

Summary of Changes

ACR METHODOLOGY: *Quantification, Monitoring, Reporting, and Verification of Greenhouse Gas Emissions Reductions and Removals from Carbon Capture and Storage Projects*

VERSION: 1.1 to 2.0

The following is a summary of the significant changes from version 1.1 of ACR’s Methodology for the *Quantification, Monitoring, Reporting, and Verification of Greenhouse Gas Emissions Reductions and Removals from Carbon Capture and Storage Projects* published in September 2021, to version 2.0 published on May 4, 2026.

TOPIC	REVISION	SECTION
METHODOLOGY STRUCTURE	Reorganized structure to conform to ACR general requirements for methodology layout and content.	All
ELIGIBILITY	Expanded geographic location of projects beyond the United States (U.S.) and Canada to include U.S. territories and U.S. and Canada’s jurisdictional waters.	2
	More clearly defined the eligible CO ₂ sources and explicitly included the capture of emissions from these sources using fossil fuels, sustainable biomass, and methane capture from landfills and from livestock and wastewater treatment anaerobic digestion. Retained eligibility of direct air capture as an eligible CO ₂ source. Projects utilizing biomass must utilize sustainable biomass (as defined by the Methodology). Direct air capture and CO ₂ sources utilizing sustainable biomass as fuel or feedstock at eligible CO ₂ sources. Natural gas processing facilities have new requirements to prevent against emissions leakage.	
	Expanded eligible geologic storage reservoirs to saline reservoirs and depleted oil and gas reservoirs, while retaining eligibility for store in producing oil reservoirs.	
	Expanded eligible transport modes expanded (beyond rail, trucks, and pipelines) to include maritime ships and intermodal transport.	

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	<p>Required that wells must be permitted under applicable (e.g., federal, state, provincial) underground injection regulations. In the U.S., wells must be permitted as either Class II or Class VI U.S. Environmental Protection Agency (EPA) Underground Injection Control (UIC) wells.</p> <p>Required Project Proponents to demonstrate clear and uncontested rights to the storage reservoir pore space, enter into a Reversal Risk Mitigation Contract with ACR, and demonstrate approval from the surface owner(s) to access the surface land for the duration of the Minimum Project Term to conduct post-injection monitoring and, if necessary, remediation.</p>	
ADDITIONALITY	<p>Updated the performance standard with the following activities now designated as additional under the performance standard in v2.0:</p> <ul style="list-style-type: none"> • Projects with DAC as a CO₂ source, • Projects storing CO₂ in a saline reservoir or depleted oil and gas reservoir (i.e., non-EOR CCS projects), • Projects storing CO₂ in an active oil reservoir (i.e., utilizing CO₂-EOR) and which capture CO₂ from a CO₂ source that utilizes sustainable biomass as a fuel or feedstock, • Projects storing CO₂ in an active oil reservoir (i.e., utilizing CO₂-EOR) in the Permian Basin and which capture CO₂ from a CO₂ source that utilizes fossil fuels, and • Projects storing CO₂ in an active oil reservoir (i.e., utilizing CO₂-EOR) in regions not currently utilizing CO₂-EOR (i.e., regions <i>not</i> listed Table 4) and which capture CO₂ from a CO₂ source that utilizes fossil fuels. 	3.2

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	<p>Updated the performance standard to clarify that projects that capture CO₂ from CO₂ sources that utilize fossil fuels and that store CO₂ in active oil reservoirs (i.e., utilizing CO₂-EOR) in regions that currently utilize CO₂-EOR (i.e., regions listed Table 4), with the exception of the Permian Basin fall outside of the performance standard. These projects must demonstrate additionality through the three-pronged additionality test as outlined in the <i>ACR Standard</i>. The three-pronged additionality test must include the financial implementation barrier test.</p>	3.3
PROJECT BOUNDARIES	<p>Expanded the physical boundary of CCS projects to include GHG emissions associated with construction; post-injection monitoring; decommissioning and closure; and, for CO₂-EOR, the GHG emissions associated with the refining and processing, transport, and end use for produced oil and associated gas.</p>	4.1
	<p>Expanded the GHG boundary to include CH₄ and N₂O emissions (where appropriate) for sources previously included in v1.1, and to include CO₂, CH₄, and N₂O emissions for the expanded physical boundary (as outlined in Section 4.1).</p>	4.2
	<p>Updated the following in temporal boundary:</p> <ol style="list-style-type: none"> 1. Definition for Start Date; 2. Definition for Crediting Period 3. Establishment of Crediting Periods as 12 years for projects not involving DAC and 15 years for projects involving DAC and/or storage in a saline reservoir or depleted oil and gas reservoir; 4. Limiting eligibility to renew Crediting Periods to non-EOR projects; and 5. Definition of Minimum Project Term, which requires monitoring during the injection period plus a minimum five-year period after the end of the Crediting Period. The Minimum Project Term is 	4.3

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	extended in two-year increments until CO ₂ plume stabilization is demonstrated.	
BASELINE DETERMINATION	Updated the approach to baseline determination. In Version 1.1, Section 3 defined the project baseline using a choice between a Projection Based- or a Standards Based- approach, with additional subsections describing baseline considerations for retrofit and new build CCS projects. Version 2.0 replaces this structure with a more comprehensive and prescriptive framework in Section 5, introducing two new baseline types, Project Based and Intensity Based. The previous retrofit/new-build guidance and projection/standards methods are removed and replaced by new guidance specific to the CO ₂ source type, including dedicated baseline rules for DAC and biogenic CO ₂ sources.	5
QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS	<p>Updated all equations extensively to account for emissions in the updated project boundaries.</p> <p>Adapted equations to accommodate Reporting Periods of different durations (v1.1 equations assumed year-long Reporting Periods).</p> <p>Distinguished between primary CO₂ sources, which are sources that would have existed in the absence of the project, and secondary CO₂ sources, which are sources that exist because of the project. See the Definitions section of the Methodology for more detailed definitions of these two terms.</p> <p>Specified that CO₂ sources utilizing sustainable biomass as a fuel or feedstock and DAC may generate GHG emission removal credits.</p> <p>Clarified how to account for GHG emission reductions and removals by vintage year.</p> <p>Clarified how to calculate ACR Reserve Account contributions.</p>	6

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MONITORING AND DATA COLLECTION	Updated data collection and monitoring parameters for consistency with the new project boundaries and equations.	7.1
	Clarified requirements for maintenance and calibration of metering and monitoring equipment.	7.2
	Updated and added to the requirements for MRV, including MRV Plans consistent with U.S. EPA UIC Class VI MRV requirements.	7.3
OWNERSHIP AND INJECTION & STORAGE SITE ACCESS	Added new section that outlines requirements for carbon credit title and CO ₂ chain of custody through the project, pore space ownership and mineral rights, and site access.	8
PERMANENCE	Updated permanence requirements, including, but not limited to: <ul style="list-style-type: none"> • Post-injection monitoring tasks and conditions for the end of the Minimum Project Term, • ACR CCS Project Reversal Risk Mitigation Contract and Reserve Account contributions or an ACR-approved alternate risk mitigation mechanism, and • Actions required if reversals occur. 	9
VALIDATION AND VERIFICATION	Added new section to outline validation and verification requirements.	10
DEFINITIONS & REFERENCES	Updated and expanded definitions and references to align with v2.0 CCS Methodology revisions.	Definitions Appendix A
REMOVED APPENDICES:	Removed Appendices A, C, and D from v1.1. Appendix A (Enhanced Oil Recovery Overview) was removed with pertinent material moved to Section 1 of v2.0 and updated. Appendix C (Standards and Procedures for Class II Well in Texas) and Appendix D (State Legislative Actions) were removed due to rapid development of laws and	Appendices

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	regulations across the U.S. and Canada that could not be accurately reflected in an appendix.	
APPENDIX B: PRODUCED OIL EMISSION FACTORS (U.S.)	Added new appendix containing emissions factors for calculating the emissions associated with the refining, transport, and end use of oil produced via CO ₂ -EOR in the U.S.	Appendix B
APPENDIX C: ALTERNATIVE QUANTIFICATION METHODS	Renamed Appendix B from v1.1 to Appendix C and updated to allow for Reporting Periods less than one (1) year and to provide equations common conversions.	Appendix C
APPENDIX D: SUSTAINABLE BIOMASS	Added new appendix providing a detailed definition of “sustainable biomass” and outlines the requirements for biomass to be eligible under the Methodology.	Appendix D
APPENDIX E: EMISSION FACTOR GUIDANCE	Added new appendix prescribing the procedures for selecting, documenting, and applying emission factors and emissions-intensity metrics.	Appendix E
APPENDIX F: MISSING DATA SUBSTITUTION PROCEDURES	Added new appendix providing procedures for data substitution in the event of unexpected brief gaps in metered data.	Appendix F