



# Intermountain West Energy Sustainability & Transitions

## On the road to carbon neutrality in the Intermountain West

### A region in transition

Growing concern about the role of carbon dioxide emissions in climate change has started to shift global energy markets. Domestic markets are also shifting, which poses both challenges and opportunities for the Intermountain West, a region of the United States with shared economic, geographic, and environmental attributes.

The **Intermountain West Energy Sustainability & Transitions (I-WEST)** initiative is developing a technology roadmap to transition the region to an economically sustainable, carbon neutral energy system. The roadmap will outline ways for the Intermountain West states to meet challenges, capitalize on opportunities, and build an equitable energy transition strategy.



I-WEST encompasses Arizona, Colorado, Montana, New Mexico, Utah, and Wyoming. This region is home to numerous energy communities with economies built around fossil-based industries.

## PHASE ONE MILEPOSTS: OBJECTIVE, STRATEGY, APPROACH



### 1 Develop a regional roadmap

#### Why these states?

- Shared geographical, environmental, and demographic attributes
- Characterized by fossil fuel-based economies and share challenges related to climate
- Major producers and exporters of fossil-based energy and highly vulnerable to social and economic disruptions as a result of energy transition
- Positioned to emerge as leaders in new energy economies



### 2 Explore symbiotic economies

#### Which technologies are most advantageous for the region?

- Achieving carbon neutrality will require multiple pathways
- Pathways must reduce greenhouse gas emissions *and* be sustainable
- Symbiotic energy economies can be exploited to decarbonize critical energy sectors and create supply-and-demand scenarios for new energy industries



### 3 Place-based approach

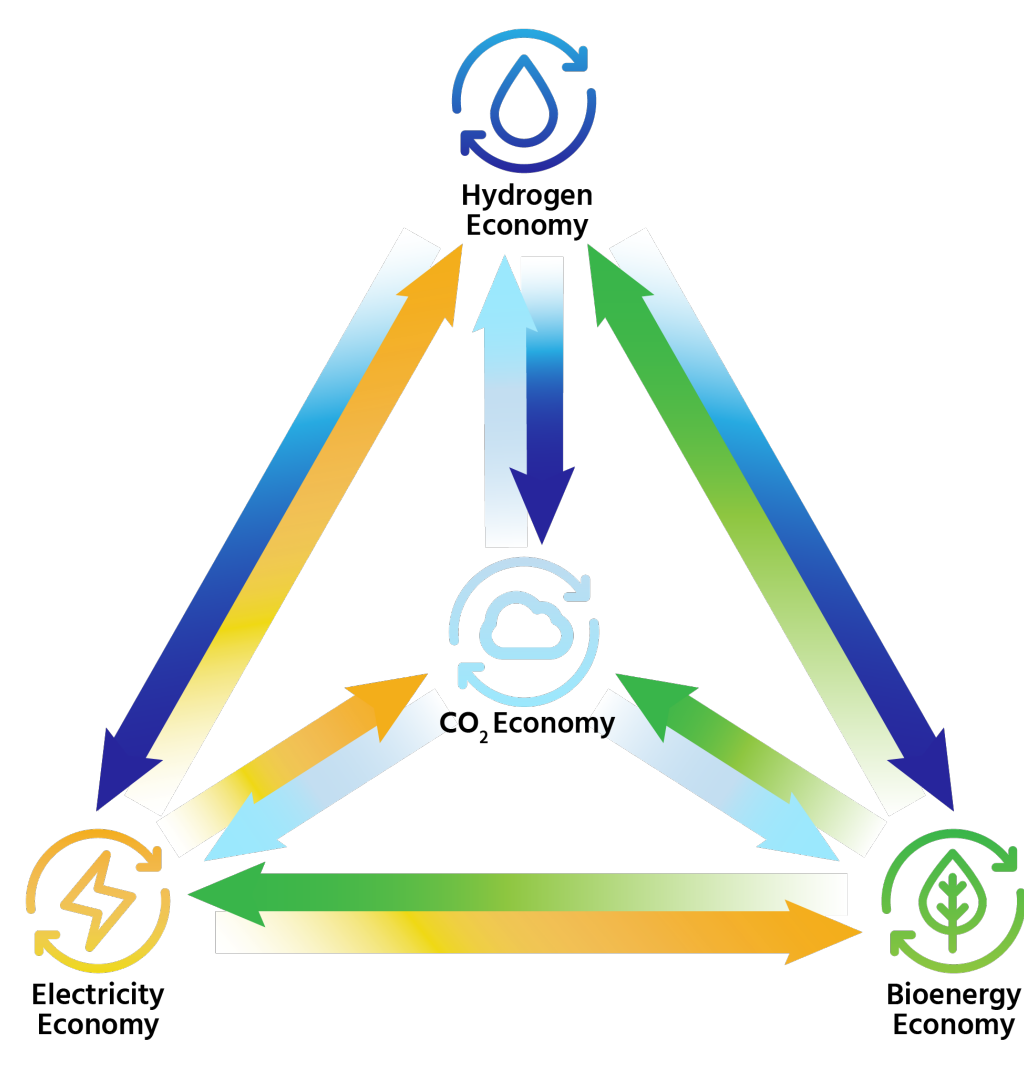
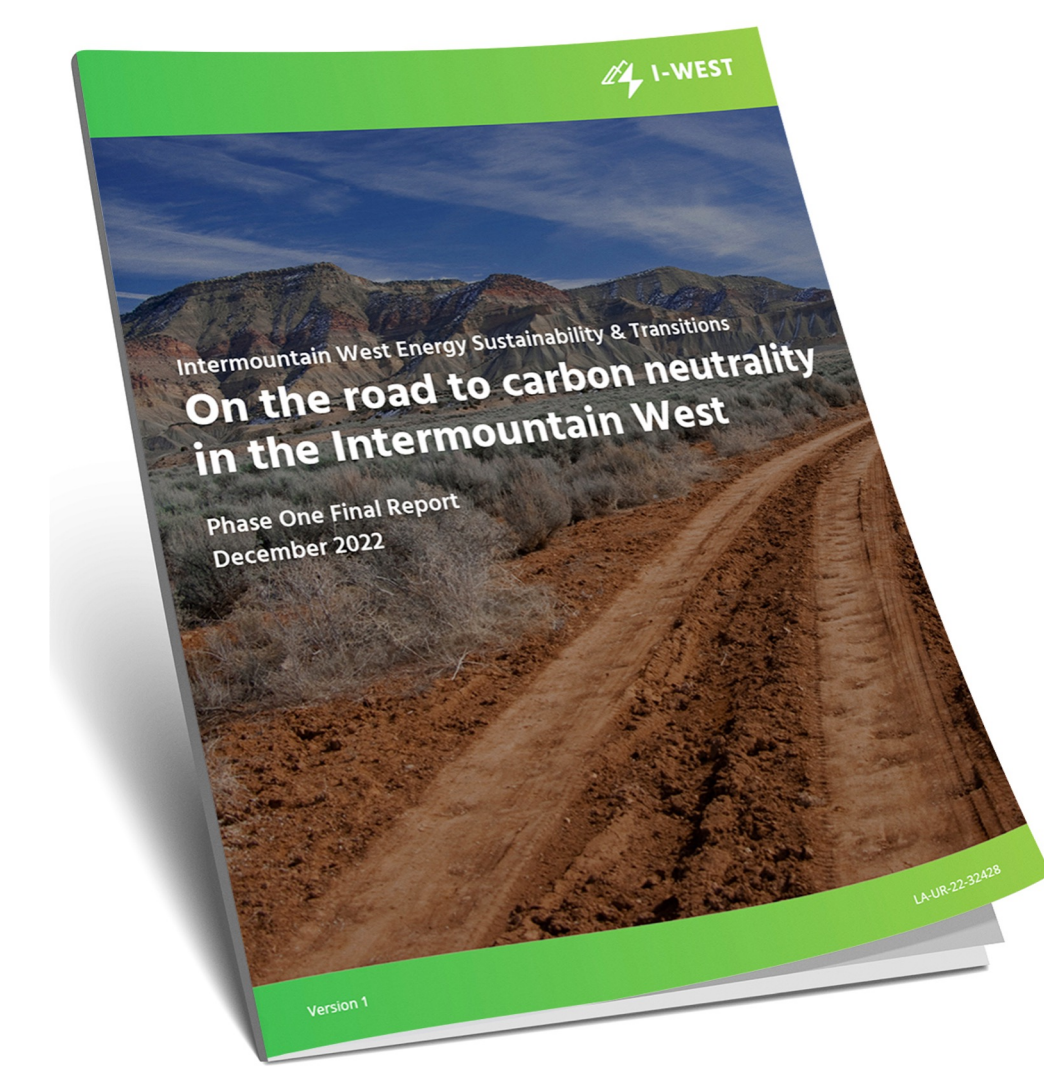
#### What do communities have to say?

- Successful energy transition strategies depend on effective planning and implementation at local levels
- Place-based approaches engage regional stakeholders to assess societal readiness in tandem with technology readiness
- Explicitly considering policy, jobs, and Environmental, Energy, and Social Justice (EESJ) is key
- Regional coalitions are critical to roadmap implementation and technology deployment

## OUTCOMES AND NEXT STEPS

### Phase One report published

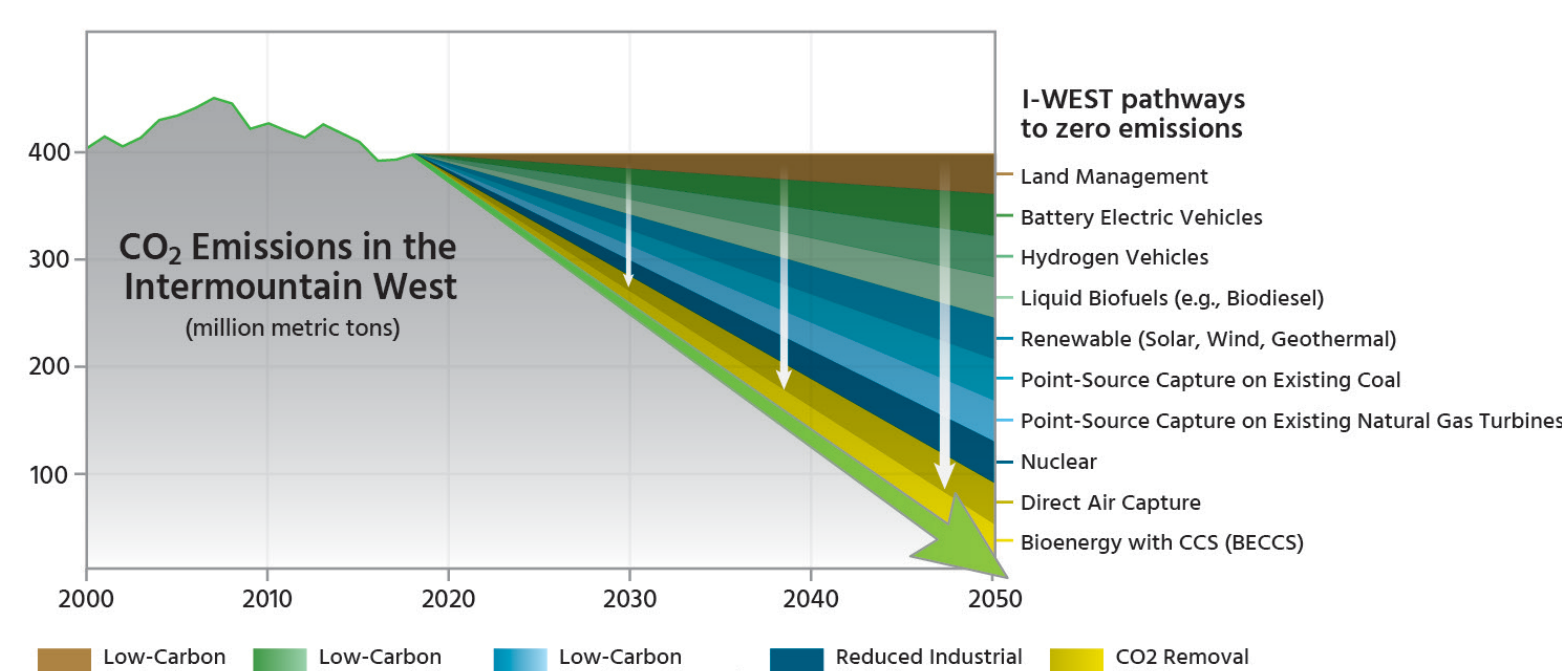
The Phase One final report summarizes the regional relevance of various technologies, key assessment findings, and recommendations for next steps.



- Regional Overview
- CO<sub>2</sub> Point Source Management
- Direct Air Capture
- CO<sub>2</sub> Storage and Utilization
- Certification
- Hydrogen Supply
- Hydrogen Demand
- Bioenergy
- Low-carbon Electricity
- Policy
- Economic Impacts
- Workforce Impacts
- Environmental, Energy, and Social Justice

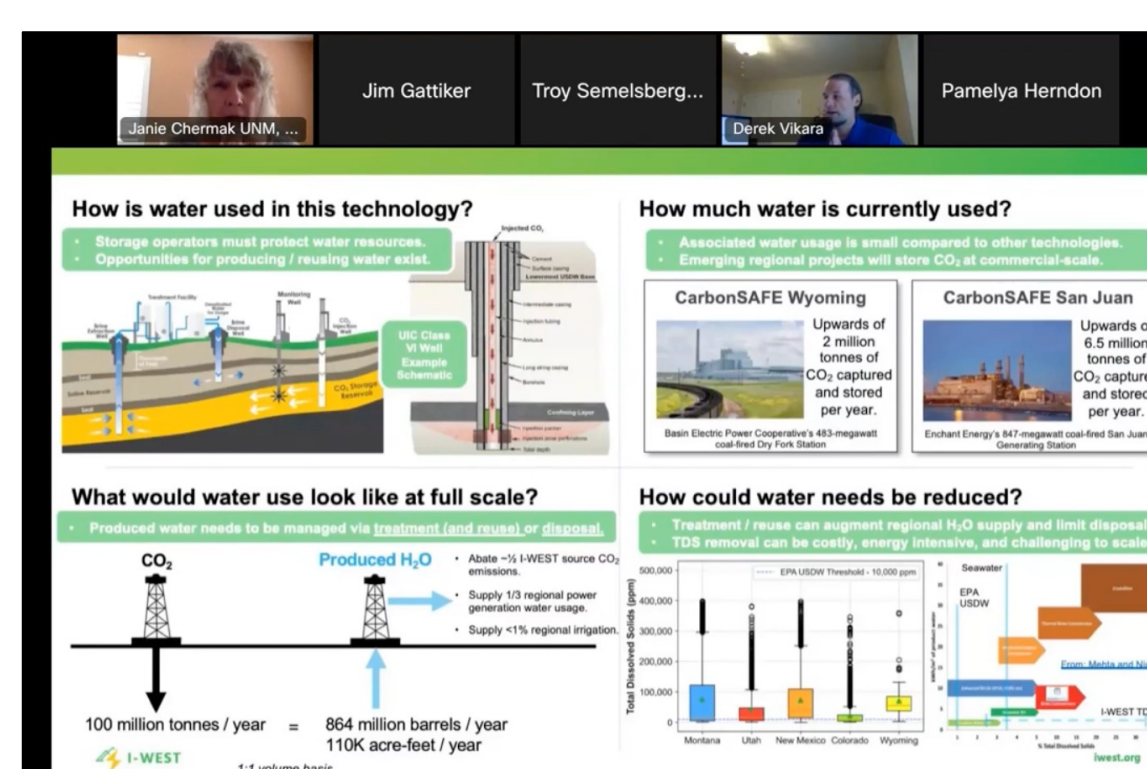
### Hone in on regional challenges and opportunities

In its next phase, I-WEST will focus on technology pathways of primary interest to the region and integrate more in-depth analysis on water usage for energy production and utilization.



Case studies focused on sub-regions will provide communities with more realistic scenarios of impact for various technology pathways.

Building on what we learned from Phase One workshops, seminars, listening sessions, and technical assessments, I-WEST will expand its studies on water usage for energy and how it can be reduced.



### Increase regional partnerships

I-WEST is a partnership between the US Department of Energy, regional colleges and universities, and national laboratories.



Sustained engagement with regional stakeholders is fundamental to I-WEST and key to its success. Here's how you can get involved:

#### Website

Visit us online at [www.iwest.org](http://www.iwest.org) to learn more about I-WEST, view previous seminars, workshops, and reports. Stay up to date on news and events.

#### Email

Contact I-WEST via email to [iwest@lanl.gov](mailto:iwest@lanl.gov).

