State Land Use Planning Advisory Council

MEETING PACKET

Friday June 3, 2022

Winnemucca, NV

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NOTICE OF PUBLIC MEETING AND AGENDA FOR THE

STATE LAND USE PLANNING ADVISORY COUNCIL

A public meeting will be held on:

Friday June 3, 2022 9:00 AM

At the following location:

Humboldt County District Court
Small Court Room
25 West Fifth Street
Winnemucca, NV 89445
Or
via Zoom at
https://us02web.zoom.us/j/81548518910?pwd=MDNENnhTa2t2d21qeXMrbk5PVktsdz09

Meeting ID:
815 4851 8910
Passcode: 568809

Phone: 669-900-6833

Attendance to this meeting will also be available virtually. For this meeting the State Land Use Planning Advisory Council will be using Zoom, a third-party app, and does not control its technical specifications or requirements. Your ability to participate in the public comment portions of a meeting may be impacted by factors including but not limited to the type of device you use, the strength of your internet or cellular signal, and the company that provides your internet or cellular

service. The State Land Use Planning Advisory Council is not responsible if you are not able to participate in a meeting through Zoom due to these or any other factors.

Public comment may be submitted via email prior to the meeting, please submit public comments to scarey@lands.nv.gov by 4 PM on June 1, 2022. For questions or additional information, you may contact Scott Carey, State Lands Planner at 775-684-2723 or at scarey@lands.nv.gov.

Please note that times listed are estimates

9:00 am **1) Call to Order**
Roll Call of the Council and Introductions of staff & guests.

9:05 am **2) Public Comment**
This is an opportunity for the public to provide public comment on any item included on the agenda or any other land use planning and any other related topic not included on the agenda. (Pursuant to NRS 241.020, no action may be taken upon a matter raised under this item until the matter has been specifically included on an agenda).

9:15 am **3) Review of Agenda (For Possible Action)**
(Agenda is reviewed for unforeseen circumstances such as the inability of a scheduled speaker to attend, to move an item to a different time during the meeting to accommodate a speaker, etc.)

9:20 am **4) Approval of Meeting Minutes (For possible action)**
- Approval of minutes from the October 15, 2021 SLUPAC meeting.
- Approval of minutes from the February 10, 2022 SLUPAC meeting.

9:25 am **5) Election of Four Members to serve on the SLUPAC Executive Council (For possible action)**
The Executive Council (NRS 321.755) consists of four SLUPAC members and the Administrator of Nevada Division of State Lands and is charged with, upon request, resolving inconsistencies in land use plans between two or more adjacent or overlapping local governmental entities which cannot be resolved between them. The terms of each member of the Executive Council have expired. To the extent practicable, the members selected to serve on the Executive Council must be representative of the various geographic areas of this State. Each member of the Executive Council shall serve for 2-year terms. *Members - State Land Use Planning Advisory Council*

9:35 am **6) NEAP Funding Letter of Support (For possible action)**
Consideration and possible approval of a letter expressing support for funding to help support the ongoing operations of the University of Nevada, Extension's Nevada Economic Assessment Project (NEAP) and future data updates for the project. *Members - State Land Use Planning Advisory Council*

9:50 am **7) County and Member Planning Updates (For Discussion Only)**
Updates from SLUPAC members on planning and land use related activities within their areas of representation. *Members – State Land Use Planning Advisory Council*

10:50 am **8) <u>Humboldt County Public Lands Plan Revision</u> (For Discussion Only)**
Humboldt County will provide the Council with a presentation on the revision to the county's Public Lands plan.

11:20 am **9) <u>Lithium Industry in Nevada Presentation</u> (For Discussion Only)**
Nevada is the only state in the nation that encompasses every facet of the lithium-ion battery economy and life cycle, from the mining of natural lithium deposits to the research and development to production and assembly, and finally to recycling. Mike Visher, Administrator for the Nevada Division of Minerals will provide the Council with a presentation on lithium exploration and mining in Nevada. Staff will provide the Council with an overview of the Lithium-Ion Economy white paper recently released by the University of Nevada, Las Vegas Center for Business and Economic Research. Following the presentation, the Council will have an opportunity to discuss and share information about other lithium industry projects in Nevada. *Members – State Land Use Planning Advisory Council*

11:50 am **10) <u>State Land Use Planning Agency Update</u> (For Discussion Only)**
Staff will provide the Council with an update on agency activities, SLUPAC projects, Federal public lands and other legislation, and other issues of interest to the Council.

12:10 pm **11) <u>Future Agenda Items</u> (For Possible Action)**
The Council will discuss and recommend items to be placed on a future SLUPAC agenda. *Members – State Land Use Planning Advisory Council*

12:20 pm **12) <u>Scheduling of Future SLUPAC Meeting Dates and Locations</u> (For Possible Action)**
The Council will discuss and recommend dates and possible locations for future SLUPAC meetings. Traditionally, the Council has met four times in a year and has held its meetings in various geographic areas throughout the State. *Members – State Land Use Planning Advisory Council*

12:25 pm **13) <u>Public Comment</u>**
This is an opportunity for the public to provide public comment on any item included on the agenda or any other land use planning and any other related topic not included on the agenda. (Pursuant to NRS 241.020, no action may be taken upon a matter raised under this item until the matter has been specifically included on an agenda).

12:30 pm **14) <u>Adjourn</u> (For Possible Action)**
Members – State Land Use Planning Advisory Council

<u>PLEASE NOTE:</u>
(I) Times listed for all items are estimates.
(II) Items on the agenda may be taken out of order at the discretion of the Chair; the public body may combine two or more items for consideration; and the public body may remove an item or defer discussion of an item on the agenda at any time.
(III) Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to notify Scott Carey in writing at the Nevada Division of State Lands, 901 S. Stewart Street, Suite 5003, Carson City, Nevada 89701 or by calling 775-684-2723 no later than June 1, 2022.

(IV) Documentation and supporting agenda items are available on the Nevada State Clearinghouse Website at https://clearinghouse.nv.gov and will be available at the SLUPAC meeting. For further information you may contact Scott Carey at 775-684-2723 or at scarey@lands.nv.gov.

Notice of this meeting was posted at the following locations:
Humboldt County District Court, Small Conference Room 25 West Fifth Street Winnemucca, NV 89445
Division of State Lands, 901 S. Stewart Street, Suite 5003, Carson City, NV 89701
Nevada State Library and Archives, 100 N Stewart St, Carson City, NV 89701
Nevada State Clearinghouse website at: https://clearinghouse.nv.gov
Nevada Public Notice Website at www.notice.nv.gov

STATE LAND USE PLANNING ADVISORY COUNCIL
MEETING MINUTES

October 15, 2021
Churchill County Administrative Complex
Commissioner Chambers
155 North Taylor Street Fallon, NV

Members Present
Jake Tibbitts, Eureka County (Chair)
Lorinda Wichman, Nye County (Vice Chair)
Hope Sullivan, Carson City
Sami Real, Clark County
Jim Barbee, Churchill County
Maureen Casey, Douglas County
Wilde Brough, Elko County
De Winsor, Esmeralda County
Wes Henderson, Lyon County
Curtis Schlepp, Mineral County
Roger Mancebo, Pershing County
Marla McDade Williams, Nevada Indian Commission
Charlene Bybee, Nevada League of Cities & Municipalities

Members Absent
Jim French, Humboldt County
Art Clark, Lander County
Kevin Phillips, Lincoln County
Kathy Canfield, Storey County
Jeanne Herman, Washoe County
Bill Calderwood, White Pine County
Vinson Guthreau, Nevada Association of Counties

Others Present
Andy Rieber, Public Lands Consultant
Brett Waggoner, Nye County
Colin Robertson, Nevada Division of Outdoor Recreation
Jeremy Drew, Resource Concepts Inc.
Guinevere Hobdy, Nevada Department of Transportation
David Pritchett, U.S. Bureau of Land Management
Jordan Hosmer-Henner, Governor Steve Sisolak
Dan Nubel, Office of Attorney General
Charlie Donohue, Nevada Division of State Lands
Ellery Stahler, Nevada Division of State Lands
Scott Carey, Nevada Division of State Lands

1) Call to Order

The meeting was called to order by **Jake Tibbitts** at 9:31 am. A roll call was held for members of Council and a quorum was established. Introductions were made by others who were present.

2) Public Comment

Jake Tibbitts called for public comment. There was no public comment, and the public comment period was closed.

3) Review of the Agenda

Scott Carey with the Nevada Division of State Lands stated that there were no changes needed for the meeting agenda. There we no other changes to the agenda suggested by the Council. **Jake Tibbitts** stated that since there we no changes to make, then the Council will proceed with the meeting agenda as submitted.

4) Approval of March 1, 2021 SLUPAC Meeting Minutes

Lorinda Wichman made a motion to approve the March 1, 2021 SLUPAC meeting minutes as submitted. The motion was seconded by **Jim Bybee.** There was no discussion on the motion. There was no opposition to the motion and the motion was passed. **Charlene Bybee** abstained from voting on the motion.

5) County and Member Planning Updates

Hope Sullivan, Carson City

Hope stated that the Board of Supervisors recently to took action to prohibit marijuana lounges in Carson City. She stated that the city is looking at allowing curbside and drive thru pickups at the existing permitted marijuana dispensaries. She suggested a future item for the Council to discuss tiny home regulations throughout the state.

Sami Real, Clark County

Sami stated that Clark County continues to on move forward with the implementation of its All in Clark County sustainability plan to combat the effects of climate change at the county level. Sami stated that the county is planning to take the update to its master plan for review the Board of County Commissioners at its second meeting in November. She stated that the county's new master plan is a greatly improved document and is reflective of the needs of the county today.

Sami stated that the county has begun the first phase of updating its zoning code. She stated that the county's existing code is nearly 50 years old and is being updated to be reflective of the business trends in the county in terms of permitted uses by zoning. She stated that one of the lessons learned for the county is to not be too specific but not too generic in terms of the permitted uses allowed by zoning. She stated that the first two chapters will be completed in January, followed by the next chapters in March. She stated that the goal is for the final zoning code to be scheduled for adoption in early 2023.

Sami stated that implementation of drive thrus and curbside pickup for marijuana dispensaries in Clark County has gone relatively smooth with minimal impacts to surrounding uses. She added that the county's experience to date with these uses is that they are similar to fast food and other drive thru uses.

Maureen Casey, Douglas County

Maureen stated that Douglas County has been impacted this summer by the smoke from wildlife's in the region and expressed her appreciation for the firefighters and first responders during the recent Tamarack and Caldor fires.

Maureen stated the Board of County Commissioners passed a Vacation Home Rental ordinance for South Lake Tahoe that is currently being challenged in the courts. She stated that the county has recently done some industrial rezoning near the airport to accommodate a commercial recycling plant. She added this recycling plant was permitted through a special use permit and will be required to report back and be reviewed again by the county in one year. She stated that the county recently permitted a small boutique slaughterhouse in town with the condition that it be connected to city water and sewer. She stated that the county is also in the process of updating its zoning code.

Maureen stated that the County has already permitted existing Vacation Home Rental throughout the county, but the new ordinance will cap total number of rentals in the county at 600. She stated that ordinance allows for a certain number of permitted rentals per entity, fines for violations and other issues that will ultimately be worked

out through the court system. She offered to provide the Council with additional information about the county's Vacation Home Rental ordinance following the meeting. **Hope Sullivan** suggested a future meeting agenda item about Vacation Home Rentals in Nevada.

Wilde Brough, Elko County

Wilde stated that the BLM recently transferred land to Elko County for use as a future veteran's cemetery. He stated that the county continues to work with the BLM to resolve land ownership and lease issues surrounding the Jackpot airport. He stated a railroad tie company has bought the entire industrial park in Wells and is working on a $30 million project that will create 50 jobs for the community. He stated that the county continues to work on getting natural gas service in Wells.

Wilde stated that the City of West Wendover has recently purchased 84 acres of land for their new downtown. He stated that the new downtown is planned to be located next to city hall and will include a new fire station. He also stated that the City of West Wendover has received 3,000 acres of land from the BLM that used to be part of the bombing range. He stated that the city is planning for future industrial, and aviation uses on this land and has plans to obtain an additional 3,000 acres. He stated that the sales in marijuana dispensary in West Wendover has been very strong.

De Winsor, Esmeralda County

De stated that the county met recently to discuss upgrading the existing water system in Goldfield to accommodate the new mine. He stated that county is having difficulty finding a contractor to conduct this work due to the strong construction market. He stated that the county is also working with NV Energy to upgrade the power system to accommodate the new mine in Goldfield.

De stated that Ioneer has begun work on a new road to the Rhyolite Ridge project located in the Fish Lake Valley. He stated that the new project is projected to generate 100 new truck trips on the road per day which the existing road cannot handle.

Jake Tibbitts, Eureka County

Jake stated that Eureka County has received two complaints about private landowners putting up gates and closing off public roads during hunting season. He stated that AB 211 was passed by the Legislature this past session, and it requires tentative maps to be submitted to the Nevada Department of Wildlife (NDOW) for review. He stated that this legislation gives NDOW the authority to adopt regulations for its review of tentative map applications and to adopt a fee. He stated that NDOW is looking to make a presentation to NACO Board in November about its implementation of AB 211.

Jake suggested a future agenda item about water use on county roads for maintenance and noxious weeds control.

Andy Rieber, Humboldt County

Andy Rieber a public lands consultant for Humboldt County provided the county's update. Andy stated that county is working with the BLM on its proposed 4,000 wild horse facility within the Paradise Valley within its two-week public comment period. She stated that the county is working to make sure that all impacts are identified and mitigated during the environmental assessment review process for this facility.

Andy stated that the BLM is in the process of developing a wilderness plan for the Pine Forest Wilderness Area in the county. She stated that this wilderness area is very unique in how it was designated by Congress in 2014. She stated that the county is working to make sure that the specific features and special issues for this area are incorporated into the proposed wilderness plan. Andy stated that the county is updating its public lands plan so that needs and policy of the county can be incorporated into future BLM and other Federal environmental review processes.

Wes Henderson, Lyon County

Wes stated that the county has hired Andrew Haskin as its new Community Development Director. Wes stated that the county continues to work on its 2020 master plan update. He stated that the goal is to complete the update of the plan by the end of the year. He stated that the county is working on a lands bill.

Wes stated that the county has recently approved a new marijuana dispensary in Mound House that should be open by the end of the year.

Curtis Schlepp, Mineral County

Curtis stated that Mineral County has recently permitted a 33-acre marijuana cultivation facility that will include greenhouses. He stated that there is a new solar development proposed in the northwest portion of the county along the border of Lyon County. He stated that the solar plant in Lunning is planning for an expansion and is undergoing review by the BLM.

Curtis stated that the county is following the Ioneer lithium development in Esmeralda County as in planning on impacts and housing development in Mineral County. He stated that it has been very rare to see new homes built in the county over the past 30 years and that now new homes are being constructed. He stated that the new homes being built in the county are positive for overall workforce development and employment retention. He stated that a new commercial tire center is planned to be built in the Babbitt area near Hawthorne and that the county has hired a consultant to update their master plan.

Lorinda Wichman, Nye County

Lorinda stated that she has been following a lot of solar renewable energy projects that are proposed throughout the county. She stated that she is also working on fire fuels reduction projects throughout the county and conducting flood planning in the Pahrump Valley. She stated that the county has begun working on a lands bill and that she is working with partners and Tribal Governments throughout the county.

Roger Mancebo, Pershing County

Roger stated that the commercial fish farm continues its development in the county. He stated that a new truck stop is planned for the Rye Patch Area. He stated that a new brewery is coming to Lovelock and is being developed by the owners of the Seven Troughs Distillery in Sparks.

Bill Calderwood, White Pine County

Bill was unable to attend the meeting but did provide the Council with a White County Update.

Jeremy Drew, with Resource Concepts Inc. on behalf of White Pine County stated that comments for the Mountain Home Air Force Base Air Space Optimization EIS are due on October 25th. Jeremy stated that the county is dealing with a lot of new transmission projects that has increased interest in renewable energy development. He stated that the White Pine water energy storage project is anticipated to start the Federal Energy Regulatory Commission process in December and has started their geological investigations. He stated that during the county is in the process of amending its public land management plan to include provisions related to renewable energy development.

Marla McDade Williams, Nevada Indian Commission

Marla stated that she is attending today's Council meeting on behalf of Stacey Montooth, Executive Director for the Nevada Indian Commission.

Charlene Bybee, Nevada League of Cities and Municipalities

Charlene stated that the City of Sparks is working on a lands bill for the city to create new districts for the city including rezoning industrial areas near the Truckee River to residential. Charlene stated that the city is working on expanding industrial areas into the BLM lands east of the city. She stated that the new industrial areas are planned to complement existing industrial areas in Storey County and would be connected by a new regional road. She stated that currently 80% of the workers in the Tahoe-Reno Industrial Center in Storey County live north of Interstate 80. She stated that the is working with the Desert Research Institute to study the offsets to carbon emissions from a new road to the Tahoe-Reno Industrial Center. She stated that the city is working with the Tribal Governments in the region on potential cultural resource issues involved with the proposed land bill.

Charlene stated that 6 years ago the city updated its zoning code and that they are continuing to refine the code to meet changing needs. She stated that one area of the code the city is working on is the differences between multi-family development and duplexes or condominiums. She stated that one issue statewide the needs to be addressed is the missing middle for housing and that city is updating its zoning code to help meet this need. She stated that the City of Sparks has grown 19% since the last census and that its population is now over 109,000. She stated that the city is working on its redistricting of city council wards and is hoping to approve the new maps by the end of the year. She stated that the city has chosen to designate its marijuana dispensaries to the industrial areas along major arterial roadways. She stated that the city has used the proceeds of its marijuana fees on information technology improvements and new artificial turf at Golden Eagle Regional Park.

6) Churchill County Presentation

Jim Barbee and Jeremy Drew provided the presentation for Churchill County.

Jim Barbee stated that the county is working with FEMA to review and update the flood maps for county. He stated that the outcome of the update showed that the previous mapping showed that more land was restricted for floodways than what is actually needed. He stated that the new mapping takes into account the capacity of flood storage for the dam and in the irrigation system. He stated that FEMA has accepted the county's maps and that it may take a couple of years for the flood maps to be approved and implemented. He stated that updating of the FEMA maps may result in new buildable lots in the community that were previously not allowed due them being in the floodway.

Jim stated that the county is in an extremely upside-down housing market. He stated that the proposed expansion of NAS Fallon will result in an additional 1000-1500 new jobs in the community and is challenging the housing market. He stated that the average price for a home in the county is over $330,000 which is an significant increase over the past two years. He stated that within the City of Fallon every buildable lot in the city is currently under contract which will result in over 100 new homes being constructed. He stated that the county is working with developers on new planned unit developments which are challenging the county's infrastructure capacity. He stated that to meet this challenge the county is putting in a redundant well and installing a second water system that would be constructed north of the city. He stated that county is working on a federal appropriation for a new 3 land road and bridge off of Coleman Road that would create a northern connector road.

Jim stated that the county has recently put together a request for proposal for a 26-acre property that the county intends to develop for multi-family housing. He stated that the county has received interest in this property from several developments and could accommodate 350-400 muti-family units. He stated that county is in the process of adding multi-family development standards to its zoning code to accommodate this development. He stated that he met recently with the City Manager for the City of Fernley to discuss economic development, housing, and infrastructure issues along the county's western border with the city. He stated that the county is planning to open its new 75,000 sq ft arena on its fairgrounds that would be used for conferences and livestock & rodeo events in December.

Jeremy Drew, with Resource Concepts Inc. provided an update on the Fallon Range Training Complex modernization and the Churchill County lands bill. Jeremy stated that county continues to work with the Navy on implementing the Record of Decision and working with Congress to address the remaining issues involved

with the proposed modernization. He stated that the county continues to work with the Navy and other stakeholders on the remaining issues or proposed modernization in the Intergovernmental Executive Committee that was established by Congress.

Jeremy stated that Congressman Amodei recently introduced the Northern Nevada Economic Development and Conservation & Military Modernization Act of 2021 related to the proposed modernization. Jeremy stated that it's the county's understanding that none of the Navy's legislative proposals related to the modernization will be included in this year's National Defense and Authorization Act. He added that because of the Nevada Congressional delegations' actions on behalf of the county's concerns has resulted in new meetings and increased communication with the Navy. He stated that the county will remain engaged with the Navy on the proposed modernization and working to resolve the remaining issues. He stated that the proposed realignment of Pole Line Road remains an important issue for both the county and Pershing County. He stated that the county continues to work with the BLM to resolve issues related to the BLM's 4-year extension of the administrative withdrawal of the Fallon Range Training Complex modernization lands.

Charlie Donohue with the Nevada Division of State Lands stated that he views the county's engagement with the Navy on the modernization as positive and hopes the upcoming face to face meeting with the Secretary of the Navy can help resolve the remaining issues.

Jeremy Drew, with Resource Concepts Inc. stated that the Navy recently provided the Nevada Congressional Delegation with an update on the remaining issues related to the modernization. He stated that he remains optimistic that the Navy will work with the county and other stakeholders to find a resolution to the remaining issues.

Mauren Casey asked about the county's proposed water infrastructure project to support new housing and if the county treats its wastewater tertiarily or secondarily.

Jim Barbee stated that the county developed a sewer plant about 15 years ago which is at about 30% capacity and provides for effluent water use. He added that the county is working with a developer on a project located near the sewer plant and would like to use the unused effluent water and transport it for use in areas of the community for landscaping. He stated that the main challenge for the county is providing the infrastructure that is needed to support its growth.

Mauren Casey asked if NAS Fallon has its own sewer treatment plant. Maureen stated that in Douglas County, the treated water from South Lake Tahoe is sent down to the Carson Valley for use in agricultural production and for aquifer recharging.

Jim Barbee stated that NAS Fallon has its own water rights that are sent to and processed to the City of Fallon's sewer treatment plant. Jim stated that the continue is in early talks with partners in the area to pursue opportunities to utilize treated water for agriculture in the area as opposed to storage in a treatment pond.

7) Railroad Valley Proposed NASA Withdrawal and Possible Adoption of a Comment Letter

Scott Carey with the Nevada Division of State Lands provided an overview of the proposed letter which is included on pages 19-20 of the **meeting packet**. Scott stated that in May the BLM put a call out for comments on a request from NASA to withdrawal about 23,000 acres in the Railroad Valley in central Nevada. He stated that NASA would like to withdrawal these public lands for use on satellite calibration activities. He stated that activity that has been taking place in the Railroad Valley for the past couple of decades and data collected from this activity is used by NASA's Jet Propulsion Laboratory in Pasanda and the European Space Agency.

Scott stated that Nye County has expressed concern with NASA's proposed withdrawal primarily because of the inconsistency of the withdrawal with their land use plan. He stated that the proposal by NASA would remove these public lands from multiple use activities which will have a negative impact on the county's land use plans and management activities in this area. He stated that the Council has been consistent over the years on promoting multiple use activities on public lands and in particular to make sure that Federal land management

activities are consistent with local land use plans. He added that the Council has also stressed that cooperation between Federal, State, Tribal, Local Governments and other stakeholders is critical on the withdrawal of any public lands or change in land use. He stated that proposed comment letter stresses further cooperation between the BLM, NASA and Nye County & other interested stakeholders and requests that these parties continue to meet on this issue.

Scott stated that staff believes that the proposed land withdrawal by NASA in the Railroad Valley could have potential impacts on the adopted land use plans in Nye, White Pine and Lincoln counites. He stated that if approved, the Chair will be authorized to sign the letter on behalf of the Council and staff will submit a copy of the letter to Alicia Brown, Intergovernmental Affairs Director for NASA.

Lorinda Wichman stated that she has made several phone calls and other inquiries with NASA to engage the agency on this issue and get more information. Lorinda stated that NASA has used the Railroad Valley playa site to calibrate their satellites since 1993. She stated that the NASA has requested to limit activity on this land, but the county has had a hard time trying to find out the reason for limiting activity. She stated that the county met in September with staff from NASA on this issue and discussed ways how the county can protect this area for the agency. She stated that NASA expressed a concern with the county about allowing lithium mining in this area and in particular the use of evaporative ponds. She stated that the county has concerns about water use and is not in favor of allowing evaporative ponds within the Railroad Valley as well. She stated that the county is planning to meet with NASA again on November 12th to further discuss this issue.

Lorinda stated that there are existing oil and gas wells within the proposed 23,000-acre area that NASA is proposing to withdrawal. She stated that the oil and gas companies have been using this area since the NASA began its satellite calibration activities and there have been no conflicts with the oil derricks. She stated that the county believes that the BLM could permit lithium extraction in the Railroad Valley without the use of evaporative ponds.

Jake Tibbitts suggested adding Perry Wickham, BLM Tonopah Field Office Manager to the list of individuals receiving a copy of the letter. Jake clarified that NASA would be the lead agency on NEPA review for this public land withdrawal and that NASA would be responsible for brining everyone together. He stated that the BLM would be a cooperating agency on this project. He suggested that language be added to the letter to ask NASA to ensure that affected state and local agencies are offered cooperating agency status.

Lorinda Wichman stated that Perry Wickham is aware of this proposal and that including him on this letter is a good idea. Lorinda stated that county has requested to BLM and NASA that the county become a cooperating agency on this project. She stated that the county has not heard back from either entity on its request to become a cooperating agency.

Jake Tibbitts pointed out a couple of minor typo errors and suggested changes to the proposed letter. Jake suggested a new sentence in the fifth paragraph of the letter that the Council requests that NASA allow local parties to become cooperating agencies in this proposed withdrawal. He also suggested added that a copy of the letter be submitted to Nye, White Pine, and Lincoln counties.

Hope Sullivan suggested that word "advocates" be removed from the last sentence of the fifth paragraph of the letter. Hope stated that its not the Council's role to advocate for local governments and suggested that this word be replaced with encouraging or another word.

Jake Tibbitts suggested replacing "advocates" with "supports" in this section of the letter.

Sami Real recommended changing "comments" to comment in the first sentence of the sixth paragraph of the letter.

Marla McDade Williams suggested adding the term "cultural resources" at the end of the second sentence of the fourth paragraph of the letter. Marla stated that cultural resources are in an important issue for the Tribe's involved with this proposal.

Jake Tibbitts suggested sending a copy of the letter to the Duckwater Shoshone Tribe.

Charlie Donohue with the Nevada Division of State Lands asked if the letter should include a reference to the existing oil and gas activities in the Railroad Valley that don't impact NASA's satellite calibration activities.

Jake Tibbits stated that he agreed with Charlie's suggestion and stated that the last sentence of the sixth paragraph be rewritten.

Lorinda Wichman stated NASA brought up in their recent meeting that the data collected from the Railroad Valley is important to gauge changes in the environment. Lorinda stated that county does not believe it's necessary for NASA to move but rather work with the county to develop a multiple use plan for the area that is acceptable to all parties.

Jake Tibbits suggested that the last sentence of the sixth paragraph be rewritten be rewritten as "SLUPAC also requests that NASA and the BLM work with Nye County and other affected stakeholders to identify acceptable alternatives or a land management plan that will accommodate multiple uses that will preserve the environment and quality of life in the Railroad Valley while also allowing for the satellite calibration activities to be protected."

Charlie Donohue with the Nevada Division of State Lands asked what the county's timeframe is for getting this letter to NASA.

Lorinda Wichman stated that the county would like to have this letter in hand before its November 12th meeting with NASA.

Wes Henderson suggested that a copy of the letter be provided to each member of Nevada's congressional delegation.

Sami Real made a motion for the Council to adopt the proposed letter the additions and changes as discussed by the Council and authorize the Chair to sign the letter. The motion was seconded by **Hope Sullivan**. There was no opposition to the motion by those present. The motion was approved unanimously by the Council

8) Nevada Division of Outdoor Recreation and Dark Skies Program Presentation

Colin Robertson with the Nevada Division of Outdoor Recreation provided the Council with a **presentation** about the division and the Nevada Dark Skites Program.

Charlene Bybee asked if the division of working with local convention and visitor's authorities around the state. Charlene stated that the Reno-Sparks Convention and Visitors Authority and others around the start are targeting outdoor recreation as a big component of their tourism recovery efforts.

Colin Robertson with the Nevada Division of Outdoor Recreation stated that the division is working with several local visitor's authorities around the state. Colin stated that he serves as chair of the Confluence of States and that Nevada is scheduled in October 2022 to host the outdoor media summit. He stated that the summit is a large gathering and will help promote the economic impacts of outdoor recreation in Nevada. He stated that he is also working with the Reno-Sparks Convention and Visitors Authority to help bring meetings and conventions to the region that are linked to outdoor recreation.

David Pritchett with the Bureau of Land Management asked what the scale is for a dark sky designation in Nevada.

Colin Robertson with the Nevada Division of Outdoor Recreation stated that the intention of the Nevada Dark Sky Program is to support and celebrate communities that go through the process to obtain international dark sky certification. Colin stated that a local community could assess the lighting standards in their jurisdiction and take actions to obtain international dark sky certification. He stated that there is a process for parks to also obtain international dark sky certification. He stated that the program is a local process, and the main idea is to have a network across the state of areas at all levels that are certified as dark sky areas.

Hope Sullivan stated that the city has developers who are torn between meeting the state's goals for dark skies but also providing lighting required by the city's zoning code. Hope stated that it would be great to join together the state's goals for preserving dark skies with the local government's code requirements for lighting.

Colin Robertson with the Nevada Division of Outdoor Recreation stated that he would welcome this collaboration. Colin stated that sometimes policy making can add confusion to specific projects. He added that part of the Nevada Dark Skies Program funding is set aside to develop a toolkit for local communities to conduct dark skies conservation efforts and that the Division is seeking other grant funding to replace new dak skies lighting.

Sami Real asked if local governments would be the ones who would implement a dark skies designation or if it would be done by others at a smaller scale.

Colin Robertson with the Nevada Division of Outdoor Recreation stated that the Town of Baker is dealing with this issue currently and is working with White Pine County Commission to adopt an ordinance at the Town of Baker level to preserve dark skies in the community. Colin stated that at a larger scale the City of Boulder City has directed its staff to develop and ordinance to implement a dark skies program in the city. He stated that the process within the Nevada Dark Skies Program is set up to work at a small town or at a larger city scale.

Maureen Casey suggested a future agenda item for the Council to discuss and share efforts around the state to implement a dark skies program in their parts of the state.

9) State Land Use Planning Agency Update

Scott Carey with the Nevada Division of State Lands provided an update of the State Land Use Planning Agency that was included as pages 37-56 of the **meeting packet**.

10) Future Agenda Items

Jake Tibbitts stated during the course of today's meeting he has heard the following future agenda items suggested; tiny homes siting and regulations, vacation home rentals, 30 by 30, and the NDOW Habitat Conservation Framework.

Scott Carey with the Nevada Division of State Lands stated that staff will also look the following future agenda items; NDOW tentative map review regulations, water use for road maintenance, and marijuana consumption lounges.

11) Scheduling of Future SLUPAC Meeting Dates and Locations

Scott Carey with the Nevada Division of State Lands stated that the staff was hoping to finalize a date and location for the next Council meeting. Scott suggested that the Council set a date and location for its next meeting towards the beginning or middle of February.

Jake Tibbitts suggested Thursday February 10, 2022 at 9:00 AM in Las Vegas as the date for the next Council meeting. The consensus of the Council was that this date would work for its next meeting.

12) Public Comment

Jake Tibbitts called for public comment. There was no public comment, and the public comment period was closed.

13) Adjourn

The meeting was adjourned at 12:52 pm.

Respectfully submitted,

Scott Carey
/s/
Meeting Recorder

Please note that minutes should be considered draft minutes pending their approval at a future meeting of the State Land Use Planning Advisory Council. Corrections and changes could be made before approval.

The meeting was digitally recorded. Anyone wishing to receive or review the recording may call (775) 684-2723. The recording will be retained for three years.

Nevada Division of
STATE LANDS

STATE OF NEVADA
Department of Conservation & Natural Resources
Steve Sisolak, Governor
Bradley Crowell, *Director*
Charles C. Donohue, *Administrator*

June 3, 2022

To: State Land Use Planning Advisory Council

From: Scott Carey, AICP State Lands Planner

RE: Election of Four Members to Serve on the SLUPAC Executive Council

The Executive Council (NRS 321.755) consists of four SLUPAC members and the Administrator of Nevada Division of State Lands. The Executive Council is charged with, upon request, resolving inconsistencies in land use plans between two or more adjacent or overlapping local governmental entities which cannot be resolved between them.

At the May 28, 2020 meeting, the Council appointed Sami Real (Clark County), Jim French (Humboldt County), Lorinda Wichman (Nye County), and Lee Plemel (Carson City) to the Executive Council. The appointments were for a two-year term ending on May 28, 2022.

At the March 1, 2021 meeting, the Council appointed Jim Barbee (Churchill County) to the SLUPAC Executive Council to fill a vacancy on the Executive Council left by the retirement of Lee Plemel (Carson City). Jim's term on the Executive Council expired on May 28, 2022.

Since all the terms of all of the Executive Council have expired, the Council needs to appoint 4 new members to serve on the Executive Council. NRS 321.755 (2) states that "To the extent practicable, the members selected to serve on the Executive Council must be representative of the various geographic areas of this State. Each member of the Executive Council shall serve for 2-year terms."

Recommendation: *Staff recommends that the Council appoint 4 new members to serve on the Executive Council for a 2-year term ending on June 3, 2025.*

Nevada Division of
STATE LANDS

STATE OF NEVADA
Department of Conservation & Natural Resources
Steve Sisolak, Governor
Bradley Crowell, *Director*
Charles C. Donohue, *Administrator*

June 3, 2022

To: State Land Use Planning Advisory Council

From: Scott Carey AICP, State Lands Planner

RE: SLUPAC Nevada Economic Assessment Project (NEAP) Letter of Support

Background

At the December 7, 2018 meeting, the Council heard a presentation from University of Nevada Cooperative Extension, BLM, NACO, and the US Forest Service about the Nevada Economic Assessment Project (NEAP). The purpose of NEAP is to assist counties with compiling and analyzing economic data that can be used statewide for various types of planning and policy assessments. At this meeting, the Council heard about ways to get involved with this project and had a discussion on how the data collected could be of use for land use planning decisions.

At its February 10, 2022 meeting, the Council hear a presentation from University of Nevada Cooperative Extension about the progress of NEAP. The presentation also included an overview on how to access and utilize the economic information gathered from the project. At the end of the presentation, the Council had a discussion on the merits of NEAP and usefulness of the data for land use planning decisions. The Council also expressed a desire for future funding to support NEAP moving forward and requested a future agenda item to consider a letter of support for the project.

Analysis

Since the February meeting staff has been working with staff from the University of Nevada Cooperative Extension on a letter from the Council expressing support for continued funding for NEAP. The proposed letter expresses support for continued funding for NEAP so that the project can continue its work throughout Nevada.

Over the past several years, the Council has stressed that cooperation between Federal, State, Tribal, Local Governments and other stakeholders is critical on the withdrawal of any public lands or change in land use. Additionally, the Council has advocated for local governments and Tribal Nations in Nevada to have active engagement in this process consistent with their local land use plans and policies. The NEAP provides a very helpful tool for local governments and Tribal Nations to use to analyze the economic impact of a proposed land use planning decision involving public lands.

Staff believes that NEAP contains a lot of great data that can be to support the position of local governments and Tirbal Nations in the land use planning process. Staff feels that the proposed letter is consistent with policy adopted by the Council in the past with respect to having accurate information to assess the economic impacts of land use planning decisions. Additionally, staff believes that the proposed letter will help support the University of Nevada Cooperative Extension's efforts to secure long term, sustainable funding for NEAP.

A copy of the Council's proposed letter of support is attached to this memo. Per NRS 321.750 (4), the Council is authorized to advise any federal or state agency or local government on land use planning and policy. If approved, the Chair would be authorized to sign the letter on behalf of the Council and a copy of the letter would be posted on the Council's website. Additionally, a copy of the letter would be sent to Governor Sisolak, Senator Catherine Cortez Masto, Senator Jackie Rosen, Congresswoman Dina Titus, Congressman Mark Amodei, Congresswoman Susie Lee, and Congressman Steven Horsford. Additional copies of the letter may be sent to any other officials or agencies as directed by the Council.

Recommendation

Staff recommends that the Council review and discuss the proposed letter of support for the NEAP project and consider approval of the letter. If approved, staff recommends that the Chair be authorized to sign the letter and transmit a copy to the individuals and agencies included in the letter and to others as directed by the Council.

BRADLEY CROWELL
Director
Department of Conservation
and Natural Resources

CHARLES DONOHUE
Administrator

STEVE SISOLAK
Governor

State Land Use Planning Advisory Council
State Land Use Planning Agency

Address Reply to

State Land Use Planning Agency
901 S. Stewart St. Suite 5003
Carson City, Nevada 89701-5246
Phone: (775) 684-2723
Fax: (775) 684-2721
Web: lands.nv.gov/land-use-planning

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

State Land Use Planning Advisory Council

June 3, 2022

SLUPAC Support of Continued Funding for Nevada Economic Assessment Project (NEAP)

On behalf of the Nevada State Land Use Planning Advisory Council (SLUPAC) I am writing this letter to provide the Council's support of continued funding for the Nevada Economic Assessment Project (NEAP). SLUPAC supports the work of the NEAP team's efforts to obtain long-term, sustainable funding to continue their work throughout the communities of Nevada.

NEAP was created by a group of public entities in Nevada, including Nevada Association of Counties, U.S. Bureau of Land Management, and U.S. Forest Service for the purpose of creating a quantitative backing to guide better decision making.

NEAP develops a comprehensive data repository of county quantitative and qualitative baseline data to be used to assess local land use planning and economic development initiatives. Thie project also provides individual counties with economic impact assessment models that are critical to help analyze industries and activities associated with policy decisions.

The NEAP team has continued to look for additional ways to bring better data to the forefront of decision making. Recent projects and partnerships include implementing the most-in-depth hunting expenditure survey ever completed in Nevada, showing the economic impacts of big-game and upland-game hunting to local communities, with the Nevada Division of Wildlife. Additionally, they have an ongoing partnership with Nevada State Parks to assist with Visitor Use Surveying and showcasing economic impacts of the park sites.

If you have any questions or would like additional information concerning SLUPAC, please feel free to contact Scott Carey, State Lands Planner at 775-684-2723 or scarey@lands.nv.gov.

Sincerely,

Jake Tibbitts
Chair
State Land Use Planning Advisory Council

CC:
Governor Steve Sisolak
Senator Catherine Cortez Masto
Senator Jackie Rosen
Congressman Mark Amodei
Congressman Steven Horsford
Congresswoman Dina Titus
Congresswoman Susie Lee

Nevada Division of
STATE LANDS

STATE OF NEVADA
Department of Conservation & Natural Resources
Steve Sisolak, Governor
Bradley Crowell, *Director*
Charles C. Donohue, *Administrator*

June 3, 2022

To: State Land Use Planning Advisory Council

From: Scott Carey AICP, State Lands Planner

RE: Lithium Industry in Nevada Presentation

Background

Over the past several years, there has been a lot of attention about the growth and development of the lithium industry in Nevada. Earlier this month the University of Nevada, Las Vegas Center for Business and Economic Research issued a white paper about the Lithium-Ion Economy in Nevada. Highlights of the white paper include.

- Nevada is the only U.S. state that encompasses every facet of the lithium-ion battery economy and life cycle, from the mining of natural Lithium deposits to the research and development to production and assembly, and finally to recycling.
- The expansion of the electric-vehicle market and clean-energy production globally has served as a catalyst for the growth in the lithium industry.
- A primary driver is the demand for electric vehicle (EVs) with an additional 54 million passenger electric vehicles forecasted to be on roads globally by 2025, up from 12 million today.
- Total global deployment of home and utility energy storage is predicted to grow 122-fold: from 9 gigawatts (GW)/ 17 gigawatt hours (GWh) in 2018 to 1,095 GW/2,850 GWh by 2040.3
- The entire Lithium-ion economy in Nevada employs between 8,282 to 9,116 workers in Nevada, roughly the same number of people as a mid-sized gaming company in Las Vegas.
- Nevada is home to at least 16 companies in the Lithium battery economy, including battery recycling companies such as Redwood Materials. Lithium manifesting and recycling firms like Redwood, Tesla, and Panasonic are located in northern. Southern Nevada is home to two battery companies: K2 Energy and Lithion Battery Inc.

Lithium mining currently takes place in Nye County while existing lithium battery manufacturing and recycling is happening in Northwestern Nevada. There are currently

large-scale lithium mining projects planned in Northern and Central Nevada along with additional lithium manufacturing and recycling facilities planned for Northwestern and Southern Nevada.

Analysis

The purpose of this presentation is to provide the Council with an overview of the economic impact and potential of the lithium industry in Nevada. All facets of this industry are expected to grow over the next several decades and is likely to affect land use planning and economic development efforts around the state. As the Council is aware, there are large lithium mineral deposits around Nevada. Mike Visher, Administrator for the Nevada Division of Minerals is going to provide the Council with a presentation about lithium mining and exploration projects that are planned throughout the state. Following the presentation, staff will provide the Council with an overview of some of the highlights from the UNLV The Lithium Ion-Economy white paper and the state's economic development efforts towards the lithium industry in Nevada.

Following the presentation, the Council is encouraged to share any information about lithium industry related projects in their respective jurisdictions. The goal of this agenda item is to have a high-level discussion about the lithium industry in Nevada overall and its potential. For the purposes of this agenda item the Council is asked to not focus on or take a position on any specific project or proposal. If the Council would like to take a deeper look at or weigh in on a specific lithium project, members are encouraged to request a future agenda item.

Recommendation: *Staff recommends that the Council review the information provided in this memo & the attached Lithium-Ion Economy white paper and listen to the presentation about the lithium industry in Nevada. Following the presentation, members of the Council are encouraged to share any information about lithium industry related projects in their respective jurisdictions.*

The Lithium-Ion Economy

Published May 2022

Fast Facts:

- The expansion of the electric-vehicle market and clean-energy production has served as a catalyst for the lithium-ion battery industry.
- Forecasts predict a fivefold increase in the global lithium-ion battery market through 2030, from $21.95 billion in 2020 to $115 billion by 2030.[1]
- A primary driver is the demand for electric vehicle (EVs) with an additional 54 million passenger electric vehicles forecasted to be on roads globally by 2025, up from 12 million today.[2]
- Total global deployment of home and utility energy storage is predicted to grow 122-fold: from 9 gigawatts (GW)/ 17 gigawatt hours (GWh) in 2018 to 1,095 GW/2,850 GWh by 2040.[3]
- The number of lithium-ion battery manufacturers of all types in the United States is forecasted to expand at a 2.6 percent annual pace reaching 41 enterprises by 2025.[4]
- 15 new lithium-ion battery cell facilities for all electric vehicles in the United States are planned for completion by 2025.[5]
- Nevada is the only U.S. state that encompasses every facet of the lithium-ion battery economy and life cycle, from the mining of natural Lithium deposits to the research and development to production and assembly, and finally to recycling.
- The entire Lithium-ion economy in Nevada employs between 8,282 to 9,116 workers in Nevada, roughly the same number of people as a mid-sized gaming company in Las Vegas.
- The lithium-ion battery manufacturing industry alone currently employs almost 5,000 people in the United States, over 59 percent of whom are here in Nevada.[6]

Acronyms:

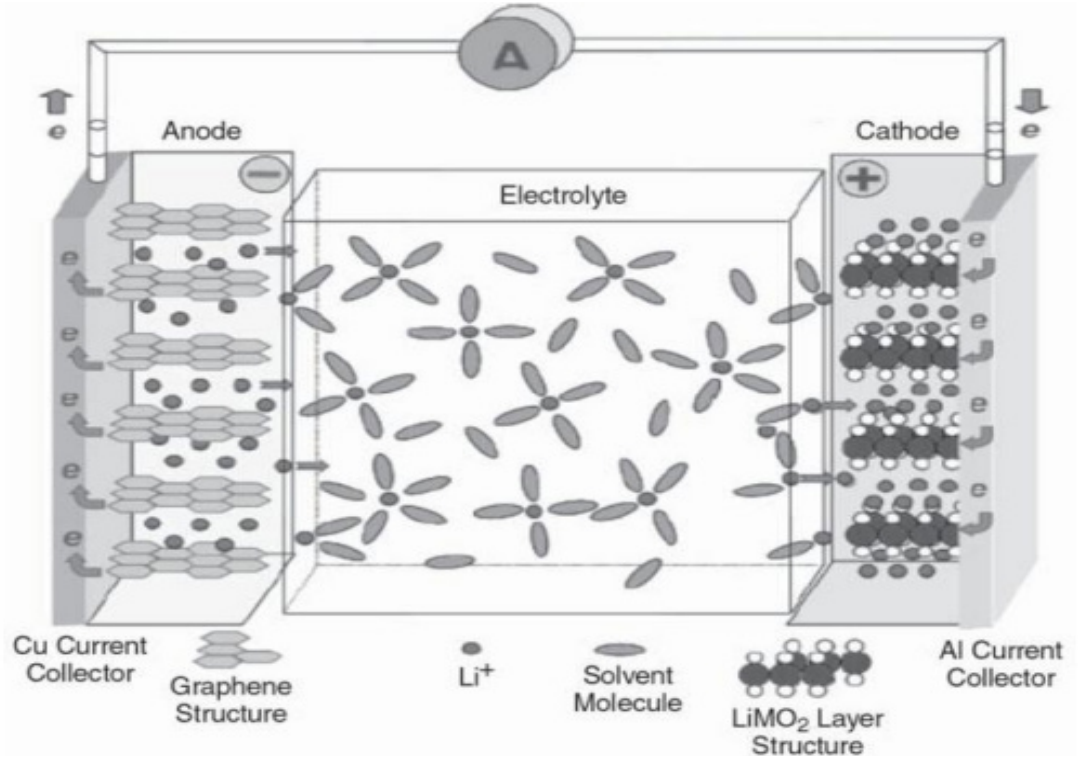
EV	Electric Vehicle		
GW	Gigawatt	**ARC**	Applied Research Collaborative
GWh	Gigawatt hour	**UNLV**	University of Nevada, Las Vegas
IIJA	Infrastructure Investment and Jobs Act	**UNR**	University of Nevada, Reno
NCAR	Nevada Center for Applied Research	**eVTOL**	Electric Vertical Take-off & Landing
TMCC	Truckee Meadows Community College	**GED**	General Educational Development

1 Financial News Media; **2** BloombergNEF Electric Vehicle Outlook Long-Term fbloomb; **3** Bloomberg, Energy Storage Investments, 2019 https://about.bnef.com/blog/energy-storage-investments-boom-battery-costs-halve-next-decade/; **4** IBISWorld, Page 15; **5** Fred Lambert, 2021; **6** IBISWorld, Page 15

I. History of the Lithium-ion Battery

Batteries, or electrochemical cells, are devices that convert the energy created by chemical reactions into electricity. Cells made from lithium were developed in the mid-20th Century, providing lighter and more dense battery cells, thus longer lifespans. Early on lithium-ion batteries served the market for mobile electronic devices – such as medical device implants, military equipment, and an array of consumer goods.[7] In 1991, Sony released a camcorder that featured the first commercial rechargeable lithium-ion battery, beginning a wave of battery -powered products that are now ubiquitous to modern life.

Today, lithium batteries are the battery cell of choice for powering the world's fleet of cell phones, electric vehicles, and electric storage units because of their ability to charge faster and store more electricity than other types of batteries. Unlike wet batteries, such as automotive batteries that use an electrolyte fluid, lithium-ion batteries are dry, meaning they use an electrolyte paste of lithium-ion salt to create chemical energy, and therefore are lighter, easier to handle, and can be easily recharged. In comparison to other rechargeable batteries, lithium-ion batteries possess a higher energy density, a higher voltage capacity, and a lower self-discharge rate. Because a single cell can hold a charge for longer than other battery types, this results in higher electrical efficiency.[8] As commercialization has caught up with technological advancements, lithium-ion batteries have become the preferred choice of battery in everything from consumer electronics, to automobiles, power grids, and home power storage.



Source: Daniel, "Materials and Processing for Lithium-ion Batteries," September 2008.

7 Scrosati, "History of lithium batteries",.5; **8** What are the Benefits of Lithium-Ion Batteries?

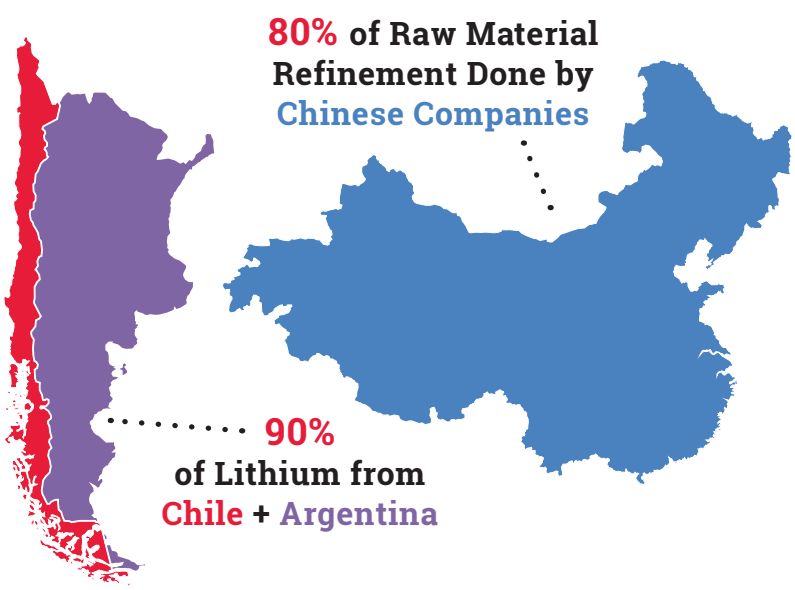
II. The Lithium-Ion Battery Economy in Nevada

When the Panasonic Corporation agreed to partner with the electric auto manufacturer, Tesla, at the Tahoe-Reno Industrial Center in 2015, the electric automobile industry was changed almost overnight. The size of the facility, called a "gigafactory", and advanced production and scaling techniques allowed Panasonic and Tesla to lower the per-unit cost of each battery cell while packing cells in more efficient ways that allowed for more electricity storage. The partnership brought the per-unit price of electric vehicles down and increased their ability to compete with traditional gasoline-powered automobiles. Nevada brings many other assets to the table when it comes to the lithium-ion battery economy beyond just the Tesla gigafactory. These additional assets include the mining of lithium-ion and other rare earth minerals in and near our state boundaries, partnerships between the private selector and academic entities dedicated to research and development, e.g. University of Nevada, Reno (UNR) Nevada Center for Applied Research (NCAR), Truckee Meadows Community College (TMCC) Jump Start, and University of Nevada, Las Vegas (UNLV), Applied Research Collaborative (ARC), production and assembly facilities, and finally several battery recycling startups. These assets all happen in one form or another in Nevada, putting our state front and center in a world that is ever increasing its demand for electricity generation and storage to power everything from homes to cars to cell phones and even hotels, restaurants, and large industrial operations.

Due to rising demand, the total global lithium-ion battery market is forecasted to go from $21.95 billion to $115 billion by 2030, driven primarily by the EV market and electricity grid storage.[9] A report by Bloomberg projects that total global deployment of energy storage will grow by 122-fold: from 9 gigawatts (GW) in 2018 to 1,095 GW in 2040.[10]

> **To keep pace with demand, the global lithium supply will need to quadruple in the next ten years.**[11]

According to McKinsey, the U.S. will need to invest $65 billion annually by 2030 just in new battery manufacturing plants to keep up with rising demand.[12] Yet, the U.S. is strategically behind in the domestic manufacturing of lithium-ion batteries and supply chain security from the beginning to end of battery life cycle according to a report by the U.S. Energy Department's Consortium for Advanced Batteries.[13] For example, 90 percent of the lithium that arrives in the United States comes from two countries: Argentina and Chile.[14]

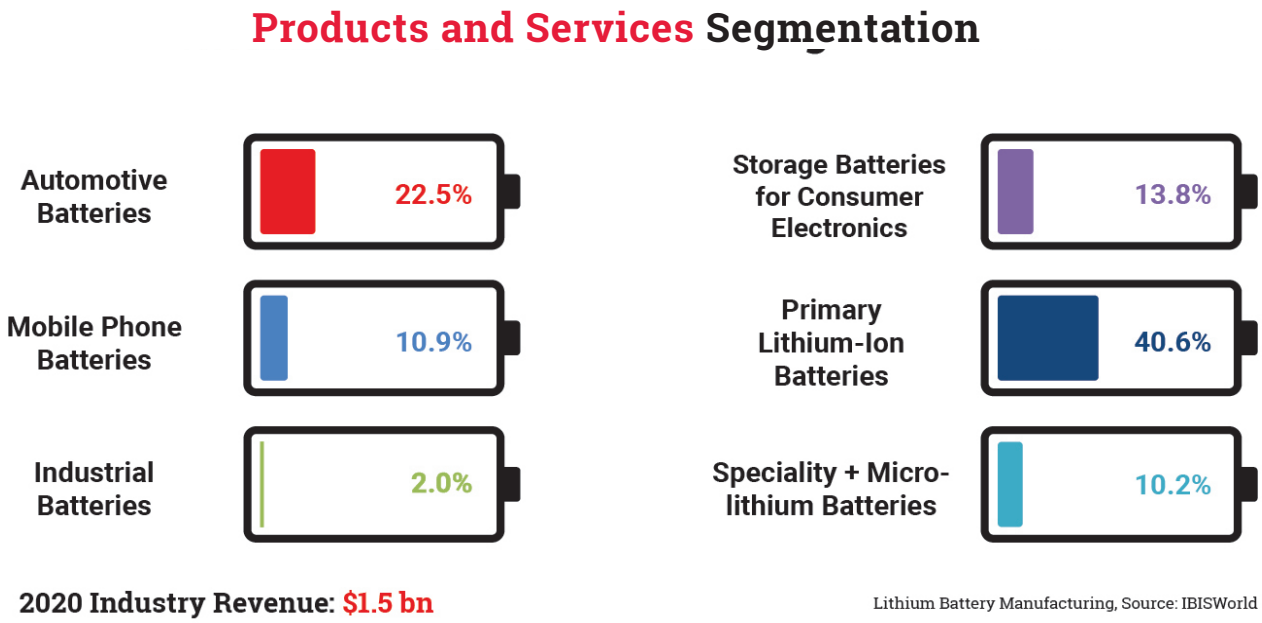


9 FinancialNewsMedia; **10** Bloomberg; **11** Fastmarkets2030; **12** McKinsey & Company, 2021; **13** Department of Energy202; **14** The Conversation 2022

Many of the companies in those countries involved in the extraction of lithium as well as other key metals, such as cobalt, are owned or partially owned by Chinese companies. 80 percent of the world's refinement of raw materials for use in advanced batteries, like lithium-ion batteries, is done by Chinese chemical companies according to the Institute for Energy Research.[15] Several U.S. administrations have mentioned the need to invest in research and development in domestic production of the Lithium-ion Economy as a way to achieve economic, environmental, and geopolitical goals of not only transitioning but being a leader in the clean energy economy.

III. Application of Lithium Battery:

In 2020, industry revenues from battery manufacturing alone totaled $1.5 billion according to IBIS World.[16] There are two types of batteries produced in the lithium battery industry: storage batteries, which are rechargeable and reusable, and primary batteries, which are one-time use. Storage batteries are used most heavily in consumer electronics, such as cell phones, automotive batteries, and increasingly industrial batteries. Automotive batteries are the single biggest and most recognizable most used storage product, accounting for 22.5 percent of revenue in 2020. This is followed by mobile phone batteries, accounting for 10.9 percent revenue, and industrial batteries accounting for 2.0 percent of revenue.[17] Another 40.6% of revenues come from primary lithium batteries (single use) that are used in consumer products, though that share is rapidly falling.



Used and recycled lithium-ion batteries are used by consumer product manufacturers as inputs in other consumer products including phones, tablets, toys, and electronic cigarettes. Furthermore, advances in lithium-ion battery technology, combined with lower lithium prices, have caused increasing dominance in a range of new applications, such as home-energy storage and power-grid distribution. Recent geopolitical events will likely push prices for lithium-ion

15 et. al. Institute for Energy Research 2020; **16** IBISWorld, Page 17; **17** IBISWorld, Page 17

batteries higher for the time being after a long downward trend over the past decade.[18] For example, a typical lithium-ion battery pack for an EV costs around $6,300, but is forecasted to increase by $1,000 per unit as a result of recent sanctions on Russian commodities. In particular, nickel is a necessary raw material in modern lithium-ion batteries and 20 percent of the world's nickel comes from Russia.[19]

Lithium-ion is the preferred storage battery in many applications, since it can charge faster and hold more energy than other types of batteries. The use of lithium-ion batteries in new applications will continue to be a major development driver, especially as the United States and the world work to reduce their carbon footprint from the use of fossil fuels, especially in transportation and energy generation economic sectors.[20][21] One limitation to further advancement in the lithium-ion battery economy occurs in the research and development phase.

> **While lithium-ion batteries have achieved cost-competitiveness with other batteries and forms of energy storage and delivery, studies document that advancement in the industry increases at a very steady, but not necessarily stunning pace of 7-8 percent per year.[22]**

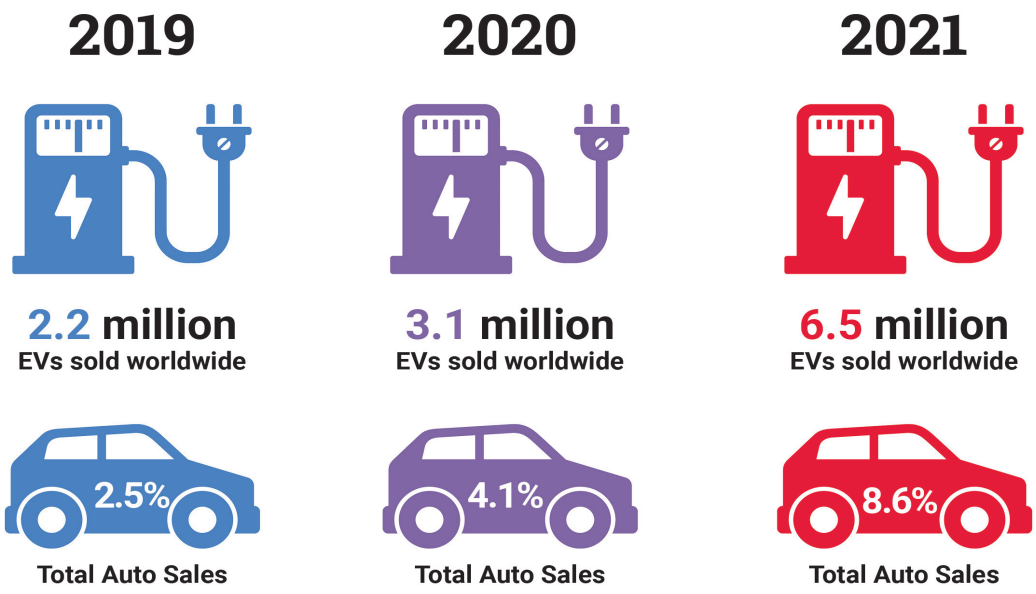
Even when innovations occur in battery storage or efficiency, the time lag until a commercial application emerges can be extensive, thus preventing any immediate acceleration in the technological application as we have seen in some other industries, notably computing.

IV. Demand:

Lithium-ion based batteries are expected to be the leading technology in the market. The main demand for lithium-ion batteries comes from the automotive industry and not just from automotive tech startups such as Tesla, Rivian, and Lucid, but now from legacy automotive producers such as Ford, GM, Volkswagen, and Stellantis. Bloomberg estimates that by 2025, there will be 54 million passenger EVs on the road globally, up from 12 million today.[23] The vast majority of that growth will come from China and certain European countries such as Germany, though U.S. sales of electric vehicles are on the rise. For example, in 2021, 801,550 hybrids and 434,879 electric vehicles were sold in the United States, representing an 83-percent increase for the EV market from 2020.[24]

The demand for electric vehicles globally has been increasing in a very short time period. In 2019, 2.2 million EVs were sold worldwide, accounting for only 2.5 percent of total automobile sales. In 2020, it jumped to 3.1 million units, accounting for 4.1 percent of total vehicle sales despite the pandemic. In 2021, global EV sales doubled to 6.5 million units in 2021.[25] The International Energy Agency reports that the share of EVs in the global automotive sales market increased from 4.11 percent of the total market in 2020 to 8.57 percent in 2021.[26] In the United States just 4 percent of passenger automobiles sold in 2021 were electric.[27]

18 Bloomberg; **19** Bloomberg; **20** IBISWorld, Page 17and16; **21** Environmental protection Agency; **22** WSJ 2022; **23** BloombergNEF Electric Vehicle Outlook ; **24** Kierstein "Motor Trend"; **25** Saur Energy (2022); **26** Fred Lambert; **27** Bloomberg NEF Electric Vehicle Outlook



By 2025, the global figure will double again as 16 percent of passenger vehicle sales around the world will be an electric vehicle according to Bloomberg.[28]

Home-energy storage batteries have been on the market for a long time, and there are now many different types and sizes to choose from. Modern lithium battery systems swiftly surpassed traditional lead-acid batteries as manufacturers developed clever, flexible systems to fit many energy storage applications, thanks to significant advancements in lithium technology.[29] Another use is the ever increasing need for on demand electricity storage for the electrical grid. The demand for electrical grid storage as measured by GW is forecasted to increase 122-fold as more utilities move to sustainable power. This will require large scale industrial sized batteries and new technology to handle demand.

Other uses include zero-emissions air trips, using aircraft (drones) for urban package delivery. By 2025, the global eVTOL aircraft market is predicted to be worth between $162 million and $1 billion. This doesn't include other lithium-ion battery uses in the consumer product market such as cell phone batteries, power packs for recharging devices, wheelchairs, scooters, stair lifts, emergency backup power for medical equipment, etc…[30]

V. Economic Impact:

In 2021, the global lithium-ion battery market was valued at $21.95 billion and is expected to grow to $115 billion by 2030.[31] Despite supply-chain bottlenecks and the expiration of EV subsidies in China, EVs, as a percentage of vehicles on the road, continue to grow, especially as uncertainty surrounding oil production and supply chains continues.

According to IBIS World, as of 2022, the lithium battery manufacturing industry alone employs 4,860 people in the United States.

28 CNBC 2022; **29** Best Solar Battery Systems; **30** eVTOL "Aircraft Market"; **31** Financial-NewsMedia

Between 2017 and 2022, the number of persons employed in the Lithium battery manufacturing industry in the United States decreased by - 0.6 percent on average, most likely due to technological advances, dependence on international battery manufacturers, and prioritization of areas in the battery life cycle such as research and development, end of life cycle processing, and EV production and assembly.[32] In the 3rd quarter of 2021, Nevada employed about 2,913 workers in lithium battery manufacturing, accounting for 59.9 percent of the jobs nationwide.[33]

The average wage in Nevada in the battery manufacturing industry is $55,383.47 per year, higher than the average wage in the whole battery industry.[34] The average wage in the battery industry as a whole in Nevada is $48,991, slightly below the national average of $49,521.

The salaries in the United States battery industry presently vary from $27,000 (25th percentile) to $58,500 (75th percentile), with top earners (90th percentile) earning $104,000 annually.[35] In Las Vegas, the average hourly rate salary is $36,618 $(18 an hour), while hourly work in the battery industry starts at $18 an hour and goes up to $30.41 an hour, higher than the Las Vegas average.[36] [37] For comparison, the median household income in Las Vegas is $60,365 according to the U.S. Census Bureau.[38] [39]

A Sample of Jobs, Salary, and Education Required in the Lithium-Ion Battery Industry

Job Title	Annual Salary	Education
Operations	$115,872	Bachelor's Degree Plus Experience
Software Engineer	$102,604	Bachelor's Degree, Programing Language Proficiency
Battery TEST Engineer	$101,789	Bachelor's Degree
Lithium-Ion Battery Engineer	$89,556	Masters Degree
Battery Engineer	$86,117	Masters Degree
Energy Storage Technician	$71,116	Bachelor's Degree
Machine Operator	$37,752 - $63,252.80	Highschool Diploma Plus Certification
Lithium mining	$56,000	GED Plus Some Certifications
Production Manager	$79,071	Master's Degree
Technical Support + Product Specialist	$37,440 - $63,252.80	Highschool Diploma Plus Certification

Source: ZipRecruiter

32 IBIS World, 2022; **33** Walburg, Chelsea 2022; **34** EMSI, 2022; **35** ZipRecruiter; **36** EMSI, 2022; **37** ZipRecruiter; **38** U.S. Census Bureau; **39** IBISWorld, Page 15 and 9

VI. Workforce Impact:

From 2015 to 2020, the number of lithium battery industry operators expanded at a 3.0-percent yearly pace to 36 enterprises globally. At the same time, however, lithium battery manufacturing employment decreased by 1.3 percent to 4,631 employees on an annualized basis. This decrease largely reflects increased degrees of automation in cutting-edge industrial facilities and dependence on international manufacturers. Employment in battery manufacturing is predicted to grow at a 2.3 percent yearly pace to 5,193 workers with the number of industry firms rising at an annualized rate of 2.6 percent to 41 companies globally by 2025. Those figures are likely on the low end as in the last year there have been a flood of announcements of new battery manufacturing facilities just in the United States (at least 15) under construction or set to be up and operating within the next 5 years (see appendix). According to McKinsey & Company, each large battery factory, aka gigafactories, employ 2,000 or more workers.[40]

> **Simple math would dictate that at least 30,000 or more workers will be needed to staff all 15 proposed or planned gigafactories in the United States by 2025.**

Over the next four years to 2025, the number of facilities in the overall Lithium-ion battery manufacturing space are forecasted to grow at an annualized pace of 2.6 percent, to 50. In 2020, wage expenditures are expected to account for 18.8 percent of total industry sales, up from 14.4 percent in 2015. Wages increased throughout time as employment increased in line with industry revenue. The tremendous demand for qualified workers, in particular engineers

US Battery Manufacturing Employment Outlook[41]

Year	Employment (Units)	Revenue ($m)	Wage ($m)	Average Wage
2020	4,631	$1,545	$291	$62,837
2021	4,720	$1,581	$297	$62,924
2022	4,860	$1,647	$306	$62,963
2023	4,991	$1,706	$315	$63,114
2024	5,102	$1,756	$323	$62,119
2025	5,193	$1,796	$329	$63,355
2026	5,294	$1,835	$335	$63,279

40 McKinsey & Company, 2021; **41** IBISWorld, Page 15

and technicians, to develop new products and outperform competitors has kept wages high.[42] Positions such as chemical, electrical, and mechanical engineers, all jobs that require at least a bachelor's degree or an equivalent amount of experience, are required for both upstream and downstream of the production process. Many of the floor technicians in manufacturing only require a high school diploma but require certifications and specialty training through either their employer or local education facilities. For example, Tesla offers an eight week "START' program for its floor technicians, which teaches the basics of EV manufacturing.[43] Jobs in the Lithium mining process require a GED as minimum education and pay wages of $56,000 in Humboldt County, Nevada.[44] Workers on energy storage projects, such as the Nevada utility, NV Energy, earn an average annual salary of $71,116, or $34.19 per hour, on a national scale. While the average employee salary at NV Energy is $71,116, pay varies greatly depending on the role.[45]

VII. Conclusion : The Future of The Lithium-ion Battery in Nevada

The United States lags behind much of the world in key points of the Lithium-ion Battery supply chain. Australia, China, and Chile produce 88 percent of the world's raw Lithium.[46] The rest of the supply chain is dominated by China, which produces 66 percent of the world's cathodes and anodes, 73 percent of the Lithium-ion cells, and 80 percent of the world's refined battery chemicals.[47] Nevada's Lithium deposits in Thatcher Pass and Clayton Valley, totaling 593.3 million tonnes of ore graded at 1,073ppm lithium,[48] could supply the raw materials necessary for the United States to be a much larger domestic producer of raw lithium. The Department of Energy has stressed the need for the United States to play a bigger role in every step of the life cycle of battery deployment to ensure energy independence and to reduce greenhouse gas emissions.[49]

Nevada is home to at least 16 companies in the Lithium battery economy, including battery recycling companies such as Redwood Materials. Firms like Redwood, Tesla, and Panasonic are all located in northern Nevada and have given rise to an innovation cluster. Continuing to harbor this cluster with increased investment at all supply-chain levels, as well as statewide investment in complementary institutions like education and research and development, would boost growth in the Lithium battery industry while strengthening our economic diversification efforts.[50]

To be clear, battery manufacturing is no longer contained just in the north. Southern Nevada has two battery companies in Henderson, Nevada: K2 Energy and Lithion Battery Inc., which employ between 163 and 312 individuals. Legislative help at the state and federal level could increase Southern Nevada's commercial capacity by opening more land for commercial facilities such as for research and development, assembly, production, and recycling. Northern Nevada is unable to do so at this time, but has a critical role in the processing of materials as well as contributing to research and development, and the development of new companies.

42 IBISWorld, Page 12; **43** "Tesla Start"; **44** Borden, Buddy, & Tom Harris. "Economic and Fiscal Impacts from New Lithium Mine and Lithium Processing Operations in Humboldt County, Nevada.", Page 35; **45** Zippia Score, Feb 2022; **46,47** "Visualizing the Global Demand for Lithium."; **48** "Clayton Valley Lithium Project, Esmeralda County, Nevada, US."; **49** "Department of Energy, Page 7."; **50** Bailey, "Clusters and Innovation Districts: Lessons from the United States Experience."

This would follow a similar path to the gaming industry, which initially took off in the north and later came to dominate southern Nevada with legacy gaming companies in Reno supporting the Las Vegas Strip.

This would also incentivize Northern and Southern Nevada stakeholders to strengthen their ties along the I-95 corridors such as among academic and private facilities, knowledge bases, and raw material producers.

On November 15, 2021 Congress passed and U.S. President Joe Biden signed into law the Infrastructure Investment and Jobs Act (IJJA) which dedicates $3.1 billion for domestic manufacturing of batteries. The funding in the form of grants by the Department of Energy aims to build, retool, and expand the manufacturing of batteries and battery components. This is part of $7 billion in the $1 trillion bipartisan law dedicated to strengthening the U.S.'s battery supply chain.[51]

Other legislation before Congress, the BBB Act, has proposed an expansion of EV tax credits originally introduced in the Energy Policy Act of 1992. Individual buyers would receive a $4,000 guaranteed credit, with additional credits for battery capacity, nationally built cells, and union manufacturing. All combined, consumers would receive $12,500 per EV.[52] Global leaders in this EV space, such as Elon Musk, have commented that once EVs are mass-produced in large numbers, the globe will require several dozen large battery manufacturing facilities.[53] As of 2022, there were 7 operational EV battery manufacturing plants of various sizes and 15 in various stages of completion in the United States.[54] Not since Tesla and Panasonic has another large electric vehicle battery facility been built in Nevada.

It is worth mentioning that lithium-ion is not the only battery material in existence. Other sources include sodium-sulfur batteries, which are currently being used in Abu Dhabi for energy storage.[55] Hydrogen fuel cells have also been mentioned as an alternative, with Toyota having spent significant sums investing in hydrogen automobile technology, including getting the Japanese government to encourage the production of hydrogen refueling stations. One of the stumbling blocks has been an efficient way to produce hydrogen in large and safe quantities to power the hundreds of millions of vehicles on the roadway. [56]

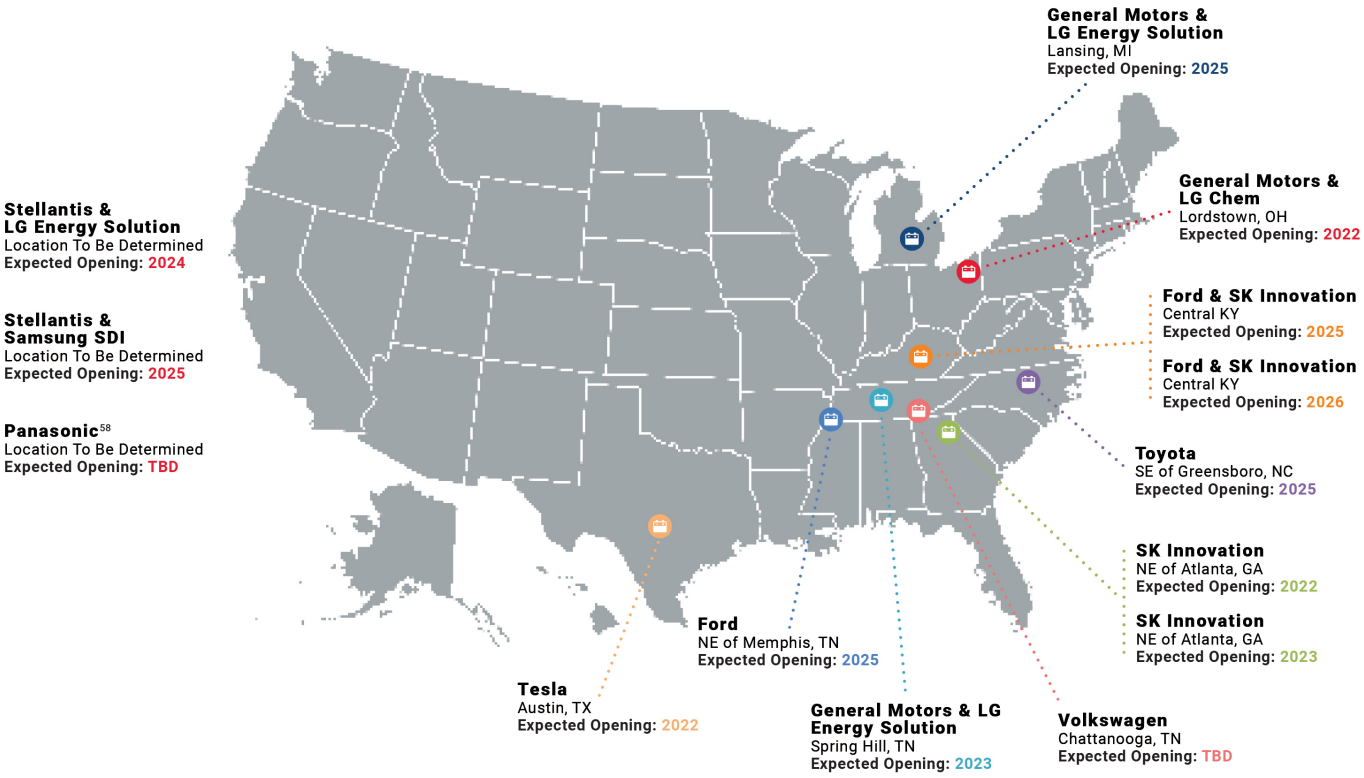
VIII. Further Research

Further questions worth researching on this topic:

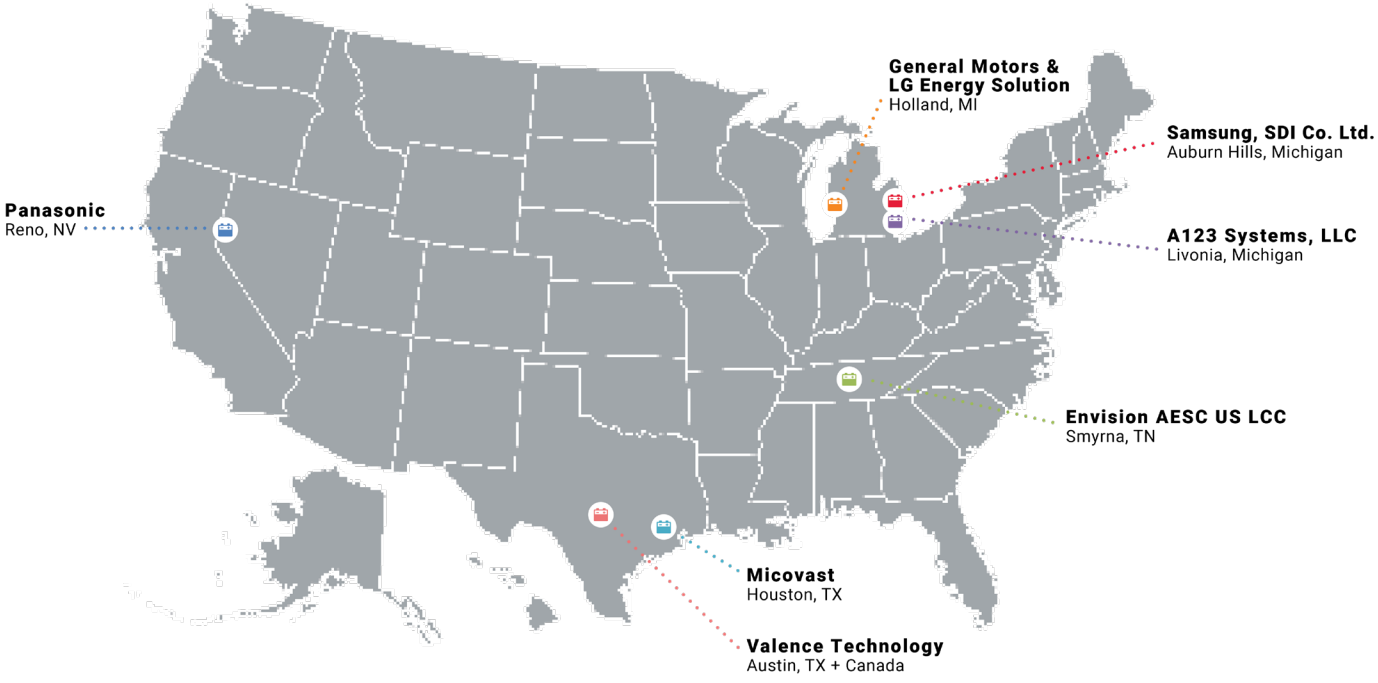
- What are further impendents to industry expansion in Nevada?
- Are there areas of the battery manufacturing ecosystem that Nevada should focus on or should it be all of them and all types of batteries?
- Can the industry be fully onshore or will the supply chain always be dependent on facilities in other countries?
- What are the spin-off industries that come from specializing in battery production?
- Is there enough lithium to meet demand in the coming decades?

51 CNBC, 2021; **52** Tsafos, "The United States' Industrial Strategy for the Battery Supply Chain."; **53** "We Are over Elon Musk's 100 Gigafactory Target for Sustainable Energy: Do We Need a Terafactory?" **54** Moores, "The Global Battery Arms Race: Lithium-Ion Battery Gigafactories and Their Supply Chain."; **55** Power-Technology, 2022; **56** Green Authority, 2021

Appendix I: Planned Electric Vehicle Battery Factories in the United States as of January 2022 [57]

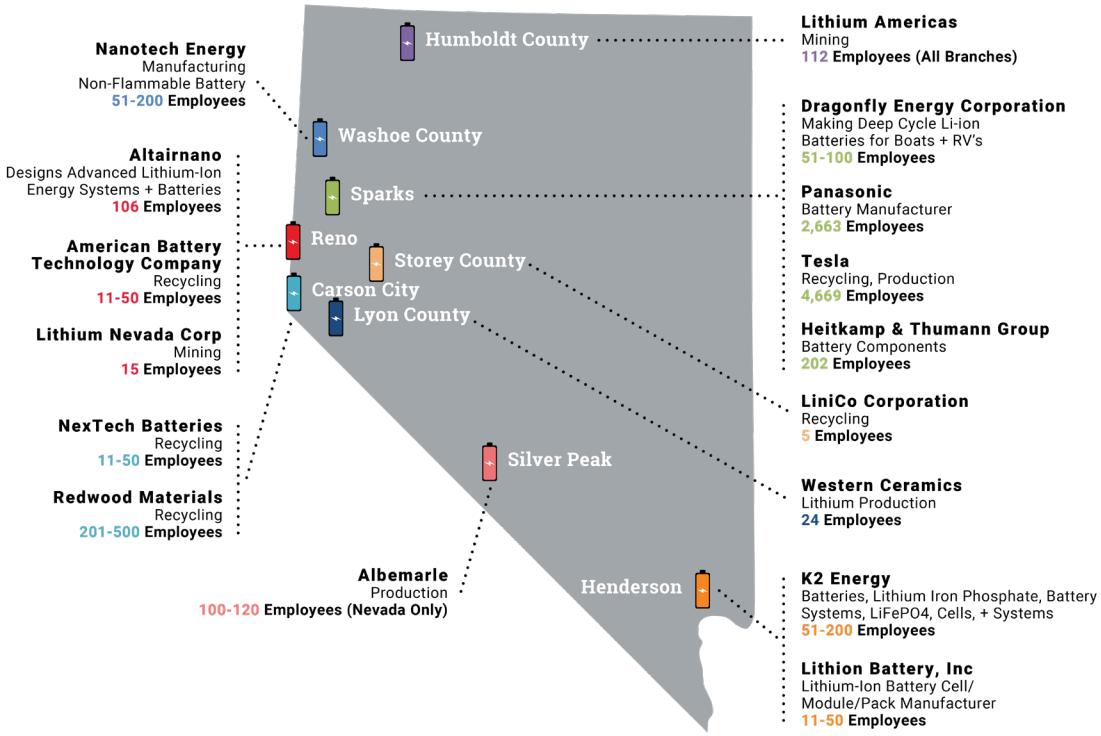


Appendix II: Electric Vehicle Battery Manufacturers Already Operating in the United States [59]



57 Energy.Gov; **58** Fred Lambert, 2022; **59** Coffin and Horowitz, 2018

Appendix III: The Lithium-Ion Battery Economy in Nevada



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Nevada Division of
STATE LANDS

STATE OF NEVADA
Department of Conservation & Natural Resources
Steve Sisolak, Governor
Bradley Crowell, *Director*
Charles C. Donohue, *Administrator*

June 3, 2022

To: State Land Use Planning Advisory Council

From: Scott Carey AICP, State Lands Planner

RE: State Land Use Planning Agency Update

Since the February 10th meeting the Agency has been working on and tracking various activities, SLUPAC projects, Federal public lands and other legislation, and other issues of interest to the Council. The purpose of this memo and agenda item to provide the Council with an update on the agency and provide an opportunity to answer questions or provide additional information.

1) 30 by 30: On January 27, 2021, President Biden signed Executive Order 14008 which was aimed at tackling the nation's climate crisis at home and aboard. Section 216 of the executive order directs the Federal Government to achieve the goal of conserving at least 30 percent of the nation's lands and waters by the year 2030. In May, the Nevada Legislature adopted Assembly Joint Resolution (AJR) 3 which expresses support for the goal of protecting 30 percent of he lands and waters of the State by 2030.

   The Agency believes that policy of 30 by 30 could have an impact on land use planning and land management activities across Nevada. For the past year, the Agency has been looking into where Nevada is with respect to preserving and protecting 30 percent of its land and waters. The Agency has run some preliminary projections and depending upon how specific lands are classified Nevada could exceed or fall short of the 30 percent goal. The agency continues to await further direction from the Federal government as to how specific lands will be classified as protected or preserved as part of the 30 by 30 policy. In January, the Federal Government issued an annual progress report about the 30 by 30 initiative nationwide.. The Agency will continue to engage with the Federal Government and other stakeholders to review the land use implications of this policy and will provide updates to the Council as necessary.

2) SLUPAC Executive Council Sunset Subcommittee: On January 26th the Sunset Subcommittee of the Legislative Commission selected the SLUPAC Executive Council for review. The purpose of the review is to determine whether a board or commission should be terminated, modified, consolidated with another board or commission, or continued. In

2014, the Sunset Subcommittee reviewed the SLUPCAC Executive Council and recommended for continuation of council with further recommendations. The further recommendations ultimately took the form of AB 144 during the 2015 Nevada Legislative Session. On March 30th, the Sunset Subcommittee held a hearing to review the SLUPAC Executive Council. The hearing went well, with lots of support for keeping the SLUPAC Executive Council in public comment, there were no questions asked from the Committee. At the meeting, Chair Jauregui made a point of thanking the SLUPAC members for submitting their letters of support for keeping the SLUPAC Executive Council.

On April 20th, the Sunset Subcommittee met again and held a work session on the SLUPAC Executive Council. During the meeting Vice Chair Spearman provided comments on the need for the SLUPAC Executive Council to be representative of the demographic make-up of Nevada. Vice Chair Spearman also stressed the importance of including as many different perspectives as possible on land use planning decisions in the state. During the meeting Chair Jauregui again expressed her appreciation for the letters of support and perspectives offered on SLUPAC Executive Council and its purpose. At the work session the Sunset Committee voted unanimously to recommend the continuation of the SLUPAC Executive Council without any changes to the statute.

3) Nevada Rail Coalition: At the March 1, 2021 meeting the Council unanimously endorsed a letter of support for the NDOT State Rail Plan. In its support of the plan, expressed a desire to increase local rail service and its positive impact on local government land use plans. The Council also expressed a desire to help make local government planning departments around the state aware of the plan and encourage them to consider the State Rail Plan when updating their master plans. Earlier this year, the Nevada Rail Coalition was formed to help implement the State Rail Plan. The Nevada Rail Coalition is a citizen-based initiative advocating for an expanded, robust rail system in Nevada and neighboring states as the keystone of a low-carbon, environmentally sustainable and socially just transportation system. In April the Nevada Rail Coalition issued its first newsletter which provides some interesting insight into rail planning in Nevada and throughout the nation.

4) AB 211 NDOW Tentative Map Review: During the 2021 Session of the Nevada Legislature, Assembly Bill 211 was passed and signed into law by Governor Sisolak. The law changes the requirements for local governments to consider the to consider the potential impact to wildlife and wildlife habitat before taking final action on a tentative map. The law also requires that tentative map applications be submitted to the Nevada Department of Wildlife (NDOW) for review. We are working with staff from NDOW to provide the Council with a presentation about this bill and its implementation at a future meeting. NDOW is currently in the process of drafting regulations to implement this bill and would like to come to a future Council meeting to provide a presentation and seek

input. Additionally, NDOW staff has expressed an interest in meeting individually with local government planning staff to seek input on their regulations and the best way to implement their review of future tentative maps around the state.

5) Federal Highway Administration (FHWA) Nevada Planning Study: At the July 9, 2021, meeting the Council heard a presentation from the FHWA on the Nevada Planning Study. The first goal for this study is to conduct a needs assessment to identify unmet access needs to federal lands and develop a framework to prioritize those needs. The results of this analysis will inform future FLAP calls for projects, and help us better align priorities between FLAP, the Federal Lands Transportation Program (FLTP), and the bigger Fed-Aid program for the state. The second goal of the study is to provide policy and process recommendations for enhanced integration of federal lands access needs into the statewide and Metropolitan Planning Organization (MPO) transportation planning processes. Since the last Council meeting, staff attended a meeting between the FHWA and NDOT staff working on this project. This meeting provided staff an opportunity to provide feedback on the proposed scope of work for the project and the proposed timeline for stakeholder engagement. On May 9th, the FHWA held a virtual project kick off meeting with stakeholders from around the state, with future listening sessions to be held in Southern Nevada, Northern Nevada, and Northeastern Nevada this summer.

6) Federal Public Lands Bills: The Agency continues to track the progress of several Nevada specific public lands and natural resource Federal bills. Below is a listing of the bills currently being tracked by the Agency. As the Biden Administration and the 117th Congress continue to work on new legislation, the Agency expects these Federal bills to continue moving through the process or resurface over the next year.

- Southern Nevada Economic Development and Conservation Act (S. 567) (H.R. 1597)
- Ruby Mountains Protection Act (S. 609)
- Carson City Public Land Correction Act (S. 1412)
- Lander County Land Management and Conservation Act (S. 1411)
- Lake Tahoe Restoration Reauthorization Act (H.R. 3132) (S. 1583)
- Maude Frazier Mountain (H.R. 216)
- Great Basin National Heritage Area and Mormon Pioneer National Heritage Area Extension Act (S. 1004) (H.R. 2882)
- Elko National Cemetery Act (S. 726)

- Northern Nevada Economic Development, Conservation, and Military Modernization Act of 2021 (H.R. 5243)
- Avi Kwa Ame National Monument (H.R.6751)
- Apex Area Technical Corrections Act (H.R. 7247)
- Truckee Meadows Lands Bill
- Nye County Lands Bill
- Fallon Range Training Complex modernization & withdrawal
- Nevada Test and Training Range modernization & withdrawal
- Sunrise Mountain Protections
- Numu Newe National Monument