

**Summary of changes from ACR from Carbon Capture and Storage Projects Methodology v.1.1 to v.2.0**

The following is a summary of significant changes from v.1.1 (September 2021) to 2.0 (September 2022) of ACR’s Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from Carbon Capture and Storage Projects.

Section	Revision
General	<ul style="list-style-type: none"> <li>The methodology has been updated throughout to incorporate CO<sub>2</sub> injection into depleted oil and gas reservoirs and saline formations. Language has been broadened to specifically encourage Carbon Dioxide Removal (CDR).</li> <li>Inclusion of offshore reservoirs.</li> <li>Inclusion of transportation, refining, and end-use emissions from oil produced with CO<sub>2</sub>-EOR as project emissions.</li> </ul>
1.1	<ul style="list-style-type: none"> <li>Updated to specifically include eligibility for CDR and sustainable biomass (Bioenergy with CCS [BECCS] and Biomass with Carbon Removal and Storage [BiCRS]) and to broaden methodology to other geologic formations besides oil and gas reservoirs.</li> </ul>
1.2	<ul style="list-style-type: none"> <li>Updated to specifically include CDR and to broaden methodology to other geologic formations besides oil and gas reservoirs.</li> <li>Process emissions will now include emissions from transportation, refining, and end-use of produced oil. These emissions must be accounted for beginning after five years or January 1, 2030, whichever is sooner.</li> <li>Pore space rights and ownership must be addressed in project application. Access throughout the project life must be guaranteed, CO<sub>2</sub> must remain undisturbed in perpetuity.</li> <li>Acceptance of USEPA Class VI wells.</li> <li>Storage reservoirs may be located on or offshore.</li> <li>Clarification that CO<sub>2</sub> captured in approved projects, including CDR, is considered “anthropogenic”.</li> </ul>
1.6	<ul style="list-style-type: none"> <li>Reporting period length may be defined by the project developer.</li> </ul>
2.2	<ul style="list-style-type: none"> <li>Added clarification for existing projects that may have originally operated with ineligible sources of CO<sub>2</sub>.</li> <li>Defined start date flexibility to enable project proponents to list projects after design to demonstrate eligibility, required validation, and crediting period.</li> </ul>
3.1.3	<ul style="list-style-type: none"> <li>Addition of baseline guidance for CDR.</li> </ul>
4.1.2	<ul style="list-style-type: none"> <li>Addition of definition of “project baseline” for CDR projects.</li> </ul>
4.1.4	<ul style="list-style-type: none"> <li>Addition of section on CDR.</li> </ul>
4.2.1	<ul style="list-style-type: none"> <li>Eq. 9- Addition of requirement for proponent to demonstrate if renewable electricity is used.</li> </ul>
4.2.4	<ul style="list-style-type: none"> <li>Addition of language clarifying storage/emissions calculations for non-EOR projects.</li> </ul>

4.2.4	<ul style="list-style-type: none"> <li>Eq. 23- Clarification on calculations for emissions associated with produced water in EOR projects.</li> </ul>
4.2.4	<ul style="list-style-type: none"> <li>Eq. 26- Clarification on closed loops produced water systems.</li> </ul>
4.2.5	<ul style="list-style-type: none"> <li>Eq. 29- Added to calculate emissions from oil produced through CO<sub>2</sub> EOR. Emissions need to be accounted for beginning five years after project Start Date or January 1, 2030, whichever is first.</li> </ul>
4.2.6	<ul style="list-style-type: none"> <li>Due to the expansion of the methodology to include depleted oil and gas reservoirs and saline formations, project proponents are now required to demonstrate that there is a competent confining layer overlaying their sequestration reservoir.</li> </ul>
5.4.11	<ul style="list-style-type: none"> <li>Addition of requirements for confining zone characterization.</li> </ul>
5.4.1.2	<ul style="list-style-type: none"> <li>Addition of Class VI well language.</li> </ul>
5.4.1.3	<ul style="list-style-type: none"> <li>Addition of language stating the methodology is aligned with CCS requirements in the US, Canada, and other internationally recognized standards bodies including the International Organization for Standards (ISO).</li> </ul>
6.4	<ul style="list-style-type: none"> <li>Clarification added that site access must be guaranteed for the life of the project and that the CO<sub>2</sub> will be left undisturbed in perpetuity.</li> </ul>
8	<ul style="list-style-type: none"> <li>Addition of language for depleted oil and gas reservoirs and saline formations.</li> </ul>
Appendix A	<ul style="list-style-type: none"> <li>Addition of procedures, emission factors, and references for calculating process emissions from produced oil. Step-by-step guidance for how to use reference tables is provided.</li> </ul>
Appendix D	<ul style="list-style-type: none"> <li>Removed- CCS regulations are frequently being proposed and updated. Project Proponent is responsible for demonstrating compliance with liability and pore space requirements.</li> </ul>