

## **How Regional Partnerships Can Impact Industrial Decarbonization Efforts: An Overview of the Carbon Utilization and Storage Partnership of the Western USA**

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### **Abstract**

The Carbon Utilization and Storage Partnership of the Western United States (CUSP), one of four regional Initiatives sponsored by the US Department of Energy (DOE), has a primary goal of providing support to commercial carbon storage projects in a 13 state region encompassing the Western and Southwestern United States. The CUSP has 16 founding organizations and is primarily formed from Universities, Research Centers, State Geological Surveys, and US National Laboratories). The CUSP is tasked with creating opportunities for projects in the region by compiling and sharing regional and inter-regional data on potential geologic carbon storage sites and transportation pathways with industrial carbon sources and then to provide for regulatory considerations, community engagement, and technical support in application processes for Monitoring, Reporting, and Verification (MRV) plans and injection permits. These permits allow for optimal site selection, well design, and operation of carbon storage sites. MRV plans also enable access to 45Q tax credits and create a favorable environment for commercial storage, since the credits can effectively recover much of the initial capital costs of projects. With the expansion of section 45Q tax credits for CO<sub>2</sub> storage in recent US federal legislation, industry interest has grown significantly in deploying new storage projects at commercial scales, and in state governments to provide sound legal and regulatory support to administer these projects. An integral part of preparing for commercial storage is to provide information to communities and to ensure that Environmental Justice concerns are addressed both in project design, but also in direct community engagement. A primary task for the CUSP is to accelerate and assist in development of projects in the western US in a responsible and sustainable manner.

The CUSP has directly funded 15 projects in 2020 and 2021 and had an additional five projects federally funded to CUSP members in 2022. Also, the CUSP provides direct industry support and are currently engaged with industry on two hydrogen projects, five midstream company projects, and an EOR conversion to storage project. In Total the CUSP has 28 active projects in its portfolio. Since its inception, the CUSP has accumulated a diverse portfolio of projects including: Change of focus for midstream facilities from acid-gas disposal focus to regional carbon storage hubs; Conversion of an active CO<sub>2</sub> EOR project to a storage focus; Development of storage for blue hydrogen power generation facilities; and in developing regional storage hubs in Arizona, California, New Mexico, Oklahoma, and Washington states. During the course of CUSP engagement in the western USA, it has become increasingly important to focus efforts on outreach, community engagement, and environmental justice as these are critical components to the acceptance and deployment of commercial storage projects. Through August of 2023 the CUSP has performed at least 949 stakeholder interactions including: 69 workshops; 147 Abstracts, papers and posters; 203 Presentations and panel sessions; and 530 collaborative discussions with regional stakeholders.

This paper will discuss progress towards commercial decarbonization efforts in the Western USA and the interplay between industry, regulators, and community members as projects work become commercially viable, environmentally sustainable and community supported operations.