

Water & Energy: How Do They Mix?

June 14, 2022

9:00 am – 12:00 pm MT

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. Learn more online at www.iwest.org.

Water is a critical enabler for energy production. The energy sector uses 3.5 trillion gallons of freshwater, which is around 10 percent of total U.S. water consumption. New low-carbon technologies will likely change how we use water for energy production, but they will not eliminate our dependence on it. In regions like the Intermountain West, where persistent drought and water scarcity are already impacting communities, environments, and economies, water management is a key factor in energy transition. This workshop is an opportunity for regional stakeholders to join the conversation about the challenges and opportunities water presents for energy transition in the Intermountain West. Discussion topics will include:

- Current regional water usage for daily consumption, agriculture, and energy production
- Water needs for various energy technologies and their scale of impact on water usage
- Projections on likely changes in surface water available as climate evolves
- Opportunities for water recovery from produced water and CO₂ storage

If you are interested in, concerned by, or just curious about how water factors into the energy transition equation for the Intermountain West, then this workshop is for you. Concerned citizens and advocacy groups; farmers and ranchers; tribal, state, city, and county leaders; and project leaders working on water-related initiatives are all encouraged to participate. Input received will inform the [I-WEST technology roadmap](#).

Draft Meeting Agenda

Time	Topic	Presenter
9:00 AM	Welcome and Opening Remarks Bringing water to the forefront of the dialogue on energy transition.	John Sarrao Los Alamos National Laboratory
9:05 AM	Introduction to Water and Energy Transition in I-WEST Overview of I-WEST and the objectives of the workshop.	Jolante Van Wijk Los Alamos National Laboratory

Segment 1: Water Usage for Energy Today and Into the Future

9:10 AM	Energy-Water Nexus Big-picture look at the interdependencies between water and energy on a national scale.	Tom Lowry Sandia National Laboratories
9:20 AM	Current Water Usage in the Intermountain West Regional water landscape today in the context of energy.	Bruce Thomson University of New Mexico
9:30 AM	Water and Climate Futures in the Intermountain West Forecasts of climate in the near future and its impacts on water availability.	Katrina Bennett Los Alamos National Laboratory
9:40 AM	Roundtable Discussion with Q&A Panelists: Tom Lowry, Bruce Thomson, and Katrina Bennett Moderators: Nicole Jackson and Peter Kobos (Sandia)	All participants join in the discussion

Segment 2: Tour of Low-Carbon Technology Water

9:55 AM	Potential Energy Transition Pathways for the I-WEST Overview of regionally relevant technologies under evaluation by I-WEST.	Jolante Van Wijk Los Alamos National Laboratory
	Lightning Talks on Water Needs for Transition Pathways How is water used in low-carbon technologies and what is the potential for reduced water usage in the future? <ul style="list-style-type: none">• Low-Carbon Electricity• Low-Carbon Hydrogen• Carbon Capture• Carbon Storage and Utilization• Bioenergy	Mary Ewers Los Alamos National Laboratory Troy Semelsberger Los Alamos National Laboratory Jim Gattiker Los Alamos National Laboratory Derek Vikara National Energy Technology Laboratory Babetta Marrone Los Alamos National Laboratory
10:30 AM	Roundtable Discussion Panelists: Mary Ewers, Troy Semelsberger, Jim Gattiker, Derek Vikara, and Babetta Marrone Moderators: Jolante Van Wijk and Janie Chermak (UNM)	All participants join the discussion
10:45 AM	Break	

Segment 3: Emerging Opportunities in Non-traditional Water

10:50 AM	Opportunities for Non-traditional Water in the Intermountain West A look at the nature of and opportunities with produced water.	Mike Hightower New Mexico Produced Water Research Consortium
11:00 AM	Regional Case Study in Non-traditional Water Treatment PESCO, Inc. will discuss their water treatment pilot and startup testing in Farmington, NM in partnership with New Mexico Tech and Navajo Technical University.	John Byrom PESCO, Inc.

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11:10 AM	Critical Materials: A Secondary Benefit Extracting critical materials for energy transition from produced water.	Scott Hynek United States Geological Survey
11:20 AM	Roundtable Discussion Panelists: Mike Hightower, John Byrom, and Scott Hynek Moderators: Tom Lowry and Peter Kobos (Sandia)	All participants join the discussion
11:35 AM	Open Mic Final comments from workshop participants on the discussion topics, or suggestions for I-WEST events on the topic of water and energy. Moderator: Jolante Van Wijk	Open to all (Begin with participants who submitted comments at registration)
11:50 AM	Closing Remarks	Melissa Fox/George Guthrie Los Alamos National Laboratory
12:00 PM	Adjourn	