent submits to ACR the proposed methodology modification. ACR conducts an internal review and, at the Project Proponent's discretion, shall conduct a public comment period followed by expert peer review (see Chapter 7 for further details on steps required for approval).
2. Having secured approval of the methodology modification, the Project Proponent follows steps 1 through 8 as in section A above.

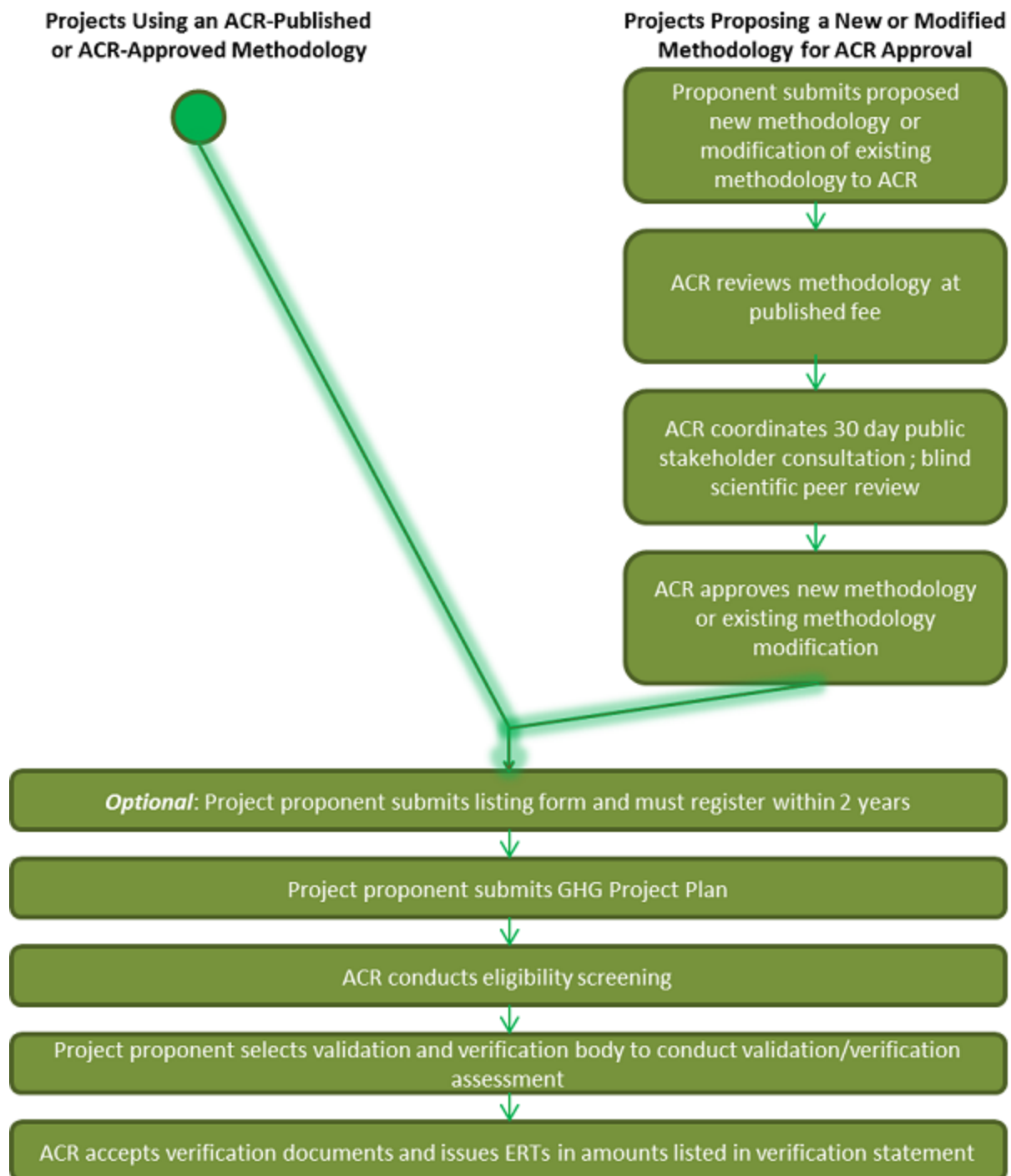
¹⁰ The ACR fee schedule is posted at www.americancarbonregistry.org.

C. Projects Proposing a New Methodology for ACR Approval

For projects for which there is no ACR-published or ACR-approved methodology the Project Proponent finds acceptable, ACR offers the option of proposing a new methodology for review and approval. Approval of new methodologies requires ACR's internal screening, public stakeholder consultation, and scientific peer review process as detailed in Chapter 7. Project Proponents (or methodology developers) shall take the following steps:

1. Project Proponent submits to ACR the proposed methodology for ACR's review at the published fee. ACR reviews the methodology for eligibility within ACR's scope and provides feedback in addition to a budget and timeline for methodology approval through ACR's public consultation and scientific peer review process.
2. ACR coordinates a 30 day public stakeholder consultation period followed by a blind scientific peer review process by subject matter experts. Once all technical issues raised by peer reviewers have been addressed, ACR approves the methodology.
3. Having secured ACR approval of the new methodology, the Project Proponent follows steps 1 through 8 as in section A above.

Figure 1. The ACR Project Development Trajectory



D. Information in a GHG Project Plan

A GHG Project Plan is a document that describes the Project Activity; addresses ACR eligibility requirements; identifies sources and sinks of GHG emissions; establishes project boundaries; describes the baseline scenario; defines how GHG quantification will be done and what methodologies, assumptions, and data will be used; and provides details on the project's monitoring, reporting, and verification procedures. A GHG Project Plan shall be sufficient for an independent third party to verify project outcomes. The GHG Project Plan shall include the following information:

- Project title, purpose(s) and objective(s);
- Type of GHG project;
- Project location, including geographic and physical information allowing for the unique identification and delineation of the specific extent of the project;
- Physical conditions prior to project initiation;
- Description of how the project will achieve GHG emission reductions and/or removal enhancements;
- Project technologies, products, services and expected level of activity;
- *Ex ante* projection of estimated GHG emission reductions and removal enhancements, stated in metric tons of CO₂e;
- Identification of risks that may substantially affect the project's GHG emission reductions or removal enhancements;
- Roles and responsibilities, including contact information of the Project Proponent, other project participants, relevant regulator(s) and/or administrators of any GHG Program(s) in which the GHG project is already enrolled, and the entities holding offset title and land title;
- Information relevant to the eligibility of a GHG project and quantification of GHG emission reductions or removal enhancements, including legislative, technical, economic, sectoral, socio-cultural, environmental, geographic, site-specific and temporal information;
- Relevant outcomes from any stakeholder consultations and mechanisms for on-going communication, as applicable;
- Chronological plan for initiating project activities, project term, frequency of monitoring, reporting and verification, including relevant project activities in each step of the GHG project cycle;
- Notification of relevant local laws and regulations related to the project and a demonstration of compliance with them;
- Statement whether the project has applied for GHG emission reduction or removal credits through any other GHG emissions trading system and the success of any of these applications;
- An assessment of net positive community and environmental impacts, and a mitigation plan for any foreseen negative community or environmental impacts.

Project Proponents shall use the template for GHG Project Plans available at www.americancarbonregistry.org.

E. Project Deviations

ACR will permit project-specific deviations to an existing approved methodology where they do not negatively impact the conservativeness of an approved methodology's approach to the quantification of GHG emissions reductions and removal enhancements. For instance, where alternate monitoring or measurement regimes are proposed, ACR may permit these changes provided they are conservative. ACR will not permit, on a project-specific basis, changes to requirements related to additionality assessment or baseline establishment.

Project Proponents shall submit any proposed project-specific methodology deviation to ACR for review and approval. Deviations apply for that specific project but are not published as modifications to the methodology. Project Proponents must provide evidence that the proposed deviation (e.g. a substitute calculation method for missing data) is conservative, i.e. likely to underestimate net GHG reductions or removal enhancements.

Project Proponents shall request a project-specific deviation by using the Methodology Deviation template available at www.americancarbonregistry.org.

F. Project Monitoring Reports

Project monitoring reports shall be completed for each verified reporting period. The monitoring report shall describe the current status of project operation, and include the data monitored and monitoring plan, and the calculated emission reductions for the reporting period. Additionally, project monitoring reports shall describe any project-specific deviations that may have occurred during the reporting period as per the below.

Changes to validated GHG Project Plans shall not be conducted. Instead, project-specific deviations from methodology requirements or other changes from the validated GHG Project Plan (such as new GHG sources, sinks, or reservoirs) must be described in a Project Monitoring Report (and all subsequent Project Monitoring Reports) and submitted during the Project's subsequent verification. As described in Section E. above, any project-specific deviation from methodology requirements must be pre-approved by ACR. Where changes to GHG Project Plans require revisions to baseline or additionality assessments, these changes must be validated at the time of the subsequent verification.

Project Proponents shall use the template for Project Monitoring Reports available at www.americancarbonregistry.org.

G. Aggregation and Program of Activities

G.1 Aggregation

A Project Proponent proposing an Aggregate shall submit a GHG Project Plan encompassing all project instances, fields, producers or facilities included in the Aggregate. Project boundaries, baseline definition, additionality demonstration, and all other requirements are applied at the level of the Aggregate.

The ACR Standard requirements for precision ($\pm 10\%$ of the mean at a 90% confidence level) shall be applied at the level of the entire Aggregate for the purposes of monitoring and verification. The GHG Project Plan for an Aggregate is subject to eligibility screening by ACR and third-party validation, once per Crediting Period.

If the Project Proponent anticipates adding more project instances, fields, producers or facilities before the end of the Crediting Period, they should instead register a Program of Activities (PoA).

G.2 Program of Activities

The Project Proponent serving as aggregator for a PoA shall complete a GHG Project Plan covering the entire PoA as well as the first Cohort of Project Participants. The GHG Project Plan shall define the project boundary and baseline criteria encompassing the initial Cohort of fields, producers or facilities, and should be written broadly enough to encompass new Cohorts anticipated to be added in the future. The GHG Project Plan will specify project boundaries (geographic, temporal, and the GHG assessment boundary), a baseline scenario, and a monitoring/verification plan for the entire PoA, i.e. for the initial and future Cohorts.

A PoA may be created at the time of registering the first Cohort of fields, producers or facilities. Cohorts may be added at any time provided they conform to the project boundaries and baseline criteria established in the initial GHG Project Plan. A PoA will have multiple Start Dates and Crediting Periods, but a single overall baseline scenario and monitoring/verification plan.

The *ACR Standard* requirements for precision ($\pm 10\%$ of the mean at a 90% confidence level) shall be applied at the level of each Cohort for the purposes of monitoring and verification.

The GHG Project Plan for a PoA is subject to eligibility screening by ACR and third-party validation, at the start of the Crediting Period for the first Cohort. Subsequently, each Cohort Description must be reviewed by the VVB.

The Project Proponent must describe in the GHG Project Plan a management system that includes the following:

- Clear definition of the roles and responsibilities of personnel involved in the process of inclusion of new Cohorts;
- Procedures for technical review of inclusion of new Cohorts, made available to the VVB at the time of validation of the PoA;
- A procedure to avoid double counting (e.g. to avoid the case of including in a Cohort a project instance, field, producer or facility that has been or will be registered on ACR as its own project, or in a Cohort of another PoA);
- Records and documentation control process for each Cohort under the PoA, made available to the VVB at the time of request for inclusion of the Cohort.

The Project Proponent of the PoA shall identify measures to ensure that all Cohorts under its PoA are neither registered as an individual ACR project, nor included as Cohorts in another registered PoA. These measures are to be validated and verified by the VVB.

The Project Proponent shall demonstrate that net emission reductions and removal enhancements for each Cohort under the PoA are real and measurable; are an accurate reflection of what has occurred within the project boundary; and are uniquely attributable to the PoA. The PoA shall therefore define at registration the type of information which is to be provided for each Cohort to ensure that leakage, additionality, establishment of the baseline, baseline emissions, eligibility and double counting are unambiguously defined for each Cohort within the PoA.

H. Commercially Sensitive Information

Project Proponents may designate certain parts of the GHG Project Plan or other project documentation as Commercially Sensitive Information. This information must be available for review by ACR and the VVB (with non-disclosure agreements as necessary), but will be excised from the project documentation posted publicly on the ACR registry.

For the sake of transparency, ACR shall presume project information to be available for public scrutiny, and demonstration to the contrary shall be incumbent on the Project Proponent. At a minimum, ACR shall disclose publicly the project baseline scenario, calculations, monitoring report and additionality assertion. The VVB shall check that any information requested as “commercially sensitive” meets the ACR definition of Commercially Sensitive Information.

I. Additional Required Documentation for Eligibility Screening

ACR may require the following documentation as part of screening the GHG Project Plan:

- Title documents or sample landowner agreements;
- Chain of custody documentation, if applicable;
- ACR-Proponent agreement governing buffer pool obligations, if applicable.

Proof of title shall accompany each GHG Project Plan, and shall contain one or more of the following: a legislative right; a right under local common law; ownership of the plant, land, equipment and/or process generating the reductions/removals; or a contractual arrangement with the owner of the plant, land, equipment or process that grants offset title to the Project Proponent.

Project Proponents shall include documentation to establish chain of custody, prior to registration on ACR, if the project offsets have been bought and sold previously, or if the project has a forward option contract. Examples of appropriate documents are:

- Delivery of Confirmation Notice;
- Emissions Reduction Purchase Agreement;
- Signed Attestation of Ownership;
- Forward Option Purchase Agreement.

J. Crediting Period Renewal

All projects have a limited Crediting Period, i.e., the finite length of time for which a GHG Project Plan is valid, and during which a project can generate offsets against its baseline scenario.

In general, the Crediting Period for non-AFOLU projects is ten (10) years, unless otherwise specified in the relevant ACR sector standard or approved methodology. Crediting periods for AFOLU projects vary and are specified in the relevant sector standard and/or methodology.

A Project Proponent may apply to renew the Crediting Period by:

- Re-submitting the GHG Project Plan in compliance with then-current ACR standards and criteria;
- Re-evaluating the project baseline;
- Demonstrating additionality against then-current regulations, common practice and implementation barriers (or against an approved performance standard and then-current regulations);
- Using ACR-approved baseline methods, emission factors, tools and methodologies in effect at the time of Crediting Period renewal;
- Undergoing validation and verification, as required.

ACR does not limit the allowed number of renewals, since at each Crediting Period renewal the Project Proponent must demonstrate that the project is additional and meets all ACR requirements. An acceptable validation report is necessary in order for ACR to renew the Crediting Period and continue issuing offsets generated by the project. Upon acceptance by ACR of the validation and verification documents, ACR will issue new ERTs each year (or more or less frequently, at Proponent's request)

for the duration of the new Crediting Period, provided the Proponent submits its Annual Attestation, periodic desk-based verifications, and full verifications at least every five years.

CHAPTER 7: METHODOLOGIES AND TOOLS

If ACR has not yet published a methodology for a particular project type, the Project Proponent has the option to request approval of a methodology developed under another GHG program, or to submit a new or modified methodology to ACR for approval. Any project proposing to use an ACR-approved methodology from another GHG program must comply with the ACR Standard and any relevant ACR sector standard.

A. GHG Measurement Tools and Methodologies

1. ACR-Published and CDM-Approved Methodologies

Methodologies published by ACR via the public consultation and peer review process are approved without qualification. Methodologies approved by the CDM Executive Board are generally approved for use in non-Annex I countries; however, Project Proponents implementing projects under CDM methodologies in the U.S. or other Annex I country must have ACR's review, clarifications and approval first to ensure compliance with ACR standards.

2. Modifications to Existing Approved Methodologies

ACR may permit modifications where they do not negatively impact the conservativeness of an approved methodology's approach to determining additionality and quantification of GHG emissions reductions and removal enhancements. Methodology modifications may be submitted for approval under ACR's Internal Review, Public Consultation, and Peer Review Process as described in Section B below.

3. Methodologies from Other GHG Programs

Proponents proposing to use an existing methodology approved under another GHG program should first consult the list of approved methodologies at www.americancarbonregistry.org. If the proposed methodology is not included in this list, the Proponent shall request review and approval of the methodology by ACR at current posted methodology review fees.

ACR may refer the issue to the relevant ACR Technical Committee, if one exists for the scope in question. Approval of methodologies from programs other than CDM requires ACR's public consultation and peer review process.

4. New Methodologies

New methodologies proposed to ACR for approval always require internal screening, public consultation and blind scientific peer review.

B. ACR's Internal Review, Public Consultation and Peer Review Process

The following process is applied to new methodologies developed internally by Winrock/ACR; methodologies drafted by external authors; methodology modifications; and methodologies from other GHG programs proposed for use on ACR. In such cases, ACR coordinates a process of internal review, public stakeholder consultation and blind scientific peer review. The process is administered by ACR, with fees charged to the Project Proponent.

1. The Project Proponent submits the proposed new or modified methodology to ACR. ACR has templates posted at www.americancarbonregistry.org for some proposed methodologies. Where ACR has a posted template, Project Proponents must submit their proposed methodology using this template in order to reduce the time and cost of the approval process for both Project Proponent and ACR.
2. ACR screens the methodology against ACR requirements, communicates to the Project Proponent any corrections or clarifications that are immediately needed, and informs the Proponent of its judgment whether the methodology is ready for public consultation and peer review. ACR conducts this internal review at currently published fees. If the Project Proponent elects to proceed, the Proponent addresses any corrections and clarifications identified in the ACR review and resubmits the methodology.
3. ACR coordinates a public consultation process. The methodology is posted on the ACR website for a minimum of 30 days and ACR sends out a public notice inviting comments. During this period, the methodology authors may also elect to conduct a webinar with ACR to present the draft methodology and solicit additional comments. At the conclusion of the public comment period, ACR compiles all comments by methodology section and forwards a compiled report to the Project Proponent. The Proponent incorporates revisions and/or documents responses to each comment, which are posted on ACR's website.
4. The revised methodology is provided to a team of independent subject matter experts for a blind scientific peer review process. ACR may consult the relevant ACR Technical Committee in the selection of reviewers. The lead reviewer compiles comments and recommendations from the peer review team, and prepares a summary report. ACR delivers to the Project Proponent a peer review report, organized by section of the methodology, to which the Project Proponent must respond by incorporating revisions and/or documenting justifications for the proposed approach. Timing and cost of peer review depends on the complexity, scope and quality of the methodology and the availability of peer reviewers. The cost of peer review is borne by the Project Proponent.
5. The Project Proponent, having made corrections or clarifications required by peer reviewers or documented justifications for not incorporating changes, submits the revised methodology to ACR. Generally several rounds are necessary.

6. As needed, ACR consults the relevant ACR Technical Committee on any issues on which consensus has not been reached.
7. Once all required corrections have been made, ACR approves the new methodology and publishes it on the ACR website. An approved methodology may be used by any Project Proponent, including but not limited to the methodology author, in preparing GHG Project Plans and registering projects on ACR.
8. ACR posts process documentation – including all public comments and documented responses, and all peer review comments and documented responses – along with the public comment version of the methodology, and the final approved methodology.

Scientific peer review teams are selected from a pool of potential reviewers with applicable subject matter expertise. ACR actively identifies and qualifies candidates for inclusion in this pool, and also publicly solicits applications from interested parties. Applications are reviewed for sector expertise, GHG quantification experience, and impartiality. Throughout and after the peer review process, the experts selected for each review team remain unknown to the Project Proponent as well as the public.

C. Updates to ACR-Approved Methodologies and Tools

From time to time ACR may update *ACR-Approved Methodologies and Tools*. Such updates occur when significant changes to GHG accounting best practice or the legislative and/or regulatory context justify an update; when sufficient new data is available to revise eligibility and/or additionality requirements; when ACR becomes aware of clarifications that should be made; or for other reasons.

D. Roles of the ACR Technical Committee(s)

ACR from time to time may establish Technical Committees for particular sectors (e.g., AFOLU), to provide independent advice to ACR on methodology acceptance, methodology modifications and project deviations, selection of peer reviewers, and related issues. The responsibilities of the Technical Committees include, but are not limited to:

- Review proposed new methodologies and tools submitted to ACR for approval.
- Advise ACR on the selection of appropriate peer reviewers for a proposed new methodology or methodology revision.
- Make final determinations in the event consensus on a particular methodological issue is not reached by the peer review team or between the peer reviewers and the methodology author.
- Advise ACR on continuous improvements to its AFOLU standards, including issuance of new versions at appropriate intervals.
- Advise ACR on decisions to commission new methodologies and tools using internal resources.

ACR Technical Committees are constituted via calls for applications to select the most relevant experts.

E. Methodologies and Tools for Social and Environmental Impact Assessment

Project social and/or environmental Impact Assessments (EIAs) are to be conducted if required in the associated ACR-approved methodology. Assessments must use an internationally recognized approach¹¹ and EIAs must demonstrate approval by the applicable regulatory agency.

For all projects, ACR requires community and environmental impacts to be positive overall. The difference in community impacts between the 'with' and 'without' project scenarios (i.e., the community benefit) shall be positive in order for the project to qualify for registration. Project Proponents shall include in their GHG Project Plan a credible estimate of impacts of the project on communities and the environment in the immediate project area. This shall include changes in community well-being due to the Project Activity and an evaluation of any negative impacts on community groups. Project Proponents shall base these estimates on defined and defensible assumptions about how the Project Activity will alter social and economic well-being, including potential impacts of changes in natural resources and ecosystem services identified as important by the communities for the project duration.

Project Proponents shall disclose in their Annual Attestation any negative environmental or community impacts or claims of negative environmental and community impacts, and the actions taken to mitigate any reported negative environmental or community impacts.

¹¹ Such as the International Finance Corporation (IFC) Sustainability Framework & Performance Standards at http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IFC+Sustainability/Sustainability+Framework; The World Bank Safeguards Policies at <http://go.worldbank.org/WTA1ODE7T0>; Social Carbon Standards at <http://www.socialcarbon.org>; and The Climate, Community and Biodiversity Alliance (CCBA) Project Design Standards at <http://www.climate-standards.org/ccb-standards>.

CHAPTER 8: VALIDATION AND VERIFICATION

This chapter provides a general overview of ACR requirements for validation of GHG Project Plans, and *ex post* verification of GHG assertions, by a competent and independent third-party VVB approved by ACR. Further detail on ACR verification requirements is included in the *ACR Validation and Verification Guideline*, available at www.americancarbonregistry.org.

A. Definitions

ACR conducts a detailed screening of every GHG Project Plan against applicable requirements of the ACR Standard, relevant sector standard and methodology. ACR may request clarifications and corrections regarding GHG Project Plan documentation before allowing a project to commence validation. Validation is the systematic, independent and documented process for the evaluation of a GHG Project Plan against applicable requirements of the ACR Standard, sector standard and approved methodology.

Verification is the systematic, independent and documented assessment by a qualified and impartial third party of the GHG assertion for a specific reporting period.

Validation and verification must be conducted by an ACR-approved independent third-party VVB. Validation and verification may be conducted by the same entity, and may occur simultaneously.

B. Materiality Threshold

A material misstatement is an inaccurate assertion of an offset project's GHG emission reductions/removals, which may reasonably be expected to influence decisions or actions taken by the users of the GHG project information. To accept a verification statement, ACR requires that discrepancies between the emission reductions/removal enhancements claimed by the Project Proponent and estimated by the VVB be immaterial, i.e. be less than ACR's materiality threshold of $\pm 5\%$. Individual or aggregation of errors or omissions greater than the ACR materiality threshold of $\pm 5\%$ require re-stating before a verification statement will be accepted.

The below equation is to be used in order to calculate the percent error in an emission reduction assertion:

$$\% \text{ Error} = \left(\frac{\text{Project Emission Reduction Assertion} - \text{Verifier Emission Reduction Recalculation}}{\text{Verifier Emission Reduction Recalculation}} \right) \times 100$$

C. Validation and Verification Interval

Validation of the GHG Project Plan only occurs once per Crediting Period. Renewal of the Crediting Period requires a new validation. Per Section 6.F, if project-specific changes that require revision to

baseline or additionality assessments occur after the initial validation, these changes must be disclosed in the Project Monitoring Report and validated at the Project's subsequent verification.

ACR requires verification of GHG assertions at specified intervals in order to issue new ERTs. ERTs may be created and issued annually, or at the Proponent's request, more or less frequently. At each request for issuance of new ERTs, the Project Proponent must submit a verification statement from an approved verifier. No less than once every five years, Proponents must submit a verification statement based on a full verification including a field visit to the project site. This five year verification requirement begins on the date that the project is registered in the ACR. The scope of this verification should include (in the case of AFOLU projects) an updated assessment of risk of reversal and an updated buffer determination, as applicable.

D. Validation/Verification Body Requirements

Verification is a risk-based process carried out in conformance with ISO 14064-3:2006 and ISO 14065:2007.¹² VVBs shall be accredited for project validation and verification in the sector of the applicable methodology, and shall meet the competence requirements as set out in ISO 14065:2007.

All VVBs must be approved by ACR and accredited under ISO 14065 by the American National Standards Institute (ANSI); or be accredited by the UNFCCC as Accredited Independent Entities approved under Joint Implementation or Designated Operational Entities approved under the Clean Development Mechanism.

A list of currently approved VVBs and the sectors for which they are approved to conduct validation and/or verification is provided at <http://americancarbonregistry.org/carbon-accounting/verification>.

In order to conduct validation or verification, all VVBs must be in good standing; have completed the application process described at <http://americancarbonregistry.org/carbon-accounting/verification>, including submitting an application form and Attestation of Validation/Verification Body; document technical capabilities for each of the sectoral scopes in which the verifier seeks to conduct validation or verification; and have submitted a project-specific Conflict of Interest Form.

E. Verification Report and Statement

On completion of verification, the Project Proponent shall submit a verification report and verification statement to ACR. Verification documents shall be in English. They shall describe the verification process, any issues raised during the verification and their resolutions, and the conclusions reached by the VVB. The verification report shall:

- Describe the level of assurance of the verification statement;

¹² ISO 14065:2007 references to 'GHG Programme' shall mean the American Carbon Registry.

- Describe the objectives, scope and criteria of the verification against the ACR Standard and relevant sector standards;
- Describe whether the data and information supporting the GHG assertion were hypothetical, projected and/or historical in nature;
- State the actual number of ERTs associated with the project-specific monitoring report that the verifier has verified;
- Include the GHG assertion, signed by the lead verifier;
- Include the verifier's conclusion on the GHG assertion, with any qualifications or limitations;
- For projects requiring Project Proponents to assess risk of reversal and apply an ACR-approved risk reversal mitigation option, include the verifier's opinion on the risk assessment and adequate risk reversal mitigation.

More detail on contents of the verification report and statement is provided in the *ACR Validation and Verification Guideline*.

The VVB shall keep all documents and records in a secure and retrievable manner for at least two years after the end of the relevant project Crediting Period, even if it does not carry out verification throughout the project Crediting Period.

F. Verification Acceptance

ACR will review and accept, request corrections or clarifications, or reject the verification statement. If ACR requests corrections or clarifications, the Project Proponent and verifier have one opportunity to address these and resubmit the verification statement.

If ACR accepts a verification statement, and has already completed all other required steps, then ACR will register the project; post the GHG Project Plan, verification report and statement, and other documentation to the ACR website; and issue ERTs to the Project Proponent's account.

Projects must be verified without reservation, with Project Proponents having addressed all clarifications and corrections required by the verifier. ACR reserves the right to accept or reject verification from an approved VVB.

G. Rotation of Verification Bodies

ACR requires that Project Proponents utilize a different VVB at a minimum of every five years or five verifications, whichever comes first.

CHAPTER 9: LINKAGES TO OTHER GHG REGISTRIES AND EMISSION TRADING SYSTEMS

A. Previous Participation in another Voluntary GHG Registry

ACR provides Project Proponents the flexibility to register eligible offsets that previously were listed on another voluntary GHG registry, provided the offsets comply with all relevant ACR criteria, and have been canceled from the other registry to ensure no double-counting, crediting, or selling of the same GHG reductions or removals. Offsets canceled from another registry for registration on ACR will be screened by ACR against all relevant ACR standards and must be verified against ACR standards and methodologies by an ACR-approved VVB.

Members may likewise cancel offsets from ACR, at published cancellation fees, to register them on another GHG registry.

ACR prohibits a Project Proponent from registering a given emission reduction simultaneously on ACR and on another private registry. This prohibition does not include the registry under the U.S. Department of Energy 1605(b) Program for Voluntary Reporting of Greenhouse Gases.

B. Previous Participation in a Binding GHG System

In order to avoid double-counting of emission reductions or removal enhancements, Proponents of projects that reduce or remove emissions from activities that are a part of another voluntarily binding GHG emissions trading program, or that take place in a jurisdiction or sector in which there is a binding limit established on GHG emissions (e.g., the Regional Greenhouse Gas Initiative, the California cap-and-trade program, or other future state/regional programs with a binding GHG limit), shall provide evidence that the reductions and removals generated by the project have not and will not be used in the emissions trading program or for the purpose of demonstrating compliance with binding limits that are in place in that program or jurisdiction.

If project activities take place in such a program or jurisdiction, the Project Proponent shall include in its GHG Project Plan a written statement from the GHG emissions program operator that it has canceled from the program or national or regional cap (as applicable) a number of emissions allowances, offsets or other GHG credits equivalent to the emissions reductions and removals generated by the project so that they can no longer be used within the operator's GHG Program. Alternately, the Proponent may provide evidence of purchase and cancellation of GHG allowances equivalent to the GHG emissions reductions or removals generated by the project related to the program or national cap.

C. Projects in a Non-Annex I Country

In order to prevent double-counting of GHG emission reductions or removal enhancements, Project Proponents proposing a project in a developing country (e.g., a non-Annex I country under the UN Framework Convention on Climate Change) shall provide documentation that they have notified the relevant Designated National Authority (DNA) for that country of their project registration in the voluntary market, including the project's expected GHG reductions/removals.

D. Previous Rejection by a GHG System

ACR may consider a project rejected by other registries, due to procedural or eligibility requirements, if the project complies with all aspects of the *ACR Standard* and any relevant sector standard. The Project Proponent for such a project shall:

- Include a statement in the GHG Project Plan that lists all other programs to which the Project Proponent has applied for registration, was rejected, and the reason(s) for the rejection. Such information shall not be considered Commercially Sensitive Information; and
- Provide the actual rejection document(s), including any additional explanation, to ACR and its verifier.

REFERENCES

Clean Development Mechanism (CDM). List of Accepted Baseline and Monitoring Tools and Methodologies. <http://cdm.unfccc.int/methodologies/PAMethodologies/approved.html>

Clean Development Mechanism (CDM). Tool for the demonstration and assessment of additionality. <http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-01-v5.2.pdf>.

Climate, Community & Biodiversity Alliance (CCBA). Climate, Community and Biodiversity Standards, *Project Design Standards*, Second Edition (2008). http://www.climate-standards.org/standards/pdf/ccb_standards_second_edition_december_2008.pdf.

International Finance Corporation. 2012. *IFC Sustainability Framework: Policy and Performance Standards on Environmental and Social Sustainability and Access to Information Policy*. http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IFC+Sustainability/Sustainability+Framework/.

International Organization for Standardization (ISO) 14064-1:2006(E) - Greenhouse gases. Part 1: Specification with guidance at the organization level for quantification, monitoring, and reporting of greenhouse gas emission reductions or removal.

International Organization for Standardization (ISO) 14064-2:2006(E) - Greenhouse gases. Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.

International Organization for Standardization (ISO) 14064-3:2006(E) - Greenhouse gases. Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions.

International Organization for Standardization (ISO) 14065:2007(E) - Greenhouse gases. Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition.

Intergovernmental Panel on Climate Change (IPCC). Fourth Assessment Report. http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf

United States Environmental Protection Agency (USEPA) Climate Leaders Program, GHG Inventory Protocol (May 2005). <http://www.epa.gov/climateleaders/resources/inventory-guidance.html>

World Bank. 2012. Safeguard Policies. <http://go.worldbank.org/WTA1ODE7T0>.

World Resources Institute and World Business Council for Sustainable Development (WRI/WBCSD), Greenhouse Gas Protocol Initiative. The GHG Protocol: A Corporate Accounting and Reporting Standard – Revised Edition (March 2004). <http://www.ghgprotocol.org/files/ghg-protocol-revised.pdf>.

APPENDIX A: DEFINITIONS

Additionality

ACR's additionality requirements are intended to ensure that project offsets are in addition to reductions and/or removals that would have occurred in the absence of the Project Activity and without carbon market incentives. A Project Proponent must demonstrate that the GHG emission reductions and removals associated with an offset project are above and beyond the "business as usual" scenario. ACR requires that every project either pass an approved performance standard and a regulatory additionality test, or pass a three-pronged test to demonstrate that the project activity is beyond regulatory requirements, beyond common practice, and faces at least one of three implementation barriers.

Aggregate

The grouping of multiple project instances, fields, producers or facilities into a single project registered on ACR. An Aggregate must be coordinated by a Project Proponent (public or private entity) serving as the aggregator. The GHG Project Plan will define the overall project boundary and baseline conditions encompassing all project instances, fields, producers or facilities. An Aggregate will have a single Start Date and Crediting Period.

Agriculture, Forestry and Other Land Use (AFOLU)

A broad category of ACR-eligible project activities that reduce GHG emissions and/or enhance GHG removals through changes in agriculture, forestry and land-use practices.

American Carbon Registry® (ACR)

A leading carbon offset program founded in 1996 as the first private voluntary GHG registry in the world, ACR operates in the voluntary and regulated California carbon markets. ACR has unparalleled experience in the development of environmentally rigorous, science-based offset methodologies as well as operational experience in the oversight of offset project verification, registration, offset issuance and retirement reporting through its online registry system.

ACR-approved Methodology

ACR-approved methodologies include those published by ACR after public consultation and scientific peer review, and methodologies approved for use by the CDM Executive Board provided they are implemented in developing countries or otherwise have ACR approval for use in the U.S. or other Annex I nation. Methodologies approved by other GHG programs may be submitted to ACR for approval through the public consultation and scientific peer review process.

Annual Attestation Statement

The statement that a Project Proponent provides annually to ACR relating to the continuance, ownership, and community and environmental impacts of a project. The Attestation is required in order to continue crediting.

Baseline Scenario

The project baseline is a counterfactual scenario that forecasts the likely stream of emissions or removals to occur if the Project Proponent does not implement the project, i.e., the "business as usual" case. It also reflects the sum of the changes in carbon stocks (and where significant, N₂O and CH₄ emissions) in the carbon pools within the project boundary that would occur in the absence of the Project Activity.

Buffer Pool

ACR risk mitigation mechanism whereby the Project Proponent contributes an adequate number of ERTs to a buffer pool managed by ACR to replace unforeseen losses in carbon stocks. The buffer contribution is a percentage of the project's reported offsets, determined through a project-specific assessment of the risk of reversal. The buffer contribution may be made in ERTs of any type and vintage.

Carbon Dioxide

Carbon dioxide (CO₂) is a chemical compound comprising two oxygen atoms bonded to a single carbon atom, and is the primary greenhouse gas implicated in global warming.

Carbon Dioxide-equivalent (CO₂e)

Carbon dioxide equivalence (CO₂e) is a metric to compare GHGs based on their global warming potential (GWP) relative to CO₂ over the same timeframe. The Intergovernmental Panel on Climate Change publishes GWP values for converting all GHGs to a CO₂e basis.

Carbon Offset

In a voluntary market context, a carbon offset is a reduction, removal, or avoidance of GHG emissions that is used to compensate for GHG emissions that occur elsewhere. In a cap-and-trade context, offsets are "GHG reductions from projects undertaken outside the coverage of a mandatory emissions reduction system for which the ownership of verifiable GHG emission reductions can be transferred and

used by a regulated source to meet its emission reduction obligations.”¹³ The ACR registers both voluntary market and pre-compliance offsets and has the same quality standards for both.

Carbon Pool

A reservoir of carbon that has the potential to accumulate or lose carbon over time. Common forest carbon pools are aboveground biomass, belowground biomass, litter, dead wood, soil organic carbon, and wood products.

Carbon Stocks

Carbon stocks represent the measured, estimated or modeled quantity of carbon held in a particular carbon pool. Quantifying GHG emissions and removals for terrestrial carbon offset projects involves estimating, for the baseline vs. project scenario, changes over time in carbon stocks in relevant pools.

Cohort

A new group of Project Participants, meeting all eligibility, project boundary, baseline and additionality criteria of an already established Program of Activities (PoA).

Clean Development Mechanism (CDM)

The CDM allows GHG emission reduction and removal projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one metric ton of CO₂, which can be sold and used by industrialized countries to meet a part of their emission reduction targets under the Kyoto Protocol. The CDM is intended to stimulate sustainable development and emission reductions, while giving industrialized countries flexibility in how they meet their emission reduction targets.¹⁴

Commercially Sensitive Information

Trade secrets, financial, commercial, scientific, technical or other information whose disclosure could result in a material financial loss or gain, prejudice the outcome of contractual or other negotiations, or otherwise damage or enrich the person or entity to which the information relates.

Community

A community includes all groups of people including indigenous peoples, mobile peoples and other local communities, who live within or adjacent to the project area as well as any groups that regularly visit the area and derive income, livelihood or cultural values from the area. This may include one or more groups that possess characteristics of a community, such as shared history, shared culture,

¹³ Adapted from Pew Center on Global Climate Change. *Climate Change 101: Cap and Trade*.

<http://www.pewclimate.org/docUploads/Cap&Trade.pdf>.

¹⁴ <http://cdm.unfccc.int/about/index.html>.

shared livelihood systems, shared relationships with one or more natural resources (forests, water, rangeland, wildlife, etc.), and shared customary institutions and rules governing the use of resources.¹⁵

Community and Environmental Impacts

Community and environmental impacts are the effects, both positive and negative, that the Project Activity may have on the socioeconomic well-being of affected communities or environmental quality in the project area. ACR requires that the Project Activity provide net benefits to affected communities and the environment, and does not provide incentives for the clearing of land to generate carbon offsets.

Crediting Period

Crediting Period is the finite length of time for which a GHG Project Plan is valid, and during which a project can generate offsets against its baseline scenario. The baseline must be re-evaluated in order to renew the Crediting Period. ACR sector standards and methodologies specify Crediting Period for particular project types.

De Minimis

The ACR sets a *de minimis* threshold of 3% of the final calculation of emission reductions or removals. For the purpose of completeness, any decreases in carbon pools and/or increases in GHG emission sources that exceed the *de minimis* threshold must be included. Any exclusions using the *de minimis* principle shall be justified using fully documented *ex ante* calculations.

Emission Reduction Ton (ERT)

The “ERT” is the ACR unit of exchange for tradable, project-based carbon offsets. ERTs refer to both emission reductions and enhancements in sequestration. ACR issues one ERT for each metric ton of CO₂e emission reductions or removals verified against an ACR standard and methodology.

Geologic Sequestration

Geologic sequestration is the process of capturing carbon dioxide from a stationary source and injecting it deep underground through a well, with or without enhanced oil recovery. Geologic sequestration is also called carbon capture and storage (CCS).

Greenhouse Gas (GHG)

A GHG is any gaseous compound that absorbs infrared radiation in the atmosphere and contributes to the warming of the atmosphere. The primary GHGs regulated under the Kyoto Protocol are carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). The Intergovernmental Panel on Climate Change lists, and periodically updates, GHGs in its assessment reports. ACR’s scope includes all GHGs (including

¹⁵ CCB Standards - Project Design Standards. Second Edition (2008). Climate, Community & Biodiversity Alliance.

Ozone-Depleting Substances) listed in the IPCC *Fourth Assessment Report* (AR4), Working Group 1, Chapter 2, Table 2.14.¹⁶

GHG Emission Reductions and Removals

A GHG emission reduction is the measured decrease of GHG emissions over a specified period of time relative to an approved baseline. A GHG removal is the mass of GHGs removed from the atmosphere over a specified period of time relative to an approved baseline.

GHG Emission System/Trading Program

A voluntary or regulated program that allows for trading in project-based GHG emission reductions or removals, government-issued credits, and/or allowances.

GHG Project Plan

A GHG Project Plan is a document that describes the Project Activity, satisfies eligibility requirements, identifies sources and sinks of GHG emissions, establishes project boundaries, describes the baseline scenario, defines how GHG quantification will be done and what methodologies, assumptions and data will be used, and provides details on the project's monitoring, reporting and verification procedures. ACR requires every project to submit GHG Project Plan using an ACR-approved methodology.

Global Warming Potential (GWP)

Global warming potential is a relative scale translating the global warming impact of any GHG into its CO₂ equivalent over the same timeframe. The Intergovernmental Panel on Climate Change periodically updates the list of GHGs and their GWP factors, based on the most recent science. ACR requires Project Proponents to calculate GHG reductions and removals based on the 100-year GWPs in the IPCC *Fourth Assessment Report* (AR4), Working Group 1, Chapter 2, Table 2.14.¹⁷

Intergovernmental Panel on Climate Change (IPCC)

The IPCC is “the leading body for the assessment of climate change, established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to provide the world with a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences.”¹⁸

¹⁶ See http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html.

¹⁷ See http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html. The SAR 100-year values are in the fourth column from the right. Although the IPCC provides a new set of 100-year values in the second column from the right, and may again update GWP values in forthcoming assessment reports, for reasons of fungibility and consistency across time, ACR currently requires Project Proponents to use the SAR values. This requirement may change in the future.

¹⁸ <http://www.ipcc.ch/organization/organization.htm>.

Leakage

Leakage refers to a decrease in sequestration or increase in emissions outside project boundaries as a result of project implementation. Leakage may be caused by shifting of the activities of people present in the project area, or by market effects whereby emission reductions are countered by emissions created by shifts in supply of and demand for the products and services affected by the project.

Methodology

A methodology is a systematic explanation of how a Project Proponent established the project baseline scenario(s), and estimates and monitors emissions reductions or removals by following scientific good practice. Good practice entails that a methodology be conservative, transparent, and thorough.

Methodology Deviations and Revisions

A methodology deviation is a project-specific change to an existing approved methodology due to a change in the conditions, circumstances or nature of a project. A deviation may be accepted for a specific project but does not result in an approved modification to the methodology. A methodology revision is a fundamental change in an existing approved methodology due to a change in conditions, circumstances or general developments in knowledge. ACR approval of methodology deviations and modifications is determined by the relevant ACR Technical Committee. Approval of methodology revisions requires public consultation and peer review.

Methodological Tools

An approved component of a methodology (i.e., a stand-alone methodological module to perform a specific task) or a calculation tool (i.e., spreadsheets or software that perform calculation tasks) that a Project Proponent uses to quantify net GHG reductions/removals or meet other ACR requirements.

Minimum Project Term

The minimum length of time for which a Project Proponent commits to project continuance, monitoring and verification.

Net Emissions Reductions

Net Emissions Reductions are GHG emission reductions or removals created by a project activity, minus the baseline scenario and any deductions for leakage.

Ozone-Depleting Substances

Ozone-depleting substances (ODS) include controlled substances under Annexes A, B, C and E of the Montreal Protocol.¹⁹ Many ODS are also potent GHGs. The Montreal Protocol controls the consumption, production and international trade of ODS, but not emissions, and thus destruction of

¹⁹ See http://ozone.unep.org/Publications/MP_Handbook.

ODS in already existing facilities and equipment worldwide has the potential to prevent significant GHG emissions.

Permanence

GHG removal enhancements may not be permanent if a project has exposure to risk factors, including unintentional reversals (e.g., fire, flood, insect infestation etc. for terrestrial projects; unanticipated releases of CO₂ for geologic projects) and intentional reversals (e.g., landowners or Project Proponents choosing to discontinue project activities).

Permanence Risk Analysis

To account for and mitigate against the risk of reversal in some projects, ACR requires Project Proponents to conduct a risk analysis to determine the number of offsets that must be set aside in the ACR buffer pool (unless the Proponent elects a different ACR-approved risk mitigation mechanism). The risk analysis evaluates several types of risk – project, economic, regulatory, and social and environmental/natural disturbance – and must be conducted using an ACR-approved risk analysis/buffer determination tool.

Program of Activities

A project in which successive Cohorts of fields, producers or facilities are added incrementally to a project over time. A PoA must be coordinated by a Project Proponent (public or private entity) serving as the aggregator. In order to register a PoA the Project Proponent must use an approved baseline and monitoring methodology that defines the appropriate boundary, avoids double-counting, accounts for leakage, and ensures that the emission reductions are real, measurable, verifiable, and additional to any that would occur in the absence of the project.²⁰

Project Boundaries

GHG project boundaries include a project's physical boundary or implementation area, the GHG sources, sinks and reservoirs (or pools) considered, and the project duration.

Project Proponent

An individual or entity that undertakes, develops, and/or owns a project. This may include the project investor, designer, and/or owner of the lands/facilities on which project activities are conducted. The Project Proponent and landowner/facility owner may be different entities. The Project Proponent is the ACR account holder.

²⁰ Adapted from Clean Development Mechanism Rulebook at <http://cdmrulebook.org/452>.

Registry System

An online platform operated by ACR and powered by APX that tracks ownership of ERTs, houses a public database of all ACR projects, ERT issuances, cancelations and retirements, and provides transparent public access to project documents. <https://acr2.apx.com/mymodule/mypage.asp>

Standard

A standard is an established norm or requirement in a formal document that establishes uniform engineering or technical criteria, methods, processes and practices. Standards may provide general guidance across all project types, such as this document, or be sector-specific. While ACR may accept methodologies and tools from other GHG programs, ACR only registers projects meeting ACR's own standards.

Start Date

ACR defines the Start Date for all projects other than AFOLU as the date on which the project began to reduce GHG emissions against its baseline. ACR defines the start date for AFOLU projects as the date on which the Project Proponent began the activity on project lands, with more specific guidance in the relevant ACR sector standards.

Validation

Validation is the systematic, independent and documented process for the evaluation of a GHG Project Plan against applicable requirements of the ACR Standard, sector standard and approved methodology.

Validation/Verification Body

A competent and independent person, persons or firm responsible for performing the validation and/or verification process. To conduct verification the VVB must be ACR-approved.

Verification

Verification is the systematic, independent and documented assessment by a qualified and impartial third party of the GHG assertion for a specific reporting period. The verification process is intended to assess the degree to which a project complies with ACR-approved methodologies, tools, eligibility criteria, requirements, and specifications, and has correctly quantified net GHG reductions or removals. Verification must be conducted by an independent third-party verifier.

Verification Statement

A verification statement provides assurance that, through examination of objective evidence by a competent and independent third party, a GHG assertion is in conformity with applicable requirements.

APPENDIX B: NORMATIVE REFERENCES

The *ACR Standard* is based on the foundation laid by the normative reference standards and documents listed in Table A-1. These documents assisted ACR to articulate its own requirements and specifications for the quantification, monitoring, and reporting of GHG project-based emissions reductions and removals, verification, project registration, and issuance of project-based offsets.

The *ACR Standard* builds in particular on the ISO technical specifications for GHG accounting, GHG assertions and verification, and verifier accreditation as set forth in the ISO 14064, Parts 1-3:2006 and ISO 14065:2007 specifications. To the ISO specifications, ACR adds its own mandatory requirements as detailed in the ACR eligibility criteria, additionality determination process, sector standards, and approved methodologies and tools. In the event of conflicts between the *ACR Standard* and the ISO technical specifications or other normative references, the *ACR Standard* shall take precedence.

Table A-1 –Normative References for the ACR Standard

Authoring Body	Document or Standard	Relationship to ACR
Clean Development Mechanism (CDM)	<ul style="list-style-type: none"> Project-level baseline and monitoring tools and methodologies Tool for the Demonstration and Assessment of Additionality GHG sources and sinks significance test 	ACR generally accepts approved CDM methodologies for baselines and monitoring. The CDM additionality tool informs ACR additionality tests and may assist Project Proponents in formulating additionality arguments.
Intergovernmental Panel on Climate Change (IPCC)	<ul style="list-style-type: none"> Guidelines for National GHG Inventories Good Practice Guidance Fourth Assessment Report 	Identification of best practice and options for GHG emission inventory development; methodological guidance and primary seed document for more specific guidance materials and standards
International Standardization Organization (ISO)	<ul style="list-style-type: none"> ISO 14064:2006, Parts 1-3: a set of international standards that address the quantification, reporting, and verification of GHG emissions and project reductions. ISO 14065:2007: verifier accreditation requirements. 	ISO 14064:2006 provides a foundation for the <i>ACR Standard</i> by providing technical specifications for GHG accounting and reporting for organizational inventories, projects, and verification assertions. ISO 14065:2007 specifies requirements for verifier accreditation.

Authoring Body	Document or Standard	Relationship to ACR
USEPA Climate Leaders Program	<ul style="list-style-type: none"> • Set of sector-specific and cross sector guidance that addresses quantification, reporting and verification of GHG emissions reductions • Offset project methodologies for several specific project types 	Provides guidance for developing inventory baselines, accounting, and reporting, and Inventory Management Plans. Provides guidance for specific sectors and offset project methodologies; source of ACR-approved methodologies, tools and emission factors.
WRI/WBCSD GHG Protocol	<ul style="list-style-type: none"> • GHG Protocol for Project Accounting (2005) • GHG Protocol for Corporate Inventory Accounting (2005) 	Guidance related to additionality – common practice test.

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