



I-WEST

Intermountain West Energy
Sustainability & Transitions

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Executive Summary

Funded by the U.S. Department of Energy (DOE), the Intermountain West Energy Sustainability & Transitions (I-WEST) project is focused on delivering a regionally relevant technology roadmap to transition six U.S. Intermountain West states to a carbon neutral energy economy. I-WEST encompasses Arizona, Colorado, Montana, New Mexico, Utah, and Wyoming. The project is taking a place-based approach, which prioritizes the geographical attributes, economic landscape, and societal readiness of the region so that the resulting technology roadmap reflects pathways that are regionally relevant and can be put on an accelerated timeline to deployment. This place-based approach involves 1) translating national decarbonization goals into regional goals; 2) engaging with local communities to understand state-level energy needs, goals, and expectations; and 3) facilitating the formation of regional coalitions to deploy and implement the I-WEST technology roadmap. The primary technology pathways under consideration include: the capture, utilization and storage of carbon dioxide (CCUS); the generation and utilization of carbon-neutral hydrogen; the production of sustainable, carbon neutral fuels and feedstocks; and the production of sustainable power. The I-WEST technology roadmap will be based on an assessment of various technology options within these pathways, as well as realistic timelines for their deployment. Additionally, the effort will consider other critical factors that will be needed for an effective and sustainable regional energy strategy, including implications for workforce, regional economies, and environmental and social justice. The assessment will target a timeline of 15 years, identifying options that could deploy early to achieve goals at five years and options that have the potential to deploy later with additional R&D, allowing more aggressive goals at 10 and 15 years.

I-WEST was officially kicked-off during FY21-Q4 and saw significant technical progress within the quarter. The initial phase of the project is to develop an understanding of the regional energy landscape; as part of this, the I-WEST team organized place-based workshops to gather stakeholder inputs on carbon neutrality goals and also their concerns, needs, and expectations related to energy transition. These workshops included seven state-based workshops and one workshop focused on Tribal Nations from the Four Corners region. The workshops provided important insights into the diversity of goals, objectives, challenges, opportunities, and societal readiness related to energy transition within the Intermountain West. Additionally, they provided valuable insights on stakeholder opinions and ideas on effective technology pathways to achieve carbon neutrality. These insights will be key considerations in the development of the I-WEST technology roadmap. Another outcome from this quarter is a catalog of the total greenhouse gas emissions within the region, as well as an initial list of potential technologies that could be deployed to meet carbon neutrality goals. These technologies fall into the categories of CCUS; H₂-generation and utilization; bioenergy and production of sustainable, carbon-neutral fuels and bio-products; and generation of carbon-neutral electricity. Finally, the I-WEST team has developed a catalog of various ongoing, planned, and emerging initiatives across the region that are in the process of deploying some of the above-mentioned technologies.

This is a redacted version of the report.
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