"Supercharging Nevada's Lithium Batteries and Other EV Materials Loop" Nevada's Regional Technology and Innovation Hub

Frederick Steinmann

Director, University Center for Economic Development

Principal Investigator, Nevada Regional Technology and Innovation Hub





Western Nevada Development District Member's Summit March 25, 2024 and March 26, 2024



A little bit about UCED and Nevada

- The University Center for Economic Development: established in 1992, Nevada's only US EDA funded University Center Program...a statewide mission to foster economic development throughout Nevada by making the extensive resources of the University of Nevada, Reno to organizations and areas that can benefit from job and income creation and job retention efforts.
 - Existing work entails strategic community, organizational and economic development planning; socio-demographic, economic, and community data collection and analysis; contingency and resiliency planning; and technical assistance, economic assessment, and feasibility studies.
- Nevada: 17 counties, 8 regional economic development authorities (through the Governor's Office of Economic Development), 2 EDA Economic Development Districts, and 32 federally recognized Tribes.
 - A geographically large state (11,567 sq. miles) with 'low' population (3.14 million total population in 2021)...but the most 'urban' state in the United States (approx. 90% of the state's population lives in three MSA's)...plus nearly 80% of Nevada's land is federally owned.

Nevada's Regional Technology and Innovation Hub (Tech Hub)

- Established on October 23, 2023 as part of the US Economic Development's Regional Technology and Innovation Hub Program (Phase 1 Designation).
- Includes 16 of Nevada's 17 counties, 7 of Nevada's 8 Regional Development Authorities, and both of Nevada's two Economic Development Districts.
- Over 60 consortium partners: Institutional Partners, Industry, Economic
 Development Organizations, Workforce Development, State and Local Government,
 Tribal Governments, Venture Development Organizations
- Key Technology Focus Area: *Advanced Energy and Industrial Efficiency Technologies* (Critical Elements Tech Hub).
- "Cradle to Cradle" Approach: from Extraction to Processing to Manufacturing to Recycling.
- "...Nevada is poised to build a self-sustaining and globally competitive advanced energy cluster representing a key component in of the U.S.' transition to clean energy."



Nevada's Regional Technology and Innovation Hub (Tech Hub)

Six Component Projects:

Supply Chain Enhancement

Workforce Development

Lithium Campus

Commercialization and Entrepreneurship

Infrastructure, Community Capacity, and Housing

Nevada Native Nations Center

Project Goals over Five Years:

Create 3,000 New Businesses

Expand 2,000 Existing Businesses

Create 50,000 New Jobs

Potential Economic Impact of the EV Sector:

Moderate Growth Scenario

Employment: 350,000 (2030) and 570,000 (2040)

Contribution to U.S. GDP: \$60.0 billion (2030) and \$110.0

billion (2040)

Economic Output: \$90.0 billion (2030) and \$150.0

billion (2040)

High Growth Scenario

Employment: 510,000 (2030) and 740,000 (2040)

Contribution to U.S. GDP: \$90.0 billion (2030) and \$150.0

billion (2040)

Economic Output: \$130.0 billion (2030) and \$200.0

billion (2040)



The Nevada Tech Hub – Supply Chain Enhancement Component Project



70%
GLOBAL SUPPLY
OF LITHIUM-ION

69%
SYNTHETIC
GRAPHITE

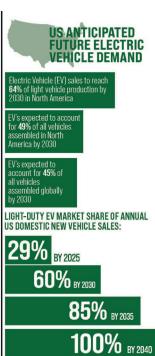
58% GLOBAL LITHIUM COMPOUNDS

BATTERIES

69% NICKEL SULFATE



Miranda Freeman, Ellen Robo, Caroline Birsner, Drug MacNair, and Yvorme Renard, 2023 ERM Group Company for CALSTART's U.S. Electric Vehicle Battery Initiative State of Nevada, Nevada Division of Winerals & the Commission on Mineral Resources



Major Challenges:

- Uncertainty citing facilities, meeting regulatory burdens, constructing facilities, financial risk.
- Lax environmental regulations and protectionist policies in China.

Major Participants:

- University of Nevada, Reno; University Center for Economic Development
- Northern Nevada Development Authority (Lead)
- Governor's Office of Economic Development
- University of Nevada, Las Vegas; Center for Business and Economic Research
- The Regional Development Authorities and EDD's
- Manufacturer Nevada
- Nevada Battery Coalition
- Nevada Mining Association
- Various Industry Representatives





Chris Brandon Western Nevada Development District cbrandon@wndd.org



Wendy Colborne
Building and Construction Trades
Council of Northern Nevada
wendy@bctnn.org



Frederick Steinmann University of Nevada, Reno <u>fred@unr.edu</u>



Bob Lucey
Governor's Office of
Economic Development
b.lucey@goed.nv.gov



Jeff Sutich
Northern Nevada Development Authority
jsutich@nnda.org



Don Tatro
Redwood Materials
don.tatro@redwoodmaterials.com

