NEVADA LEGISLATURE
JOINT INTERIM STANDING COMMITTEE ON GROWTH AND INFRASTRUCTURE

(*Nevada Revised Statutes* [NRS] 218E.320)

DRAFT MINUTES

April 17, 2024

The third meeting of the Joint Interim Standing Committee on Growth and Infrastructure for the 2023–2024 Interim was held on Wednesday, April 17, 2024, at 9 a.m. in Room 4401, Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. The meeting was videoconferenced to Room 3138, Legislative Building, 401 South Carson Street, Carson City, Nevada.

The agenda, minutes, meeting materials, and audio or video recording of the meeting are available on the Committee's meeting page. The audio or video recording may also be found at https://www.leg.state.nv.us/Video/. Copies of the audio or video record can be obtained through the Publications Office of the Legislative Counsel Bureau (LCB) (publications@lcb.state.nv.us or 775/684-6835).

COMMITTEE MEMBERS PRESENT IN LAS VEGAS:

Senator Dallas Harris, Chair
Assemblyman Howard Watts, Vice Chair
Senator Carrie A. Buck
Assemblywoman Tracy Brown-May
Assemblyman Max Carter

COMMITTEE MEMBER PRESENT IN CARSON CITY:

Senator Skip Daly

COMMITTEE MEMBERS ATTENDING REMOTELY:

Assemblywoman Jill Dickman
Assemblywoman Danielle Gallant

LEGISLATIVE COUNSEL BUREAU STAFF PRESENT:

Kristin Rossiter, Senior Policy Analyst, Research Division
Julianne King, Assistant Manager of Research Policy Assistants, Research Division
Cameron Newton, Deputy Legislative Counsel, Legal Division
Jessica Dummer, Senior Principal Deputy Legislative Counsel, Legal Division
Julie Waller, Principal Deputy Fiscal Analyst, Fiscal Analysis Division

Items taken out of sequence during the meeting have been placed in agenda order.
[Indicate a summary of comments.]

AGENDA ITEM I—CALL TO ORDER AND OPENING REMARKS

Chair Harris:

[Chair Harris called the meeting to order. She welcomed members, presenters, and the public to the third meeting of the Joint Interim Standing Committee on Growth and Infrastructure.]

I would like to mention that the solicitation of recommendations memorandum and related information has all been uploaded to our Committee web page. This memo asks all interested parties to submit recommendations to us for potential legislation. As a reminder, this Committee may request up to ten bill draft requests (BDRs), and I encourage all Members of the Committee as well as individuals and organizations to bring forward recommendations on possible legislation for the next legislative session. We will go ahead and move on to the next item on our agenda, which is public comment.

AGENDA ITEM II—PUBLIC COMMENT

Chair Harris:

Public comment will be limited to two minutes per speaker, and we will have an additional opportunity to make public comment at the end of the meeting. You can provide public comment here in person in Carson City or Las Vegas or via telephone. Is there anyone here in Las Vegas who would like to provide public comment today? [There was no one.] Is there anyone in Carson City who would like to provide public comment today? Welcome. You have two minutes. Please begin when you are ready.

Jaina Moan, Director, External Affairs, The Nature Conservancy (TNC), Nevada:

We appreciate the Committee for hearing presentations on the clean energy supply chain today. At TNC, as we think about the climate solutions being pursued, we are also vigilant that the world is in a biodiversity crisis. We are losing species at a rapid rate. Most of this loss is due to habitat encroachment, fragmentation, and destruction from development and other human activity. The Nature Conservancy is interested in ensuring nature and ecosystems are protected as we implement climate solutions. We are also concerned with the impacts climate infrastructure has on tribal and rural communities. We advocate for a smart-from-the-start approach to lithium extraction, mining, and renewable energy development. A smart-from-the-start approach is one where renewable energy generation, transmission, and storage and mineral extraction are deployed with as little impact as possible to natural lands, cultural resources, recreation, and other resources that support vibrant communities. To provide food for thought, I will submit a written comment to the Committee that includes references to a peer-reviewed article, and a recent TNC report that describes the potential impacts to biodiversity from proposed lithium extraction in Nevada, California, and across the United States. We also wanted to alert the Committee to a recent report from Eureka County on the feasibility of retiring groundwater rights coupled with agrivoltaics in Diamond Valley, a solution that would address the need to reduce groundwater use with low impact renewable energy. By sharing this information, we hope to keep nature and communities front and center as we plan for our future clean energy economy. If we plan correctly, we can certainly meet our clean energy needs and also preserve biodiversity and community integrity. Thank you for your service on this important Committee and for hearing my comment today. (Agenda Item II)

Chair Harris:

Thank you. Is there anyone else in Carson City who would like to provide public comment? Not seeing anyone. Broadcast and Production Services, do we have anyone on the phone today?

Broadcast and Production Services:

Chair, the public line is open and working; however, there are no callers at this time.

Chair Harris:

As I mentioned earlier, we will have another public comment period at the end of the meeting.

AGENDA ITEM III—APPROVAL OF THE MINUTES FOR THE MEETING ON MARCH 13, 2024

Chair Harris:

We will go ahead and move on to the approval of the minutes for the meeting on March 13, 2024. The meeting minutes have been distributed to Committee Members for review. Do we have a motion to approve the minutes?

VICE CHAIR WATTS MOVED TO APPROVE THE MINUTES OF THE MEETING HELD ON MARCH 13, 2024.

ASSEMBLYWOMAN BROWN-MAY SECONDED THE MOTION.

THE MOTION PASSED UNANIMOUSLY

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AGENDA ITEM IV—PRESENTATION ON THE BROADBAND EQUITY, ACCESS, AND DEPLOYMENT PROGRAM

Chair Harris:

We will now turn to a number of presentations scheduled for today that highlight broadband infrastructure, the work of transit authorities, and emerging technologies and opportunities. We are going to start with a presentation on the Broadband Equity Access and Deployment Program, also known as the BEAD Program.

Brian Mitchell, Director, Office of Science, Innovation and Technology (OSIT), Office of the Governor:

I am pleased to be with you today to talk about an exciting program, the BEAD Program, one that will have a profound impact on hundreds of thousands of Nevadans over the course of the next several years (Agenda Item IV). The BEAD Program is part of a larger initiative called the High-Speed Nevada Initiative. The vision and mission of that Initiative is that all Nevadans have access to a high-speed Internet connection that is affordable, reliable, and scalable. Scalable meaning that, as technology increases and improves, and our need for greater bandwidth increases over time, the infrastructure we put in today does not just meet our needs today, but will meet our needs long into the future. On the map is a visual

representation of all the individual houses that are unserved or underserved today and do not have a broadband connection that meets that affordable, reliable, scalable, high-speed definition. Our mandate is not to bring some connectivity or more connectivity, but universal connectivity so everybody in Nevada will have access to that type of connection. It is a challenge, but it is one we are enthusiastically embracing. In order to meet our goals, we have need for strong collaborations with many different partners, federal partners, especially the landowning federal agencies in the State, as well as local partnerships with local governments who will play a big role in broadband build-out. We also know there is no single funding source that is made available to us that can meet that definition, so we are weaving together many different funding sources. In everything, we are guided by a vision of making long-term investments in the broadband infrastructure of the State.

The BEAD Program is one part of the High-Speed Nevada Initiative and is a part of Phase III. Phases I and II are underway in various steps. Today, I will focus primarily on Phase III of the High-Speed Nevada Initiative. We are weaving together multiple different funding sources, about 12 in all, in order to meet that goal of universal access to broadband. The BEAD Fund is by far the biggest, but at the same time, it is one of many. Each funding source has different things that it can do or is good at. Some funding sources are tackling one problem, and a different funding source another problem, depending on the limitations and the requirements of the different funds.

I wanted to kickstart the BEAD conversation with a discussion about equity and the Digital Equity Plan we have created that is an important part of the infrastructure conversation. The infrastructure sucks a lot of the oxygen out of the room. It is the big dollars, and everybody likes seeing infrastructure going in and improvements there. However, if folks do not have an Internet connection that is affordable, if they cannot afford their connection, or if they do not have a connected device, or if they do not have the digital skills to use that device in a way that is productive and beyond watching cat videos on YouTube, they have not bridged that digital divide. That three-legged stool is how I would define digital equity. It is affordability. Can I afford my Internet connection at home? Do I have a connected device? Do I have the digital literacy in order to utilize that device for health care, for education, for work, for being involved civically, and in different ways that benefit my life? The Digital Equity Act is a part of the Infrastructure Investment and Jobs Act, or IIJA, and the State received about $750,000 to create a Digital Equity Plan. That Plan is a prerequisite to the State receiving formula implementation dollars to implement the Plan. This is a part of a $1.25 billion nationwide program. We have spent the last 18 months or so creating this Plan, and our Plan was recently accepted by our federal funder, the National Telecommunications and Information Administration (NTIA). Now that we have submitted our Plan, the next step for us is submitting a formal application for the funds, which we are currently working on. Once that application is approved, it will unlock an initial tranche of about $9 million with which we can begin to implement the Digital Equity Plan.

What went into the creation of that Plan? Significant stakeholder engagement across the entire State geographically. Diverse stakeholders—we did outreach through many diverse outreach mechanisms, in person, online, and via paper. We did our best to reach out to all unserved, underserved, and underrepresented communities. The Digital Equity Act asks us to focus on the specific needs of eight, what the Act calls, "covered populations." These eight populations are folks who have a higher likelihood of being on the wrong side of the digital divide and asks us to devise strategies, both individually and collectively, to help these folks. We know that strategies that might work with folks who are in rural areas may not work with similar folks in urban areas. We need to have an individualized and a diverse strategy to meet folks' needs.

In our research and in the Digital Equity Plan, none of our findings would surprise any of you in terms of folks who are members of those covered populations are more likely to have unreliable Internet service, have higher-cost Internet service, and are less comfortable with basic digital skills. All this substantiated the initial conclusions we thought would be true and are helping us to be able to put in place solutions to bridge these gaps in knowledge.

The Digital Equity Plan came up with a number of findings and the following areas of focus. We have identified strategies and key activities for each one of these individual areas in ways that will, in parallel with the infrastructure development, prepare and help Nevadans to be able to access the new infrastructure that we build. If we are building a lot of new infrastructure, but nobody is using it because they lack the digital equity, then us building that infrastructure is to a smaller effect than it would otherwise be.

I am going to move on to a discussion about Phase III and the BEAD Program. The BEAD Program is the complementary infrastructure program to our digital equity work. The BEAD Program is a $42.5 billion formula grant to states, of which Nevada received about $416 million. This is a representation of the timeline we are in right now. There are a lot of different steps. One of the questions I always get is, "When are you going to be building out in my district or in my neighborhood?" as we do stakeholder engagement. Nobody wants to get shovels in the ground faster than I do, but there is a significant planning process that we are in the middle of, and we are going as fast as we can. That started a couple of years ago with the creation of a five-year plan. Our five-year action plan is posted on our website. We then submitted an initial proposal to NTIA, and we were the second state to have our initial proposal approved by NTIA that has been green lit to begin the implementation. Following the implementation of the Program, we will submit a final proposal to NTIA that basically tells them, "Here is what we said we were going to do in our initial proposal. We did it, and here are the results." Once NTIA approves that final proposal, we will begin construction and all the other work that is associated with that. Once that final proposal is approved and we officially sign agreements, all our sub-awardees will have four years to build out the infrastructure.

Here are the initial proposal contents. It was quite an exhaustive and comprehensive packet of information that details very specifically how we will implement the Program. The same stakeholder engagement we did with the digital equity, we did in parallel with the BEAD Program. I will briefly talk about the selected requirements for any of our subgrantees. The network capabilities must be at a minimum of 100 megabits per second over 20 with certain latency and outage requirements. There are very specific deployment requirements as well as service obligations for these providers who will be constructing new infrastructure in unserved and underserved areas.

Our initial proposal was divided into two volumes, both of which have been approved by NTIA. Volume 1 primarily talked about how we will determine which locations are eligible for funding. Volume 2 primarily addressed how we will go about a subgrantee selection process. Right now, we are in the challenge process phase of the BEAD Program. We took the latest federal maps and put them out there and offered one last opportunity for Internet service providers, local and tribal governments, and nonprofit organizations—those were the three federally mandated or required eligible challengers—and put the locations out and said, "This is the last opportunity to make any corrections to the map, but these are the locations we believe are eligible for funds." The first step in the challenge process is a challenge to the map. After eligible entities submit their challenges, there is a rebuttal phase where if a nonprofit organization, for example, challenged an Internet service provider saying, "You do not provide service here," or maybe an Internet service provider said, "We do provide service here, and therefore this location should not be eligible." then

there is an opportunity for a rebuttal. Following the rebuttal phase, OSIT will examine the evidence that was submitted by the challenger and by the rebutter and make a determination about whether the location will either be eligible or ineligible for funds.

Following the challenge process, OSIT will then implement a subgrantee selection process where we will divide the State into project areas and invite bids or invite applications from Internet service providers to serve all the locations within that project area. All this is laid out in very fascinating detail in our initial proposal. Once we go through and evaluate those proposals and make funding decisions, we will submit all that information about the funding decisions to NTIA where they will check our work. We must certify in our final proposal that every single location on the map that is unserved today will be served at the end of the BEAD Program. Once that final proposal has been approved by NTIA, those Internet service providers will start work. The timeline is always the question that I get. "When are you going to be building in my neighborhood?" Right now, we are wrapping up the challenge process. We will start the subgrantee selection process. Towards the end of Calendar Year (CY) 2024, we will submit our final proposal to NTIA, once we have finished this subgrantee selection process. Assuming the NTIA does not take months and months to approve our plan, we will begin last-mile deployment. The first steps of this process will be the permitting before shovels will get in the ground in the spring of next year.

Likewise, with the Digital Equity grant, our plan has been approved. Our application for funds will likely be approved no earlier than August 28th, so sometime this fall our application will be approved. We will then launch our Digital Equity Capacity Grant Program, where we will partner with local organizations and add to their capacity, so they can begin to offer services to the community, either digital literacy training or we are going to launch an affordable device program, and other such programs that will implement our Digital Equity Plan.

Chair Harris:

Committee Members, do we have questions for Mr. Mitchell?

Assemblyman Carter:

I appreciate the presentation. Of the companies that have submitted requests for proposal (RFPs), how many are Nevada companies? Are they following the federal advisements to be affiliated with labor organizations? Are we going to see the requirements that they train their workers in OSHA (Occupational Safety and Health Administration) 10 as required by State statute?

Mr. Mitchell:

The federal rules require high labor standards, so we follow all the federal guidelines, and we also follow any State guidelines. Typically, almost none of the providers self-perform the work. They will contract that out to organizations that do the work. Any infrastructure company that is performing the work must meet all the State requirements, including things like OSHA 10 training as well as being licensed with the State Contractors' Board.

Assemblyman Carter:

Is there any incentive being placed on trying to give preference towards local hire? One of the things we hear consistently, especially from these rural communities; especially the eastern side of the State complains a lot about how the workforce to do these types of public works projects and projects in general are staffed almost entirely out of residents

of neighboring states. I would like to see this be incentivized. I would like to see all of it incentivized to stay with Nevada workers.

Mr. Mitchell:

The hiring of Nevada workers is a priority for us. That is our preference. One of the scoring elements is a commitment to use Nevada workers for these jobs. At the same time, Congress just put out $42.5 billion in broadband funding. There is an enormous competition for workforce. We do not have sufficient workers in this country to do the work. Part of the reason for our efforts to be one of the first states out of the gate is so our workers do not go to our neighboring states to do projects while we are still in the bureaucratic process, and then we do not have any workers here to do our work. We are also working with the workforce system, the provider community, and the labor community to put together a workforce plan to train more workers here in Nevada that would be available—short-term training programs that provide workers enough to get their foot in the door, but then also working to provide the specialized skills like fiber splicing that these companies will need, so we have an available pool of workers that can do the work.

Senator Daly:

Going back to the beginning. You said there were many funding mechanisms. There are two federal programs that provided funding nationwide for broadband Internet connection. Is that my understanding?

Mr. Mitchell:

There are multiple federal funding programs as well as State funding that we are using—12 in all.

Senator Daly:

I know the ones that are coming up with the $42 billion were national plans passed by Congress. In that language—I am not sure if it was required or not—but in the strongest possible terms they could put in for recommendations, they wanted the money to not undercut local area standards. They talked about union workers, collaborating with organized labor, and having possible project labor agreement. Those were strong recommendations coming from the Administration on how this money was supposed to be administered. When you spent your $750,000 on your plan—and I know the Plan is about where you are going to go and what the maps look like—did you include in your Plan any of those recommendations regarding ensuring you are going to have union workforce, project labor agreements, any of those types of standards? You said, "They have strong labor standards," but did you include any of that in your plan?

Mr. Mitchell:

The federal rules require high labor standards, and there are two different ways that an applicant for funds—

Senator Daly:

My question is, was it included in your Plan?

Mr. Mitchell:

The federal rules require—

Chair Harris:

Mr. Mitchell, if you could, help us out by starting with a "yes" or a "no," and then expanding upon your answer. That is what Senator Daly is looking for here. I will, of course, allow you to explain the circumstances around the "yes" or the "no."

Mr. Mitchell:

Thank you for the clarification. The best way I could describe the answer is "kind of." The rules allow two different paths for a provider to show they have high labor standards. The first path is a provider can certify they are paying prevailing wages and have project labor agreements. If they do that, they can check a box in their quarterly reporting to us and use that as a means of certifying they have project labor or high labor standards. In that sense, the answer is yes, that is one way providers can provide that certification.

Chair Harris:

Is that explicitly mentioned in the Plan? That was Senator Daly's question.

Mr. Mitchell:

It is. That is specifically mentioned as an option. The second option is that, for providers who do not wish to have a project labor agreement, there is a set of questions they can answer in lieu of making that certification, so there is an alternative path to meeting the federal labor standards requirement. I hope that makes sense as to why a "yes" or a "no" is insufficient, because there is a path, but there is also a different path, but either way, the labor standards requirements must be met.

Senator Daly:

Fast forwarding—when you were doing your community outreach on that, did you engage with organized labor at that point, as was the strong recommendation from the Administration in order to get this money? I saw your men reached out to other appropriate organizations and entities, but did you reach out to the communication workers, to the building trades, and the people who are going to do this? There is the first mile that is generally done by the Communication Workers of America. The last mile, same thing. The middle mile, which can be several hundred miles in certain cases, is then done by a contractor where it is subbed out, and they do it under normal construction, contractors' licenses, et cetera. Did you reach out to any of those groups when you were creating your plan and looking forward and saying, "How are we going to proceed? What are we going to put in our RFPs? How are we going to score the subgrantees in order of preference? Did you give any preference to the people that are going to meet those requirements and not skirt underneath, and do the bare minimum because they do not want to do it one way or the other? Answer that if you can.

Mr. Mitchell:

Yes, we had a number of meetings with the Communication Workers of America and had multiple conversations about many issues. Marc and I have spoken many times about this. He has also provided information to us on the workforce side about how we can grow the

Nevada workforce as well. We are looking forward to continued conversations with them about that and other topics.

Senator Daly:

I find that interesting. I will follow up, because I am told there has been very little communication and outreach in that fashion. You are getting ready to put out your RFPs for subgrantees. How is that scoring metric? Is there any preference for checking the box by saying, "I have a union laborer. I have a project labor agreement." Is there any preference on the scoring for that, as was clearly stated and indicated and preferred by the Administration when they issued and were granting these funds? Is that preference in scoring in your RFP proposals?

Mr. Mitchell:

Labor and meeting the labor standards was one of three required scoring criteria we were required to include in our scoring matrix. The federal rules required us to have scoring related to both past compliance with federal labor law as well as a plan to continue to meet and comply with federal labor law. I believe we have six or seven scoring criteria. If my memory serves, that is the compliance with federal labor laws, the third highest at 20 percent of the scoring.

Senator Daly:

Let me rephrase it. Is there a preference in your scoring? I understand the minimum requirements. There is nothing in the RFP proposal that says you cannot have a higher criteria or give a preference for meeting certain criteria. Is there a preference for scoring for someone who checks the box by saying, "Yes, I have union labor; and yes, we are going to pay prevailing wage; and yes, we have a project labor agreement," as was strongly indicated as the preferred mechanism in the issuance of the funds? Is there that preference? That is a yes or no. I do not need any explanation. You have already given me the rest of it on what you are doing as the bare minimum. Is that in there?

Mr. Mitchell:

No.

Senator Daly:

Why not?

Chair Harris:

Mr. Mitchell, if you would like to give the Committee some indication as to why that decision was made, we would love to hear it.

Mr. Mitchell:

Throughout the planning process, we consulted with a number of stakeholders: the stakeholders in the community, stakeholders in the provider community, stakeholders in the construction and workforce communities, and then averaged that into who does not have Internet at their homes today. Sometimes the interests and desires of those communities were aligned, and sometimes they were not, so the plan we put forward is the best way we determined to balance the needs and desires of communities, and to ensure

we have a plan that would result in universal access. On this particular topic, we wanted to provide as much flexibility as possible for companies to be able to get the job done, especially in the most rural and remote parts of the State. Therefore, that is the decision we made.

Assemblywoman Brown-May:

I would like to talk about the last mile piece with BEAD. Have we deployed the RFP process? Do we have RFPs out, and have we received RFPs back for this process?

Mr. Mitchell:

With regard to RFPs, we have not solicited applications yet for the last mile. That will happen once we finish with the challenge process. The challenge process is determining which locations around the State are eligible for funds, and we are in the middle of that process now. We want to have an agreed-upon list where everybody agrees on the locations that will be funded. Once we have that, we will start to bid those out and get proposals back.

Assemblywoman Brown-May:

Do we have any indication about how many organizations we have locally that are interested in bidding on the RFP process to do this fiber-to-fiber, last mile connectivity? Do you have any indication of how many local companies we have that are interested in this process?

Mr. Mitchell:

There are at least 50 or 60 Internets—I am hesitant to put out a number, but suffice it to say, there are lots of local companies providing Internet service. I would include companies like AT&T, Cox, and Charter as local companies because they have been here and have local workers. Even though they are a national company that provides services in a lot of states, they are local to Nevada. There are also companies that only provide Internet service in Nevada. I can try to find a specific number, but until we get the bids, we will not know who is interested. But, based on the people who register for our outreach events and who have registered for the challenge, we had over 50 entities registered for the challenge process. There is a lot of interest.

Assemblywoman Brown-May:

Thank you for that clarification. I appreciate that number. I want to talk about the importance of the BEAD Program in our urban communities, as that is a piece of it as well. How are you working with local municipalities in the cities in order to address the areas where we do not have connectivity currently in our urban—we know that rural accessibility is a big and important part of BEAD, but we also have local communities here, islands within our urban cities, that are not able to get connected. Can you speak to that?

Mr. Mitchell:

I am glad you brought this up because there is a misconception that lack of broadband access is only a rural problem, when in reality, there are pockets or donut holes within urban areas that have poor connectivity for one reason or another. We have been very focused on identifying those areas. I will publicly thank Clark County, who has been a great partner in our broadband efforts, and we are working extremely closely with them. We have

also had lots of meetings with the other municipalities—Las Vegas, North Las Vegas, Henderson—over the course of the process to keep them up to speed. We have invited all municipalities to participate in the challenge process and to submit their knowledge to the extent they are aware of locations that are showing up as served, but they get questions from residents about, why do I have lousy Internet service here? We can add those to the map. We did not get a whole lot of challenges from local governments, but the offer was there. Moving forward, I think local governments are going to be a big partner of ours in urban areas on the permitting side. We want to make sure we respect the permitting process, but also make sure we do not have any holdups so we can get Internet service deployed as quickly as possible in the urban areas.

Assemblywoman Brown-May:

For clarification purposes, I have had conversations with folks at the City of Las Vegas who have found it increasingly difficult to get their needs across. If you would make it a point to reach out to the City of Las Vegas in particular, that would be very helpful.

Mr. Mitchell:

I will. We have been going back and forth on trying to get a meeting set, so I will circle back with them.

Assemblywoman Gallant:

First, I want to commend you for trying to make an even playing field in terms of the criteria for labor across the board. First session, I kept hearing, "We do not pick winners and losers." You have done a good job in terms of who would qualify to be able to assist with this project. I would like to talk to you about Laughlin and those border communities we have and if there has been any effort in terms of coordinating with neighboring states that might have infrastructure already established on the borders, and how we could have cooperation to help lower the cost. In particular with Laughlin, Bullhead City has fiber that could easily and probably more cheaply be pulled from Bullhead City into Laughlin rather than trying to get those lines from Las Vegas to Laughlin.

Mr. Mitchell:

That is an excellent point that in Nevada, we have a lot of border communities, and sometimes the closest infrastructure is not within our State, but it is across the border. I have had a few conversations with the folks in Clark County about the City of Laughlin. The City, at least at the start of the challenge process, had shown up as being underserved, so they would be subject to the conclusion of the challenge process—would be eligible for funding. The providers that may be interested in serving that may be an Internet service provider who is either already serving Bullhead City and would come across and serve Laughlin, or it could be a local provider that would pay to bring fiber across the river into Laughlin and then pay for that upstream bandwidth from the provider in Laughlin. There are a number of different ways, either attracting a company from a neighboring state to provide service or a local company using that infrastructure to be able to provide better service. Once the RFP process starts, we will see what options come in, but I agree with you that it may be the case where it may be cheaper to get something from Bullhead City. The cost to the BEAD Program is one of the scoring criteria. A provider that proposes a cheaper option would receive more points.

Assemblywoman Gallant:

I think with the Colorado Compact, there would be reciprocity that we could easily tap into. Would you mind keeping me posted about that, and the projects in Laughlin?

Mr. Mitchell:

I will.

Assemblywoman Dickman:

When you talk about affordable devices, what type of devices are you talking about? Is the funding included in this Program for these devices? How would they be distributed?

Mr. Mitchell:

The device issue is probably one of the most challenging that we need to figure out on the digital equity side. Let me walk you through a short-term and then a longer-term conversation we are having on devices. On the short term, one of the strategies we have—let me back up. One of the problems we have is that for many low-income folks, the only way they can access the Internet is on their smartphone. If you have ever tried to write a term paper or fill out a PDF for government services or benefits on a smartphone, it is much more difficult to do so than on a computer or a laptop. We want more folks to have access to computers and laptops, and one way to do that is by trying to incentivize private sector partners to partner with us, and in the provision of either refurbished or other devices, we can try to get into the hands of nonprofit organizations that can distribute those. Our near-term solution is to utilize our federal money to set up a matching program that we can engage philanthropy and local businesses to help us to be able to match the cost of bringing more devices and putting those into the hands of folks who need them.

In the long term, there are many large organizations in the State that regularly go through computers—State government, local governments, large corporations—and these computers go to a variety of different places. There are very smart organizations nationally that have set up device refurbishment and distribution ecosystems. We are looking to learn from their best practices to be able to organize ourselves as a State a little bit better to distribute those devices that are still in good working order but have reached the end of their perhaps—almost like a used car that still works fine. There are ways to wipe those so there is no data or information on them. That way, we can get a very low cost or a zero cost device into the hands of people. Setting something like that up that can be self-sustaining is a long-term goal of ours.

Chair Harris:

My first question is about the $750,000 award. In order to develop the Plan, was all $750,000 used? Was that Plan developed wholly within the Office? Did you put out an RFP for that process? How are those dollars spent?

Mr. Mitchell:

Not quite all the money was spent. We spent most of it. I do not have an exact dollar figure for you, but the remaining dollars were returned to the federal government. We probably spent in the neighborhood of maybe $600-and-something thousand on the Plan. The funding was spent in a couple different ways. It was spent on staffing costs and on costs associated with the stakeholder engagement. That included travel costs. We spent money

on food and beverage for community outreach events. We did multiple events in every county over the course of two months. We also spent funds on consultants who did some data analysis for us. We designed a survey, distributed the survey, and then had folks crunch the numbers for us. There was graphic design work in there as well.

Chair Harris:

Was the discretion for spending those dollars wholly within your Office?

Mr. Mitchell:

Yes.

Chair Harris:

My next question is about the much bigger pot of money that is coming since the Plan has been approved. Will it operate in a similar way? Is there going to be millions of dollars at OSIT that it can spend as it so chooses? What would the oversight of that fund of dollars look like?

Mr. Mitchell:

There are multiple layers of oversight. Number one, we coordinate with the Governor's Office, and then number two, our federal funders provide a lot of oversight in the distribution of the funds. Every award we make is approved individually by NTIA, both on the digital equity side as well as on the BEAD side.

Chair Harris:

Does your Office have a plan on how it intends to allocate the funds amongst those eight vulnerable populations that are supposed to be focused on, or is it going to be anyone who comes to the door who plans to serve one of those eight can get the money? Is there some plan to say, "We are going to spend an equal percentage on each one of these, or we are going to focus on the rural communities. We are going to make sure 45 percent of the funds go there." Does that plan exist?

Mr. Mitchell:

That is an important question. One thing we found is that, in speaking with vulnerable populations, most often an individual belongs to multiple groups. It is not that there is only low-income folks, or only rural folks, or only folks that speak English as a second language, or only folks who are members of a minority group, or only folks that are aging. You could have a low-income aging person in a minority group who does not speak English well, and so on. When it comes to the distribution of funds, we do not plan to divide the funds eight ways, in large part because the strategies that involved engaging each of the groups differ by group, but also by geography. Engaging a low-income person here in Clark County is much different than engaging a low-income person in Ely or Battle Mountain. We lay this out in our Digital Equity Plan in greater detail, but we plan to utilize and partnering with local organizations, first and foremost, that already have trusted relationships with these groups. Me, as OSIT—it does not make sense for me to go out and build an army and try to go and get relationships, or try to gain the trust of these communities, but rather, I would much rather work with a local nonprofit here in Las Vegas or a senior center in Elko, or the community coalitions; so the United Way of Reno, in implementing the strategies we have outlined. We have outlined a number of strategies on the digital equity side. We will be

looking for partners that have the capacity and are willing to work with us to implement those strategies.

Chair Harris:

You and your Office are obviously the experts in this area, but you may want to consider putting thought into that given that certain populations are more expensive to serve. It is going to cost you more money to connect someone in a rural area than it is to connect someone who is in a patch in East Las Vegas. Maybe a bigger portion of funds might need to go towards getting those people connected. Otherwise, you are not going to get as many rural folks connected as you could have if you would have shifted the strategy a little bit. If you spend it all connecting people who—we want 100 percent. The goal is 100 percent, and I get that, but I am saying there might be some reason you want to be intentional about how those funds are spent amongst those populations, because they are not all equally as expensive to provide service to.

How is it that your Office became to be the location for this Program? Is that by design and the federal regulations, or is that maybe something the State chose, or the Governor chose? How did it become OSIT that would be the host for this?

Mr. Mitchell:

The Office of Science, Innovation and Technology was created in 2015, long before there was a pandemic or any of these possible funds. It was created in 2015 as the State Broadband Office. We have been working since 2015 to connect Nevadans. When this funding became available, much like funding for housing went to the Housing Division and funding for health care went to Department of Health and Human Services (DHHS); funding for broadband came to OSIT.

Chair Harris:

It came to OSIT, but why? Who was the actor that made the decision to put it there? Who made it happen?

Mr. Mitchell:

The Governor's Office made the decision to put it there.

Vice Chair Watts:

One of the other things in terms of equity and access that I am interested in is the Affordable Connectivity Program, for which we know funding is currently running out. I wanted to ask what your Office has been doing to work with the other partners involved in these programs to advocate for an extension of the Affordable Connectivity Program.

Mr. Mitchell:

The Affordable Connectivity Program is an incredibly important part of our digital equity initiative and of the larger High-Speed Nevada Initiative. I want to be clear that my Office is very supportive of an extension of the Program or for Congress to add additional funds to keep the Program going, particularly in short order, so we do not experience the churn where the Program stops, money is added later, and then you have to get people back on. That can be tough. I also want to compliment the Internet service providers that have participated in the Program and thank them. Many of them have said they are going to

continue to offer that same rate, even if the federal government no longer funds it, an individual, if they so choose out of their own pocket, they will not have their rate raised. They can continue to stay on their same plan. That is very helpful. When it comes to advocating for it, my Office and the Governor's Office collaborated. There was a bipartisan letter signed by 30 governors—and Governor Lombardo was one of the signatories of that letter—and that went to Congress, advocating for more funds. We have also been active within our association of broadband officers in making the push for funding. I have also spoken with members of our Congressional Delegation to let them know of our support. We have been strategizing with our two Senate offices about ways we can make the push. We have provided information to advocacy organizations about the number of Nevadans served, and how important it is, so they can make their own advocacy.

Vice Chair Watts:

I am glad to hear that. Following up on a couple of questions from my colleagues, in the initial plans, how have the resources been prioritized between fiber and fixed wireless? Roughly, what is the proportional allocation of resources, and how is that determined?

Mr. Mitchell:

This is a bit of a technical question. The federal rules require us, when we get applications in, to prioritize fiber. That is a determination we agree with. Fiber is the most future proof of all the technologies. Fiber is also, there is limitless capacity. We do not have equipment that has reached the limit of the amount of data you can transmit across, a strand of glass. For a particular project area, if we receive one application that proposes an all-fiber solution and another application that proposes a fixed wireless solution, as long as the all-fiber solution does not exceed a cost threshold—in other words, as long as it is not $1 million to connect every home—then we are required by federal rule to choose the fiber solution. But, if the only proposals are fixed wireless, or if the fiber proposals exceed the cost threshold, then we can choose amongst the fixed wireless. In looking at this, we have not made any determinations, "We are going to spend 80 percent of the money on fiber or 60 percent of the money on fixed wireless." We have to wait to see what bids come in. We will make that determination on a case-by-case basis because we are going to bid out every project area individually and make that determination individually. This project area may receive four fiber bids and one fixed wireless bid, and we will have to choose among them. As long as the fiber bids meet the minimum qualification, we will choose among them. But, this project area over here may only receive fixed wireless bids, in which case we will choose one of those, but we will not know until we get the applications.

Vice Chair Watts:

To be extremely clear, that is not a determination that has been made at this point or that has been made at a comprehensive scale. You will be determining that after you put out the RFP and as you get bids in for each project area. You will see what you get in; you will prioritize fiber, but in the event there is either not proposals or there is a major cost differential between the fixed wireless and the fiber, those are the only circumstances when you would consider fixed wireless over fiber. Is that correct?

Mr. Mitchell:

That is correct.

Chair Harris:

You had a slide that had the little bubbles, and it shows all the different federal funding sources along with a matrix of how discretionary the spending of those dollars is. Could you please provide the Committee with an update of what you are doing with those dollars—where they are going, who they are going to, what the plan is for the future on spending those dollars? Hopefully you can appreciate this. We are looking at a lot of money that the Legislature essentially has no idea how it is going towards its stated goal of connecting the State of Nevada. If you could give us background on where those dollars are going, how they are being used, and how you plan to continue to use them in the future to reach that goal, that would be much appreciated. Is that something you could do for us?

Mr. Mitchell:

My pleasure.

Chair Harris:

Thank you. Senator Daly.

Senator Daly:

When you go out for the RFPs, and you are looking for your "subgrantee," I understand there are provisions in the rules on who those people are. Is prevailing wage required to be paid on any of these projects, regardless of their union affiliation? Is prevailing wage part of the RFP?

Mr. Mitchell:

No, prevailing wage is not required. It is permissible but not required.

Senator Daly:

My understanding is you in your Plan have gone out and said, "We want to connect State buildings and those types of facilities first," and then you move up in your Plan. How often is it happening when you are going out for your RFP? My understanding is anyone can put in a proposal to become a subgrantee. It could be a city, a nonprofit, or a provider; but at some point, whoever it is has to partner with somebody who can provide the service. I know there are territories that might be outside of what you are looking at where there is already a provider. Do you partner with the provider that is there, or do you say, "No, now we have a new person," who is going to then end up duplicating and providing service in the same service area as another provider already, overlapping, and instead of building upon a network that exists, building a whole new network over the top of one. Can you give us any insight about how that happens or if it does not happen or how often?

Mr. Mitchell:

We do not have enough money to build over already served areas. In fact, the federal rules are very specific about a prohibition on using federal dollars to build over locations that are already considered served. That is a big reason why we are, as a first step, doing the challenge process, so we have a list of locations that everybody agrees are unserved or underserved. In fact, we do a very complicated and very thorough deduplication to ensure any location we serve, not only is not served today, but also does not have a future federal funding commitment to serve that area. Maybe a different federal program may have

funded an area, so we make sure no location, even if it is unserved today, does not have a different federal program that could be serving it in the future. When it comes to building on top of another network, if the area is considered served, then we will not use any money to build a second network on that. Having said that, there are some areas where the existing network is not affordable, reliable, or scalable, and it does not meet the definition of served. A good example of that are digital subscriber line (DSL) networks. Digital subscriber line has been determined, not at the state level, but at the federal level, as a technology that is no longer scalable and no longer meets the definition of served. If there is a market where the only available Internet service is via DSL, then these dollars would be able to build a new fiber network, for example, that would provide that affordable, reliable, scalable high-speed Internet service.

Senator Daly:

Thank you. I wanted to make sure we were not doing that and that there are guidelines to make sure it does not happen.

Chair Harris:

Are there any additional questions from Committee Members? Not seeing any. With that, we will go ahead and close out Item IV, and open up Item V, which is a presentation related to Nevada's alternative fuel infrastructure plan for electric vehicle (EV) infrastructure.

AGENDA ITEM V—PRESENTATION RELATED TO NEVADA'S ALTERNATIVE FUELING INFRASTRUCTURE PLAN FOR ELECTRIC VEHICLE INFRASTRUCTURE

Chair Harris:

We have representatives from Nevada's Department of Transportation (NDOT) today. Go ahead and begin whenever you are ready.

Kandee Bahr Worley, Chief, Division of Sustainability and Emerging Transportation, NDOT:

Thank you for having us here today to discuss the National Electric Vehicle Infrastructure Program, better known as NEVI (Agenda Item V). The agenda for this presentation will focus on topics. I will begin by explaining what the NEVI program is. Then, I will share NDOT's collaborative efforts. From there, we will walk through what has been done to date, and how we achieved our two approved State plans. I will then discuss our public involvement and conclude with time for questions.

The NEVI Plan is a formula funding program brought to us by the IIJA that was passed in November of 2021. Nevada's Department of Transportation is the designated lead agency to receive NEVI funds from the Federal Highway Administration (FHWA). The law has directed two opportunities for funding at $7.5 billion; $2.5 billion will be distributed through competitive grants offered by the FHWA, and $5 billion are apportioned to states based on formulas specified in federal law for the NEVI Plan. Both programs will serve a five-year period, 2022 through 2026. The NEVI formula is to provide funding to states to deploy EV charging infrastructure that will establish an interconnected network to facilitate data collection, access, and reliability. The infrastructure must be open to the public and must be used initially on federally designated alternative fuel corridors.

Now we will focus on Nevada. The first key element is the EV charging infrastructure deployment. Primarily, the strategy focuses on the existing and future infrastructure conditions, including EV policy and meeting the NEVI requirements, along with new deployment and upgrades.

Next, we will shift to the implementation strategies and Plan development. Nevada's Department of Transportation has built an involved stakeholder group and began a program partnering directory. We have also identified and interviewed EV charging service providers and station owners, and addressed resiliency, emergency evacuations, snow removal, and seasonal needs. This led us to our plan development, where we focused on mapping and grid identification. At this stage, the collaboration with energy providers was a priority. Conversations with NV Energy began to avoid duplication of efforts and to determine prime partnership opportunities along our alternative fuel corridors. Then we turn to our nine rural co-ops utility providers to obtain energy reliability and discuss the needs for rural Nevada. The NEVI Plan also addresses compliance with State and federal civil rights laws, including Justice40 Initiative compliance. This includes outreach opportunities with disadvantaged communities and recognized measurement benefits within those communities. The final element is labor and workforce. Nevada's Department of Transportation has participated and discussed training and workforce development both statewide and regionally. We have been able to piggyback and collaborate with the workforce development efforts of NV Energy, and we have had conversations with the International Brotherhood of Electrical Workers (IBEW) to discuss the process of Electric Vehicle Infrastructure Training Program (EVIPT) certification and the apprenticeship opportunities here within Nevada.

Funding and requirements—with our approved plans, Nevada will receive $37,958,457 over a five-year period. The first year, our plan was due in August of 2022, and we received the funding for federal year 2022 and 2023 with that plan approval. The next year, in August of 2023, Nevada received another approved plan and received funding for Fiscal Year (FY) 2023-2024. As of today, we do not have a date on when this year's plan will be due; however, we are all planning nationally that it will be due in August. The plan also is coming with new requirements this year, and we do not know what those are yet. We have begun putting the plan together, but we have room and time for shift.

The funding infrastructure requirements include that each station location must sit on a designated alternative fuel corridor. I will tell you a little bit about the background of that. In 2016, the states nominated corridors that would be considered to be built out as alternative fuel corridors. Those six fuels included electric, hydrogen, propane, compressed natural gas, liquid natural gas, and biodiesel.

In the six years preceding 2016, Nevada designated all its interstates and U.S. highways as possible alternative fuel corridors. Funding was not associated with the alternative fuel corridors at that time. The requirements for NEVI funding projects are that they must be located one mile from the alternative fuel corridors. This would mean, if you got off the freeway or got off an exit on the I-15, the charging station must be within a mile of the I-15. Each location can have no more than 50 miles in between stations. They must be direct current (DC) fast charging stations with a minimum of four combined charging system (CCS) ports with 150 kilowatts at each port that can be used simultaneously, equaling a total of 600 kilowatts for each station. Each station will be required to report data quarterly and annually to the joint office. That data includes the charging station usage, reliability, and cost information. The data will provide the joint office with information to create the public EV charging database outlined by the bipartisan IIJA. It must also include a five-year maintenance program.

Our statewide collaboration includes 23 statewide groups that play a key role in connecting Nevada. They have helped us identify available opportunities and provide technical expertise in this NEVI Plan. Some of the partners are specific to a particular region, while others serve Nevada as a whole.

For progress to date, the first year, our focus was goal setting and interstate deep dive planning. We broke down NEVI requirements into bits and pieces to figure out how to address all the NEVI requirements and develop timelines as to when each subject needed to be addressed within the next five years. It was determined that the first year, our focus would remain on our interstates, as they were the most important to achieve fully built out status. Exceptions were documented and written, and infrastructure placement opportunities were discovered. In year two, the focus has shifted into the U.S. highways. This proves to be a much harder goal to achieve. There are many stretches of roadway where it is difficult to meet the minimum standards that NEVI requires. We have desolate areas without consumer needs. We have lack of power and grid availability. There are high capital costs for installation and investor-owned utilities.

Year one—planning of the interstate build-out. We partnered with NV Energy, who services 75 percent of our State. We have worked together to determine service areas along the alternative fuel corridors that lands in their service area. We received approval for four exceptions along the I-80 with the ruling being granted due to distance. All four of the exceptions lie along the I-80; two of them were only five miles over the requirement; one was seven miles over the requirement; and the other had two exceptions. It was 21 miles over the 50-mile requirement, and the cost factor was going to be $7 [million] to $8 million to bring power into that area to hit that 50-mile mark. Wells and Carlin were also brought to the forefront, but we have continued to work with the rural co-op in Wells to obtain fully integrated build out for those two stations. Moapa—we are currently continuing coordination with that station owner to upgrade that site as well. These efforts should bring our interstate to a fully built out designation once the construction is complete.

In year two, we focused on public engagement and began community websites, surveys, webinars, and tribal engagement. Strategies of procurement process led to discussions of several options. Nevada was involved in a national working group for policy planning towards disability rights network and determined accessibility standards. We also developed our site matrix. This criteria is super small. I am going to break it down for you. The slide that is shown, breaks down the criteria that Nevada used to determine the best site placement identified in our annual plans, using traffic volume and commercial density as the two major factors for placement. From there, the focus relies on connectivity nodes, trip and in locations, existing fuel stations, existing alternative fuel station proximity, and disadvantaged communities. There were seven categories and six source layers to determine and identify the best needs of the EV traveling public. With the help of the joint office and the core stakeholder group, we put the appropriate percentage for each category to determine the best factors for the State of Nevada. We will continue to use the same weighting for the rest of the plan and develop location strategies.

We are currently in year three, and we have entered the implementation phase. For year three and beyond, we will work with a project manager to determine the best options for project advancement. Procurement decision-making options—we continue to waiver back and forth on whether we want to go with the RFP process or a grant process, and watching other states that are one step ahead of us to see how their success is with each program. The first RFP or grant process we intend to put out will address current infrastructure in place that needs upgrades to meet that 600 kilowatts and four ports. From there, we will put out a call for action to completely build out our alternative fuel corridors.

We have also focused on community outreach statewide, and we will begin the writing process of plan number three and include the changes that are coming from the joint office and the FHWA.

Public engagement starts at home with our website, and we encourage participants to share insight on where they feel the best locations are needed statewide. We continue to build our program partnering directory, and began sharing valuable information at community events regarding EVs, workforce development, and charging infrastructure. With that, I am open for questions.

Vice Chair Watts:

You mentioned you are still trying to figure out the RFP process or grant program. What is the timeline; one, to figure that out; and two, to put out the first RFP or grant application?

Ms. Worley:

I wish I could give you the exact date, but we are focusing on meeting the Title 23 requirements. The process is a little bit harder than writing an RFP and asking for a call of action. We have to make sure all our i's are dotted and t's are crossed for federal funding.

Vice Chair Watts:

With that process, you mentioned there has been engagement with IBEW and making sure there is certification. Within that process, is there any preference for proposals or projects that have strong labor standards, including wage standards, apprenticeship standards, or project labor agreements?

Ms. Worley:

The answer is yes, but I cannot answer those questions specifically. We are following the federal guidelines for highway funding, but I would like to dig into that question a little more and be able to get you the correct answer, more detail.

Vice Chair Watts:

That would be great. We heard in the previous presentation that with some of the broadband programs, we are right at the front of the pack in terms of states—second state to reach a certain point in the process. I have read elsewhere that one state deployed its first charger built through the NEVI Program. Where, at a high level, are we compared to other states in our speed of getting this program deployed?

Ms. Worley:

There are currently four states that have infrastructure in the ground, and that has happened within the last four months. We, as a NEVI group, are working nationally together to figure out people's wins and losses, so we will be able to be successful in this Program, instead of every State starting from scratch. Watching those states—they all have different state rules than we do. It is a matter of seeing what they do, focusing on our State rules, focusing on the federal rules, and then trying to figure out how to move forward. We do have an agreement almost in place with NV Energy. This is called a utility agreement, which is a much easier agreement to get into. With the money they have received from Senate Bill 1148, their ability to put in infrastructure, we are working together with them to determine best placement along our alternative fuel corridors in the areas they service, so

we will be able to share efforts of not only the infrastructure but the funding so both of our monies will be able to move farther. I believe our first shovels into the ground will be a joint project with NV Energy.

Vice Chair Watts:

It sounds like it is hard for you to give a date, when do you expect that we will have infrastructure that goes live?

Ms. Worley:

Every day I wake up, I am hoping the shovel will hit the ground. I am very eager to be one of the first states to get infrastructure in the ground. I am working hard to be able to obtain that. I am hopeful by the end of this year, we will have a station in the ground. I cannot give a definitive date.

Vice Chair Watts:

I also share that interest as an EV driver myself and one who has made trips between Las Vegas and Elko as well as Las Vegas and Carson City. Looking at those maps, I see we have some progress. We need to do more along the I-80 corridor, and we have work going on along the I-15 corridor, but allowing folks to move across the State as well as those major interstates, moving people across between California, Utah, Arizona, is critical. You mentioned the default in the NEVI Plan is 50 miles. We are a large state, so that geography does not always line up. What is the process of getting waivers or exemptions to those requirements? Because we all agree, there is no point in putting a station out in the desert and trying to move infrastructure out there when we can locate them. A lot of what we need to do is upgrade the facilities we have in Hawthorne, Goldfield, Tonopah, et cetera, and get those to have more ports, higher charging rates, and more reliability. Can you talk about the process of us being able to modify, so we do not have to strictly follow those 50 miles, and can locate these in the communities and the areas that make the most sense for us?

Ms. Worley:

Yes, there is a process through the NEVI Plan that we can ask for exemptions. In year two, we did ask for 17 exemptions. They were all turned down, which is fine because we have a different way we need to address them. The Joint Office is aware of our ruralness, along with the surrounding states. We are all in the same place to where we have hundreds of miles in between cities. The process to get that exemption is to show populations between cities. Then the next step is to have dollar amounts of what it would cost to get electricity in those areas. We were not aware that we were going to be required to show that financial burden, but we are currently working on it, so we can then ask for those exemptions in year three and hopefully get them.

Sondra Rosenberg, Deputy Director, Planning and Administration, NDOT:

To add a little bit more on the policy side, what NDOT is doing on that topic—we travel out to D.C. to meet with our delegation at least once a year, typically at least two to three times. This is one of our talking points every single time—to change the actual regulation from 50 miles to something more aligned with current ranges of the newer EVs. On Ms. Worley's program side, we are working with the Joint Office to get the exceptions to do the analysis. On the higher level policy side, we are saying, "The rule does not make sense. It is an outdated mileage requirement." We are attacking it on a number of different levels.

Vice Chair Watts:

Thank you, Ms. Rosenberg. I appreciate that. It sounds like you are working hard, but is there anything we can do to speed this up, either at the State level or through engagement with our federal partners?

Ms. Worley:

I appreciate the offer, and I will take that back to my desk with me. At this moment, I cannot think of anything, but that could change daily, and I will definitely reach out to you.

Chair Harris:

Do we have any additional questions for NDOT? Assemblywoman Brown May.

Assemblywoman Brown-May:

I know we are not there yet, but I am curious to know what consideration has been given around the rates to charge at each one of these stations. How are we going to regulate that? What is the process by which we set charging rates? The reason I ask the question is I also have an EV. I am never quite sure how much I am going to pay to charge a vehicle when I move from municipality to municipality. I am curious to know if our ratepayers are going to have some protections or assurances as we electrify Nevada.

Ms. Worley:

That is not part of the NEVI program. I cannot answer that question.

Chair Harris:

Are there any additional questions? Not seeing any. We will go ahead and close out that agenda item. Thank you for being with us today.

AGENDA ITEM VI—PRESENTATION ON PROGRAMS AND PLANS OF NEVADA'S REGIONAL TRANSPORTATION COMMISSIONS

Chair Harris:

We have representatives from both the Regional Transportation Commission (RTC) of Southern Nevada and the RTC of Washoe County.

M.J. Maynard, Chief Executive Officer (CEO), RTC of Southern Nevada:

Thank you for the opportunity to provide an update on mobility and the funding challenges we have here in Southern Nevada (Agenda Item VI A). Las Vegas is a world-class city and destination. We have always been known as the entertainment capital of the world. We are quickly becoming known as the sports capital of the world. What we are not known for is a world-class mobility system here in Southern Nevada, certainly not one that has been able to keep up with all the advancements in and around the resort corridor as well as the population growth.

I am going to talk today about a high-level overview of our mobility system and the challenges we are facing. I want to begin with, how did we get here? How is it that we, as

the roadway funding agency, as a public transit provider, how has that been? We have been able to grow and maintain in terms of funding, so we want to talk about the evolution of funding for our Agency as a representative of Southern Nevada.

In 1965, through State legislation, we received a one cent per gallon fuel tax for roadway infrastructure. For context, the population in Clark County in 1965, was a little over 211,000 people. Then, by an advisory question in 1990, we received nine cents per gallon of fuel tax for roadways and a quarter percent sales tax for transit. That is when we began operating our transit system. The population in Clark County at that time was about 770,000 residents. Then in 2002, [there was] another advisory question where we received a quarter percent sales tax for both roadway and transit. Population at that time was about 1.6 million residents. Then in 2013, through State legislation, we indexed the gas tax inflation for roadways from 2014 through 2016. The population at the time was about 2.1 million residents who called Southern Nevada home. Then in 2016, through a ballot measure, we continued to index fuel tax inflation for the next ten years. The population in Southern Nevada at that time in 2016, was about 2.2 million residents. You see this correlation between how we grow and the funding that is needed to support that growth. Without that growth, not only would we not look like the community we have today and support the hospitality industry, but over the last 26 years, we have invested $3.7 billion. Without the investment, it would not look like the community we are today. Can you imagine not having the 215, the Bruce Woodbury Beltway, or the I-11 Boulder City Bypass? Certainly, all the improvements in and around Las Vegas Boulevard and the major corridor investments here in Southern Nevada. Additionally, what would we look like if we were not offering services for seniors, veterans, students—Game Day Express? All those are not required by law; we do that because it is the right thing to do for the community.

I want to talk about the fuel revenue indexing (FRI) program and how successful it has been. This map is our FRI-funded projects through 2014; we have been able to start over 670 roadway projects, with 439 of those completed to date. It has been regionally successful. It has literally touched every portion of the Valley. Because of that program, we have been able to put 78 local small businesses to work. We have been awarded $2.2 billion in roadway projects, and over 16,000 jobs have been created because of the FRI program. To you, Committee, because of your vision in serving in Southern Nevada in this role, as well as previous roles, we have been able to successfully implement those funding options that have improved mobility in and around Southern Nevada. I also want to thank the Southern Nevada community for their willingness to support those advisory questions and ballot question.

We will talk about the challenges facing our mobility. I am going to start with the transit system. I have reported to you previously on our transit deficit—something that has been ongoing for years now. We have updated that. Before I get there, I want to remind [you about] the significance. We are the 14th busiest bus system in the United States here in Southern Nevada. [We have] 39 fixed transit routes. We are serving now over 50 million boardings every year. It is important that if you do not ride public transit here in Southern Nevada, you think it is people that cannot afford a car; that is not true. Eighty percent of those 150,000 daily boardings are people going to work. Public transit is part of the economic ecosystem in this community.

[Ms. Maynard played a video relating to the RTC of Southern Nevada.]

Thank you for allowing us to show that video. It is great to hear from the people who use their service. Again, 150,000 daily boardings—and those are people that are going to work

and going to places they need to go. We connect people to opportunities, to people, to places, and I am very proud of the work we do for our community.

We do a lot with very little, and try to make the most out of our assets. We have the highest farebox recovery ratio for a bus in the United States. That means we collect more money in our farebox than other bus systems. We have the lowest subsidy. That is public investment in public transit. [We have] one of the lowest operating costs here in Southern Nevada and the 14th busiest bus system. I will talk about that public subsidy because when you compare the per capita investment in transit on an annual basis, and you compare this to our peer cities, we rank almost last. While it is less public investment, you get what you pay for. Less public investment means there is less investment in mobility options. Our subsidies here in Las Vegas are about $118 annually per capita. Compare that to Austin, Salt Lake City, Los Angeles (L.A), Miami, Denver, Portland—they spend anywhere from $80 to $250 more per capita annually on public mobility. Besides Orlando and Las Vegas, all the other cities have multiple modes of transit—light rail, heavy rail, et cetera. That investment will reflect what mobility you can offer within your community.

I want to talk about the transit financial assessments—thank you to all of you. Thank you for your leadership and your willingness. Senate Bill 341 (2023) provided the RTC of Southern Nevada the $5 million for transit improvements. We sincerely appreciate that much-needed financial support. I want to let you know that more specifically, in September—and this is what we are doing with the $2.5 million this year—and then I will talk about what we are going to do with the $2.5 million in 2025—we are going to adjust timing in several transit routes. If you ask a transit rider what they want the most for improvements in public transit; they want faster service and more reliable service. Because of this funding, we are going to provide more frequency to help improve the reliability of service. Due to major construction projects right now, almost a third of our public transit routes are impacted by construction every single day. Currently, customers on these routes sometimes have to wait anywhere between 30 minutes to two hours more because of the interruption of those detours. We are also going to extend Transit Route 113 near the Las Vegas Motor Speedway to address the needs of the rapidly expanding manufacturing industry out there. It is going to support 8,100 employees in that area. That extension will also benefit 66,000 residents that live within a half mile of those bus stops. In 2025, we are going to use the other $2.5 million to increase the frequency of Transit Route 209. That is the Vegas/Owens Route. We are going to adjust from running every hour to every 30 minutes, and this will dramatically reduce the commute times for at least 57,000 residents and impact over 8,200 employees along the route. It is important to note Resort Corridor employees heavily use this route in the northern area of town. Finally, we are also looking to expand the frequency of service hours or extend hours of operation to 20 transit routes to early morning or late evening services that will better accommodate workers traveling during those times. This change will reduce the wait times for approximately 5,000 weekly customers. Thank you .for SB 341. It is going to benefit the community.

Let us talk about funding. This represents the current and projected transit fund cash balance. If you notice the bars on the right, those are revenues. The bars on the left are expenditures. It is important to note the shaded area behind that represents the cash balance in the fund. Everything we have and every bit of money we anticipate, received, including federal funds, is noted. You have seen previous presentations from the RTC on this transit fund deficit. We have updated the numbers. It is important to note even between FY 2027–2028 and FY 2029–2030, the deficit is over $160 million. The trend is not where we want it to go. In the outer years, you can see that decline continues. We will have to do what we have done in the past. We have been here before—not to this significant funding

deficit—but we have been here before and during the Great Recession, and then during the pandemic, and the last thing we want to do is cut public transit service. We always look internally first. How are we as efficient as we can be? We have adjusted our budget by deferring capital projects, cutting management staff and pay, furloughing the Agency, hiring freeze, and things that are difficult but necessary when we are in that funding deficit. The last thing is reducing service, but unfortunately, we have had to do that as well. Reducing service is the last thing we want to do.

Let me talk about roadways and the funding models around roadways. We work to support over 8,000 miles of roadways in Southern Nevada on behalf of the local jurisdictions to help fund their planning, construction, and maintenance of those roadways. As the Traffic Manager of the region, the Traffic Management Team manages over 1,600 signalized intersections, over 100 CCTV cameras, 74 ramp meters, over 1,600 miles of fiber optic cables, and 169 dynamic messaging signs. That is a Team that is busy working to move the community in a very expeditious manner. This slide represents our capital improvement program (CIP). It is a roadway funding agency. It is a ten-year program. This shows you the current CIP is made up of 278 projects. They are in various modes; some are completed, some are planned. These are all on behalf of the local jurisdictions. All these projects have funds that are encumbered for those projects. It is a very successful program. It is a positive impact for the area. We also want to thank again—we could not do this loan—we are the Agency we are today because we collaborate and work closely with all the local jurisdictions.

[Ms. Maynard showed a video relating to the RTC of Southern Nevada.]

Ms. Maynard:

Let us talk about roadway funding. This represents how successful the FRI program has been. The dark bars represent motor vehicle fuel tax. The orange bars represent the funding we received due to FRI, the entire program, from 2014. Without FRI, the funding levels would have remained flat or had a slight decline. This FRI program has generated more than $900 million to help fund critical roadway projects.

This is a slide we will talk about as similar to the transit slide. This is the roadway funding through the term of the current CIP. It is current and projected funding for roadway projects. We have forecasted the ability to raise enough revenue and have the bonding capacity to cover the local jurisdiction's ten-year CIP. At the same time though, the jurisdictions have provided us a list of about $2 billion worth of projects that do not have funding available. The CIP does not reflect the future projects. There is talk about El Dorado Valley getting expanded, the Apex area, the supplemental airport. None of those future projects are identified here or have funding identified for those projects that are well into the future. Without the FRI program—that purple shaded area represents the cash fund balance. It is not going in the direction we want it. The FRI program is slated to be discontinued by 2026. If FRI is not given a chance to be indexed going forward, we anticipate only having about $75 [million] to $100 million available every year for the local jurisdictions to split and share for further roadway maintenance and future growth projects.

What do we do? We have funding challenges. What does the future look like? What are our options? We know we are going to continue to grow. We continue to be one of the fastest-growing regions in the United States. We expect over the next ten years to reach about 2.7 million residents calling Southern Nevada home. We know that today there are funding challenges we do not necessarily see going away in the future, at least not right now. We are seeing taxable gallons sold continue to drop. The purchase of fuel-efficient

vehicles and zero-emission vehicles continues to grow at a much more rapid pace than anticipated.

The demand for mobility options in Southern Nevada—we get calls all the time for businesses that would like more service or new service and from residents and tourists that want better service. Labor has had a significant impact on how we are funding our streets and highways program, and the transit inflation supply chain continues to impact even the funding we have today. We will be able to do less with the same amount of money. On the transit side of the house, we have not invested in public transit in over 20 years. But again, we have seen a demand for more service and for better service. On the roadway side, despite the increasing gas prices, the RTC only received 23.1 cents to fund roadway projects throughout Southern Nevada. We are seeing a rapid increase in the number of EVs. The point of this is if the indexing program is discontinued in 2026 at a time when we still have about $2 billion of unfunded projects in the pipeline, that is problematic for our jurisdictions and our community.

I am going to conclude with a talk about a potential "RTC, we have some major problems. What now?" The biggest takeaway from this presentation is that we have a structural problem in how we fund not only transit but also roadways, and it is going to be critical for us to find a long-term sustainable funding source for both, particularly on the transit site. We have a problem today. There will be a crisis in the future if we cannot figure this out. We cannot do that alone. It is going to take collaboration and a collective effort. Future efforts could include a ballot measure. It could include an extension of existing indexing, new revenue sources, or a combination of that. We are committed to keeping you apprised of what those potential funding solutions could look like. We look forward to working with you in the next legislative session. It is a community problem that will take a community to solve. Thank you for your time, and I am happy to take any questions you may have.

Chair Harris:

Do we have any questions for the RTC of Southern Nevada? Assemblyman Carter.

Assemblyman Carter:

In the beginning of your presentation, you talked about the big march to bypass Boulder City with I-11. My community is seeing a similar problem in that it is the understanding that I-11 is going to come down through the 395 corridor, through the Spaghetti Bowl—which is already a mess for access to the east side of Las Vegas—and going to add to the already worst air quality in the Valley on the east side of Las Vegas. Is there any consideration given to thinking about the impact that decision is going to have on the urban core of Las Vegas?

Ms. Maynard:

As the funding Agency for the materials and the roadway network in Southern Nevada, we were able to move funds around for the I-11. The freeway infrastructure programs are overseen and determined by and working with the local jurisdiction. Unfortunately, I am not able to succinctly answer that question, but I could get information for you if you would like.

Assemblyman Carter:

My second question is regarding a topic that came up in the last Growth and Infrastructure meeting. It was talking about red light cameras, but it was also talking about the increase in left turn problems and violations. Where do we stand on modernizing and installing smart

intersections? I know, at least in the older sections of Vegas, we were seeing that happen a lot because of empty intersections that are red because the sensor technology has not been upgraded. Is there any plan to modernize that?

Ms. Maynard:

You are exactly right. Today, out of the 1,600 signalized intersections, there are over 300 where the equipment may not be working or there may not be fiber connectivity. It is either the loop system under the asphalt or—you are exactly right. We have consultants working with us. We have mapped out, we wanted to understand where those gaps were and start there. We are working close with all the local jurisdictions to upgrade the entire traffic management system. It needs to happen. In terms of smart technology, we are underway with a pilot with three different companies. It is called Advanced Intersection Analytics. There are eight different intersections in Las Vegas right now. We are capturing data that shows where there is red light running, where there are near misses. It is vehicle to vehicle, vehicle to ped, and it has been great information. We are able to take that information, every month we meet with all the police jurisdictions, and the public works folks take that data. One, they can use it for enforcement purposes. Two, we can look at, we are seeing jaywalking, so maybe we need to move our bus stops. Three, the public works folks can look for traffic calming measures or a new roadway design that will help the things we are seeing that increase pedestrian fatalities.

Assemblyman Carter:

Specifically, I was talking about—because I come from the IBEW world and used to cover the contractors doing this, and a lot of my brothers and sisters from the IBEW who are working in the traffic world talk about how now there is more autonomous per intersection solutions, such as cameras and optical control of intersections, and even radar and lidar that are much more efficient than the magnetic loops, especially if you are a motorcycle driver. Is there any move towards that type of technology?

Ms. Maynard:

To the best of my knowledge, yes. I will specifically get you the information we are working on in terms of ensuring there is a fiber connectivity throughout the Valley. That is ongoing right now, and I will make sure you get that detailed information.

Assemblywoman Brown-May:

In your presentation, you mentioned one-third of routes are currently impacted by road construction. Is there a way we are able to communicate that with our ridership? How long is the delay going to continue? What is the methodology you are using to communicate that?

Ms. Maynard:

Because our job is to inform the public, there is nothing worse than not knowing if your bus is coming. They are going to be late for work. Our marketing team run by the amazing Angela Castro does a lot of great work. We send out, whether it is a text, an email on the Ride RTC app; we are connected to real-time information—it is called Swiftly—that is able to note that you could see in real time where your bus is. We do information at our transit centers on our buses. The operators will do all calls. It is an all-hands-on-deck opportunity, and we learned a lot. We continue to learn a lot in how we can improve how we reach out to

our customers. We are finding it is digitally and social media platforms that seem to be effective.

Assemblywoman Brown-May:

It is difficult when you are waiting for your bus, and you do not know, and there is road dirt everywhere. Can you talk about recruiting and driver vacancies? I know you have had some negotiations as of late working on labor standards. You talked about labor being an impact on how you are able to utilize revenue. First, would you speak to recruiting and driver vacancies and then driver training? I have experienced a bus or two that perhaps went through a light that would have been yellow. I am curious to know how we are following up on active training and monitoring driver performance on the street.

Ms. Maynard:

The 30 years we have operated as a transit, we contract out our service. Currently, we have Transdev operating our fixed transit contract and MV [Transportation Inc.] operating our pay transit contract. With that being said, the transit employees are represented by the Amalgamated Transit Union (ATU); the MV employees are represented by the Teamsters. They both recently negotiated collective bargaining agreements that gave all the employees a deserved raise. We are seeing success because the wage increases were significant. It is a concerted effort by both MV and Transdev to get out there and recruit. Right now, we are seeing improvement there. Because the collective agreements were just passed, there are a lot of folks in training.

Training—we work closely with both contractors required through the scope of work in our RFPs to maintain training. Then there are also federal requirements in terms of training. When the RTC is made aware of what you described, the bus may not be—we can pull out the data; we can take a look; we could go back in and view that, share that with the contractors, and then they do some remedial training.

Assemblywoman Brown-May:

We worked on microtransit. First mile, last mile is a way to get folks into the existing bus system where they were outside of the mapped routes. Do you have an impact statement relative to that? How many riders have been utilizing microtransit? Is it beneficial? Is it a program we should continue to focus on?

Ms. Maynard:

Yes. You are going to see transit systems all over the United States. They are using microtransit systems in some way, shape, or form. It is not the answer. It is not a replacement, but it is a complimentary service. The southwest area was the fastest-growing area of the region. We did not have funds to expand. We received stimulus dollars, and we decided to take those dollars, and instead of putting in your traditional fixed-route paratransit, we added microtransits to that area. We have seen an over 200 percent increase year over year. The folks that are utilizing it—on one bus, you will find paratransit customers and high school students and fixed-route riders, so we are finding a lot of success in our love-all, serve-all approach. With future funding opportunities, we would like to do that in other parts of the Valley.

Senator Daly:

I have a couple of comments before I get to the question. Nothing against Northern Nevada RTC, but congratulations on your transit usage. Anecdotally, it is better than ours. I do not see too many people on the bus, and I have never used it, but nevertheless, the numbers are good. I know it is an often forgotten part of what people see that the RTC does. The other comment before the question is, there was a mention here of labor costs increasing. I know that is different between transit and the construction side, but the cost in construction—the amount that is labor—generally 80 percent of the cost of a project is materials. It is not the labor that is driving this stuff. You used it as inflation. That cost is materials, not labor, and there are deserved raises as well. Those people out there do great services for us.

Question—I am more familiar with the Northern RTC than the Southern. Can you give me an update on where you are at, and what the next steps are to continue your gas tax indexing? Is there a way to make it permanent the way it is in Washoe County? I would prefer it to be statewide. Let us take one step at a time. Can you fill in the blanks on what has to happen next between now and 2026 before that ends?

Ms. Maynard:

We are looking to do what we tried to do the during the last legislative session. We would prefer that the short-term fix is to continue indexing fuel tax inflation, whether that is through enabling the legislation, but preferably, that could be put in place as an interim process before going out to a ballot question. We will look at both options, and it is going to be about working with the local jurisdictions, our Board, and the next legislative session.

Senator Daly:

When they did the gas tax index in Washoe County, it was in 2009 or 2000. I know it was WC-5. It was an advisory question, and then it came to the Legislature, and we enabled the County to implement it. We barely got it done, but the County implemented it, and it has been in place ever since. Maybe that is a model you could [use going] forward. I look at your chart, and when I talk with my friends I still know in the construction industry in Southern Nevada. It has been very successful. Not only have you made road improvements, but it has put a lot of people to work—creating those jobs. When you look at the future revenue—and God bless my brothers in the environmental movement—have you done any studies or anything on the additional impact that EVs have on the road? Because last time I checked, they do not drive over potholes any better than anybody else. They get stuck in congestion the same as everybody else. They have issues with the safety upgrades the same as everybody else, but they are not contributing to the resolution of the problem or the funding side of the equation. I know that is not RTC's bailiwick or responsibility on that side, and hopefully we can get something done in the future. Is there more impact by the EVs? Has there been a study on the degradation of the roadway?

Ms. Maynard:

I am not aware of a study that has been undertaken in terms of—you are probably referring to the weight of the vehicles that may have more of an impact on roadways. I am not aware of that, at least not at our Agency, but I will look into that, and if there is something, I will make sure you get that. The conversation on EVs has been happening for a long time, and NDOT has put together a working group on behalf of the Governor to have a conversation around that, which we are participating in. More to come on that.

Senator Daly:

I hope so. It is something we need to address because we are all in favor of fuel efficiency. We are all in favor of the EVs, but there has to be a balance that then says, "How are we going to pay for the roadways?" Because like I said, they still are impacted by the puddles, congestion, and the safety issues that RTC does. You have roadways that have been designated as RTC jurisdiction versus cities—usually main thoroughfares, boulevards, wider streets—and NDOT has their jurisdiction. Do you work with and have co-funding sometimes with NDOT on projects that impact both, and then are you able to go into the municipalities and help supplement or work with them on your funding as well? How does all that coordination work? I am fairly familiar with how it works in the north, but I was curious if you have similar processes.

Ms. Maynard:

It is very collaborative. We are the funding Agency, so we work directly with all the local jurisdictions. We also go after every single RTC grant opportunity we can, and we found success in partnering with the local jurisdictions in terms of trying to co-fund various projects. We work closely with NDOT. We manage all their equipment on the highway system. It is a very collaborative approach we take.

Senator Daly:

I am glad to hear it. I figured it was that way; I wanted to be clear.

Vice Chair Watts:

Building on the questions about funding that my colleague from Senate District 13 asked—you provided information on per capita funding for the Agency, and I wanted to get clarity. That is overall revenue divided by how many residents we have, even though we are also deriving sales tax and fuel tax revenue from visitors as a major entertainment and now sports destination. Is that right? Even though the number of people also includes our tourist base, when we divide the overall revenue by our actual population, we are still underperforming compared to other similarly sized jurisdictions. Is that right?

Ms. Maynard:

That is correct.

Vice Chair Watts:

I appreciate the thank you provided on the initiatives the Legislature has brought forward. I would be remiss if I did not also thank the federal partners. You mentioned the grants the Agency has gone after. I remember getting these presentations. Thankfully, we had a major influx of pandemic response funds from the Administration that has helped push that cliff a few years into the future. I also heard the news about the federal grant award for upgrades to transit on Maryland Parkway, which I am very excited about, as it is a major corridor through my District as well as a major corridor for residents and for the workforce. I was wondering if at a high level, you could tell us—I know that is something you have been planning for quite some time—but now that funding has been pulled in from the federal government, what the timeline looks like for beginning to develop the new bus rapid transit system along Maryland Parkway.

Ms. Maynard:

It was a good day. We received almost $150 million from the Federal Transit Administration to support the Maryland Parkway bus rapid transit (BRT). You are correct. We have been working on that for a number of years. Maryland Parkway connects Harry Reid International through the University of Nevada, Las Vegas (UNLV) and all the way through downtown into the Las Vegas Medical District. It is one of the busiest routes. There are about 9,000 daily riders. It is a very important corridor—certainly a gateway for UNLV. You will see improvement, not only in the service—we will provide a much more efficient service—but better stations and better amenities and shade and wider sidewalks. It is going to advance improvements along the corridor from the airport through the downtown medical district. We will begin construction—a few processes are just about through, but in 2024 we plan on beginning construction with service to begin in 2026.

Vice Chair Watts:

Wonderful. That is exciting news, not just for me, but for residents throughout the central Valley. How does that fit in? You mentioned your focus on workforce transportation and transit as well, so how do you see that fitting in, and do you have any additional information you would like to share on working with our partners in the Resort Corridor to help get that workforce from home to work and back? That is a significant potential source of congestion. I know reducing those vehicle trips and helping get folks on transit probably aligns with the sustainability goals our resort partners have. Is there any additional information you can provide on that collaboration to help support the workers that are already on transit and maybe help encourage more workers to be able to take transit and make sure folks can clock in on time?

Ms. Maynard:

That is exactly right. If you have a mobility problem, you potentially have an economic problem in your community because it is about the workforce. We work closely with the Culinary Union with the resorts. Particularly, after and during the F1 event, it was a time to collaborate on how you move those employees in and around the Resort Corridor. In talking to the Union, they would like a more frequent service. They want more service, and we are looking at potentially, with future funding opportunities, implementing workforce mobility with an intention and understanding of where the employees live by waving an anonymized zip code chart, and then identifying an express type of service from those areas to the Resort Corridor, and looking for improvements on the west side of the Strip for access for all angles of the Resort Corridor.

Vice Chair Watts:

That is fantastic. My colleague from Senate District 13 brought it up. When it comes to indexing, the Legislature did take action to try and address that with Assembly Bill 359 last session that unfortunately got vetoed. As well as conversations about trying to incorporate EVs. I agree—there has been a lot of conversation. It is time we turn that conversation into action, and I hope we can get everyone together to figure out what that looks like. My question is particularly on FRI. My perspective is we should move to a model that restores local control to decide whether they want to adopt indexing. I know that as it stands under the law right now, we face a potential vote in 2026. Are you seeing any impacts to your planning currently based on the uncertainty and possible end of FRI in two years? Are we seeing that already start to impact project planning?

Ms. Maynard:

The answer would be yes. It would be one we are seeing because of the inflationary costs, the impacts to how we are doing business post-pandemic, the amount of funding that has been identified in the ten-year CIP program. We are able to do a little bit less with the same amount of money because of those increased inflationary costs. It is certainly something we must always consider.

Vice Chair Watts:

That is unfortunate to hear, and the best time to have addressed this would have been yesterday. The next best day is tomorrow. Hopefully, we can make this a priority during the beginning of the next legislative session.

Senator Buck:

I was wanting to, first of all, give you accolades on the great work as far as the buses to the sporting events. That is very helpful. I have been on that many times, and it is a big community event, riding the buses to and from. It is well organized and wonderful. Also the witty sayings as you are driving down the roadways you have coming across the placards—that is very clever and catches your attention. I have a few friends that ride the transit, and it seems seamless. I can only imagine you take a lot of the weight as far as traffic from the roadways when people choose to ride public transit. Thank you for all you do with that. My question goes to workforce shortages or challenges. Do you have any of that? I know that you contract that out, but do you have workforce issues on getting qualified bus drivers and keeping them in their seats?

Ms. Maynard:

The answer is yes, but it is getting better. We are finding the workforce—it is not just transit, public/private sector companies—we are all facing that labor shortage. More people are retiring than coming to the workforce. I believe that with the most recent collective bargaining agreements by both the ATU and the Teamsters, we are seeing a positive improvement in terms of the attraction and potential attention of those operators.

Senator Buck:

I have a friend who drives the bus and loves it. Thank you.

Chair Harris:

Any additional questions from Committee Members? I will make one note. I noticed in your presentation you made a claim about people riding the bus having jobs, and you use that to dispel the claim that it is people who cannot afford to ride the bus. I would caution against those two things being the same thing. Often, unfortunately, we live in a society where people do have a job and still cannot afford to drive a car. I see 80 percent of the people riding a bus who have jobs as people who are likely working poor and still do not have the additional discretionary income to make a car payment, get the car registered, and pay insurance on that every month even though they are employed. That number may be saying something a bit different than what we are using it for in the presentation. Other than that, I thought it was great. Thank you. I appreciate your time.

Ms. Maynard:

What you said is what I—that was my intention. Sometimes, people think it is just poor people who do not have jobs that are riding the system. This is about hardworking people that have less mobility options—either no options or limited options. It is our job as a community—if we do not talk about the value of a community, you cannot have access without mobility.

Chair Harris:

Thank you for that clarification. We will go ahead and turn up north now to Washoe, and we look forward to hearing your presentation. Go ahead and begin whenever you are ready.

Bill Thomas, Executive Director, RTC of Washoe County:

Good morning, Chair Harris and Members of the Committee. I brought with me today a couple of people to help me if you have questions and go a little deeper than I might. Jim Gee is our Director of Public Transportation and runs our Public Transportation Program. Michael Hillerby helps us navigate your challenging and complex world.

I wanted to start today to share—because I know there are a lot of things on your mind, who we are and what we do, and I will walk through what is going on in our world—but where I would like to start is, all of us know Nevada is a special place. In the world of transportation, which is something that touches everybody's lives and a major subject for this Committee as you look at the future of our State—we are very fortunate. What I mean by that is when you look at our structure under the core function, we are special in Nevada in how we manage and arrange and govern our transportation world. Much like Southern Nevada RTC, we run three programs that are highly interlinked, and that is the metropolitan planning organization function, which is a federal construct for communities of greater than 50,000. We are one of the four in our State—the others being Lake Tahoe and Carson City—and then we also run the public transportation system much like Southern Nevada RTC (Agenda Item VI B). Lastly, we manage the funding. Construction is a little different than Southern Nevada. We do the design and construction of the major roads. The point I want to make with that is not only do we provide an integrated service, but we also, because of our scale, work very closely with Southern Nevada RTC and NDOT. We have an opportunity to the extent we can help you collectively in dealing with this issue to pull together very quickly, in a very positive working way, all the major players in the government world of public transportation and transportation in general to put our State in the best place we can put it.

I want to talk about one of the three core businesses first, which is public transportation. Much like Southern Nevada RTC, we run the public transportation system, the backbone of which is our fixed route buses, which we call RTC Ride. We serve about 5 million people a year in terms of rides. I would say roughly, we are about one-tenth the size of Southern Nevada RTC—very similar service, but the scale is much different. Talking about the ridership—ours is about 60 percent, from the demographics, work trips. The majority of our riders, as we check the demographics, are those who are probably economically challenged, but all society, our State, and everybody wants to see how we can get people off the roads if for no other reason than to maybe reduce the traffic jams, but also for all the environmental reasons. We work very diligently to try to figure out how we get new riders on what is a very major public investment, which is the fixed-route public transportation system.

Talking about our fixed-route, I did want to highlight for the Committee that we achieved in 2022, 100 percent alternative fuel in our 68-vehicle fleet. We also were an early adopter of electric buses, and we have 23 we operate. I shared last year, and I will share again that we hit our max in terms of what we can do with electric buses because, while they are a great technological advancement, they are challenged in terms of our world, which is the charges, on average, go for about 100 miles, and much of our system—we need 300 miles a day. We were very selective on which routes, and how we use the electric buses. We are very proud that a third of our fleet is all electric. We have recently added, much like Southern Nevada RTC, hydrogen fuel cell buses, which are funded by the federal government. We have two in-house. We have not put them into service yet because we are still working through the biggest challenge, which is the fueling—which is new and a growing industry, but one that has not matured to the point of reliability and predictability. We did get this year a grant from the federal government for an additional six. Hopefully, by this time next year, we will have eight hydrogen fuel cell buses in operation. The advantage of those, unlike the electric, there is no limitation in terms of their length of service of the miles they can serve, only of course, how full their tank is.

Lastly, we are working to permanently establish a hydrogen fuel cell facility. I am sure the Committee has heard and is interested in that particular fuel source, not only in public transportation in general and in terms of replacing petroleum fuels, but how important it is to our State moving forward. It is one we certainly will engage with the State and any other people who are interested in how we advance that technology.

Our goal, in terms of public transportation, which is often thought of as the transit, is constantly figuring out how we increase ridership. As Senator Daly said, the constant thing we hear is "There is no one on the bus." Not true, but a lot of times you see the bus, there are very few people on, one or two, and a lot of that has to do with the nature of it. What we are trying to focus on is not only for that perception, which is important because the public transportation system could not work without a sales tax, and that sales tax is paid for primarily by people who do not ride the bus. It is a high bar and something we want to be aware of to make sure the public sees value in the public transportation system. We have structured ours to start first with our fixed-route. In study after study of passengers, what they tell us is a lot of things you might think are important to them—there are only two things they care about, and that is frequency and reliability. If you ask them, "What is the most important?" that is what they will tell you time and time again.

We have created bus rapid transit. Our bus rapid transit system right now is focused on Virginia Street and Fourth Street between Reno and Sparks. In those corridors, we have ten-minute bus trips, as compared to what you will often hear is hourly or maybe, if we can afford it, every half hour. For people who want to use the public transportation system, having it there frequently and having it longer hours of the day is probably what is most important. The other tools I am going to talk about a little more are FlexRIDE, which is microtransit. This is our label for it, but it is microtransit—Vanpool program, and then a Senior Ride Taxi Bucks service we provide.

First, in terms of the microtransit, which are provided by these smaller vehicles called "cutaways" in the industry—the beauty of these is that with the fixed-route system, you are defined, even though it is rubber tired and can move, you build bus stops, you invest a lot on a particular route. Those are only successful if people come to that bus, where that microtransit allows us to define smaller geographic areas within the community where we run these buses, and it lets us go curb to curb. We can go pick people up where they are and not force them to go to where the bus is. That has been very successful in increasing ridership. We have four zones, and we have a plan with our Board to move that forward as

resources are available, not only in terms of the cost to buy and operate, but also in terms of finding drivers. I would point out that our fare is exactly the same as fixed-route. There is no premium or additional cost to the microtransit program.

A couple other programs—the one that has been wildly successful with seniors in our community, which we define as people above 60 years of age, is the Senior Taxi Bucks program, whereby we provide free of charge $60 per month to seniors qualified who come in and get the card, and then they can use that to order taxis and to use for Uber and Lyft. What we found during the pandemic where we were challenged is that Uber and Lyft, in addition to our public transportation world, was wildly successful in terms of getting people around. If you think of public transportation, the continuum between everybody going to the same place and getting on a bus, and then individually getting public support and moving around to your doctor's appointments, particularly with seniors, that is what it is primarily. We found that this whole gamut of services is valuable to our customers.

Lastly, I want to touch on something that was a national program, but one that is not frequently used, which is what we call our Vanpool program. We subsidize with federal money, a driver to take out or basically be the owner—because they get the vehicle—in exchange for them driving other people to work. We have found great success. We were sixth in the nation giving—even though we are very small compared to most of the places in California that are successful—L.A., San Francisco, places like that—part of that is because of our geography, which is the Tahoe Reno Industrial Center (TRI), which is 20-some miles east of us, that has very few homes and a lot of jobs. That is conducive to this Vanpool program and is a major user of the 334 vans we use. About two years ago, and particularly last year, we started finding great success at Tahoe with the ski resorts and the businesses up there as a tool to be able to collect trips together. We are proud of that program, and it shows a lot of promise that, hopefully, will help us in many ways and the community in general to reduce the number of trips on the road.

Getting back to attracting customers and in our public transportation world, I wanted to touch on a couple of things we do. Two that I want to highlight is the Transit app. We have this app, we moved to a year or two ago, which is a nationwide app. The beauty of that is as you move from community to community, people do not have to learn a new app in order to use their bus system. We were the largest increase year over year in the country in terms of using that mobile app. Maybe it is because we started it, but certainly we want to brag about people are using it, finding it, to not only determine where the next bus is, but also to pay. Eventually, we want to move away from using coins and cash and move to a cashless system, which we think will benefit not only us, but also more importantly the customers. Lastly, one of the things we have taken on this past year with our Board's direction is to dive deep into the Spanish-speaking customer base. It is not only because it is the right thing to do, but it is also because it is a huge proportion of potential riders. In the numbers, we found 8 percent of the Spanish-speaking population use the bus even though they are almost 30 percent of the population. It is one we are spending our resources on and our efforts. We have hired specialized consultants to help us message out, maybe not taking English messages and turning them into Spanish but tuning our message to people who speak Spanish and resonating our message with them.

I want to switch now over to the other core service we do, which is road building and road maintenance. This graphic gives you an example of what we spent last year—almost $88 million. Of those 2,600 jobs, the overwhelming majority are union jobs and provided by collective labor agreements, at least with their employers. We are a significant source of employment in our community, particularly those people in the labor force. Another thing that probably hits home more to Senator Daly than the others that I wanted to highlight,

are the projects we are working on right now. I am proud to say we have 65 projects as a single Agency that we are working through. A couple of the big ones are Arlington Avenue Bridges, Lemmon Drive, which, for those of you who are not familiar, is an area that flooded some years ago. We have an intermittent lake there. That is a terminal lake and it flooded, and a disadvantaged community had no way to get it out. That is one of the projects. Mill Street, a road that feeds downtown Reno, and then lastly, Sparks Boulevard, which is a critical road for our Spanish Springs area. We are going to begin construction this year and widening that project, which is a little more than a $70 million project.

Touching on our revenues—we have three major funding sources. Fuel tax, which you already talked about in terms of the indexing, and we were the first in the State to do it, and we have had it the longest—ours does not sunset. As you can see here, about 50 percent of the revenue we bring in to operate our county's transportation needs comes from fuel tax, which is limited by law to roadways. We also have a sales tax, which is 22 percent of our revenue. That is solely devoted to public transportation. We do not use any of that money and cannot by law use any of that money for roads. We do have a one-eighth cent fuel tax that was approved by the voters more recently that we can use either way. In other words, if we have a tough year in public transportation, we can use that sales tax for running our transit program. If we have a robust or a good year in sales tax, then we can also use that one-eighth cent on roads. It has been very helpful in moving it back and forth because sales tax is vulnerable for fluctuations with the economy.

Lastly, I want to talk about federal funding. We provide the majority of the federal funds that pass through into our county, particularly those coming from FTA of the U.S. Department of Transportation. We work very closely with NDOT. Only a small slice of our revenue comes from NDOT, and that is federal pass-through money. From the standpoint of everything you must deal with in providing funding for all the State needs, I would say we are pretty self-sufficient. We do not, as a general rule, use State money to meet our needs, but we certainly are appreciative of the Legislature and its ability to empower us to meet our needs, particularly with our index fuel tax.

As far as how we spend the money, a third of it is on transit. The reason that does not balance necessarily the revenue is because the federal government pays a significant amount of the capital cost. They do not pay for operations, but they pay for capital. Then we use our fuel tax split between preservation of our existing new roadway network and then also new roadway projects. We have about a $26 million a year debt service we have to provide that obviously comes out of the top before we spend our money on the other things I mentioned.

I wanted to end with talking about the fuel tax because I know that is a major subject for this group and for all of us transportation agencies. We indexed and started the index in 2010. Obviously, we have had it the longest, and it has been able to grow over time. It funds pretty much everything we do in streets and highways. The challenge we are facing right now is, as the community grows, the maintenance gets bigger and bigger, and the roadway needs for new construction and widening do not go away. Moving forward, that will be our biggest financial challenge. Coming back to this conversation about fuel tax replacement, I would say we are not in a dire situation. We are able to keep our head above water. Because of our scale, we are not at the same level of fiscal cliff on public transportation as Southern Nevada is, but it is a matter of time. Two of you drive EVs. My son just bought one. As they become cheaper, and more people want to move to them, I would argue it is beyond the point of whether they are going to be adopted; it is more of how quickly they can get out and people can buy them. My fear, talking to you, is that right

now it may be only a single percentage of the population, but what happens if we are at 20 or 30 percent of the population driving EVs, and they have not been paying any tax at all. I would guess it is a hard lift to get those people who have been able to use the road system without contributing to it to want to pony up their money. Time is of the essence in our world, not necessarily from the crisis of being able to take care of business, but a problem that only gets worse as time goes on. Here are things that have come out of the NDOT-led study.

Our assessment, as RTC Washoe, is that probably the most expedient and realistic, as we study the road user charge and the complexity of that, is probably some interim flat fee that could be equitably set but easily collected to at least not let us get further behind. With that, I will close my presentation. The three of us are here to answer any questions you may have.

Chair Harris:

Committee Members, do we have questions for RTC Washoe?

Senator Daly:

Thank you for getting to parity and the fuel tax. Are you aware of anything different on the additional impacts from EVs? Based on the weight, they are correct. Any studies or any information regarding that?

Mr. Thomas:

We have not spent any time or energy other than the conversation you are hearing. They are much heavier, which is true. The information I got is we have heavier vehicles already, so while they may individually add more wear and tear, they are not so significant that that would be a real driver. What we are studying is the loss of fuel consumed, which year over year, we are basically flat. Even though we are growing much like Southern Nevada, more people are here, and people are driving more. We are at that pinch point now where the indexing is not covering the increase in costs. If it does not cover that incremental next driver, we have both of those compounding. That is why we feel it is urgent to get an answer before it is a crisis.

Senator Daly:

Understood. I agree. I believe it is statewide when you go to the Department of Motor Vehicles (DMV) to register, and it is on the honor system where they put in your mileage. That is leaning towards a vehicle miles travel-type of system, and you have privacy issues there, but I think that can be overcome. The only one on your list I do not like is toll roads—forget that one.

Vice Chair Watts:

I second my colleague from Senate District 13 when it comes to toll roads. You mentioned during your presentation that you are looking to move towards a cashless system at some point. Could you talk about that? I have heard concerns that while so many people are moving to cards or to apps and digital-based payment, there is still going to be a portion of the population that is going to want to do transactions via cash. Could you revisit that and talk about how you intend to manage that to make sure we do not unintentionally create access issues for folks to be able to get on transit in the future, even as we are looking to

try and streamline those things? I know for a lot of people, that is easier, and it probably also helps with getting people on and off if they are not fumbling through looking for cash.

Mr. Thomas:

As you pointed out, many of our customers, that is the way they work. They may have coins in their pocket, and that is how they get around. Instead of having that potential conflict point on the bus, where it often is a problem for the drivers and one that they make us aware of is a challenge, what we would do is move towards having kiosks in our transit centers so somebody could buy a token or a card. We are thinking a rechargeable card. They could still use their cash, but they would not be giving it to the bus driver. They would not be putting in the device on the bus.

Vice Chair Watts:

That makes a lot of sense. Thank you for the clarification.

Chair Harris:

Additional questions? Not seeing any. Thank you for being with us today. We are going to close out Item VI.

AGENDA ITEM VII—PRESENTATION RELATED TO AGRIVOLTAICS—THE SHARED USE OF AGRICULTURE AND PHOTOVOLTAIC POWER GENERATION

Chair Harris:

We will jump straight into Item VII, which is a presentation related to Agrivoltaics—the shared use of agriculture and photovoltaic power generation. We have with us representatives from UNR's Cooperative Extension.

Misha Allen, Extension Educator, Northern Nye County , UNR:

I am serving northern Nye County out of the Tonopah office—the frontier community in the center of the State. My job is to develop programming based off of community-identified need. About two-and-a-half years ago, the Nye County public identified a lot of concern, anger, and fear around current and potential solar projects in our County. In listening to Nye County public comment over these years, I have learned solar development has a public image problem. The public is telling us they do not like what they see and perceive as a scorched-earth approach. The solar industry has had decades to embrace land stewardship or shared land use practices into their business models, but they have not, so the public views utility-scale projects as a bit of a land grab effort. Interestingly, the public has also spoken to a history of unkept promises with solar development. They have told us solar developers came in and made big promises of community benefit, only to not deliver on them. Then, to add insult to injury, these projects began utilizing scarce resources from the community they originally said they did not need. Fire department resources are a good example of that. (Agenda Item VII)

While I was hearing all this, I was also aware of the federal renewable energy goals, and the funding that was being allocated for solar development. I knew there was going to be a wave of solar that was coming our way. I set out to look for potential solutions and alternatives that might be appealing to my public. I found shared-land use projects that incorporate solar generation as a co-priority rather than a singular priority. Agrivoltaics and ecovoltaics are two examples of dual-land use strategies. Agrivoltaics is farming and

ranching under solar panels, and ecovoltaics is conservation efforts under solar panels. It is important and advantageous to our renewable energy efforts to differentiate these shared-land use strategies of agrivoltaics and ecovoltaics from photovoltaics, which is straight solar. That is because they simply are not the same. Their business models are different, as are their operations and daily management practices. This is because shared-land use strategies are co-prioritizing multiple services.

You can see these are different businesses. Single priority solar is solar centric. The public looks at this, and they think it is exploitative to our lands, that it is ugly, that the incentives are being offered to other states, like California, and they do not see any local benefits pertaining to them. On the other hand, on the right is agrivoltaics and ecovoltaics with co-prioritized services. You can tell their business model is different. You can tell their operating and daily management practices—they have to be different because they are able to grow plants and animals. Their impacts are different, and their community benefits are different. I had a participant tell me the single priority solar looks like we are stuck in the past. She said the co-prioritized solar, like agrivoltaics, looks like progress to her.

How do agrivoltaics work? This is the part I find exciting. It is synergetic. The solar panels and agriculture work better together. The solar panels provide shade to the plants, so the plants and the soil do not lose as much moisture. This reduces the crop requirement for irrigation. You are conserving water. Together, the solar panels and plants create their own micro-environment, which is cooler underneath the solar panels. This, in turn, cools the solar panel temperatures and increases their efficiency in generating power. You have happier plants because they get a reprieve from the sun, and the solar panels are happier because the plants underneath help create that cooler environment. You do not get that heat island effect created by industrial areas. Additionally, this is good for farm workers and livestock. They like the shade too. It protects them from heat exhaustion and reduces physiological stress, so that creates a better work environment for people. It also creates better body composition in livestock.

I was skeptical about all this at first, and I was concerned that this all sounded too good to be true. I needed to see for myself. I needed to get boots on the ground on successful projects before I could bring this to my County. With a grant, I was able to visit ten sites across four western states with agrivoltaics being implemented in urban, rural, and frontier sites, demonstrating small, moderate, and utility-scale projects. Keep in mind these states have community solar legislation that allows these operations to be successful. Here in Tucson, we have two different University of Arizona sites. On the left is an elementary school site with a school garden under solar panels. We have elementary school students there that are lined up and university students that are there to teach science and research concepts. On the right is a rooftop project. In Tucson, they get too much wind and sun for a traditional green rooftop. By adding that elevated solar, they are able to create a cooler environment that protects and makes this rooftop garden feasible. These are native species that are grown there all without irrigation.

This Arizona installation is adaptable to both urban and rural projects. These have been replicated in multiple arid communities in Mexico, Israel, Kenya, and Morocco. They are used primarily to power wells and produce food. This is relevant to our Nevada farmers and ranchers that need to power their wells or livestock watering.

This image is from Jack’s Solar Garden. They have the Colorado Agrivoltaics Learning Center, which is their nonprofit arm. This is on four acres of solar. They generate enough power for their own operations and sell the excess to subscribers for a premium to help fund their nonprofit. They provide free land leases for research and community food programs,

and they appreciate having active land tenants onsite, as they partner in identifying any potential problems with the solar panels so they can troubleshoot them quickly.

These are more photos of the same site, Jack's Solar Garden. What is unique about this site is the amount of community engagement and social use. They have university research plots from three different universities. The community food pantry grows produce. They host dance performances, exercise classes, weddings, and corporate events. They have painting classes and educational workshops, one of which I will be joining at the end of May. This is a great example of co-prioritizing social use along with energy production and agriculture production.

Oregon State University (OSU) has two-and-a-half acres of solar panels. They power the research farm and offset university utility bills while also offering power to low-income households and nonprofits nearby. They are unique because they built their project as a farmer would. This system has a ten-year return on investment (ROI) without incentives. They have another system under development that has a four-and-a-half-year ROI due to new federal incentives.

This site in California generates 4.5 megawatts on 18.5 acres. The power generated offsets the institution's utility costs, saving them an impressive $17 million over 20 years. Here they grow, forage, and graze the university's sheep herd as needed year-round. They employ zero mowers. The sheep do all the work. I saw the advantage of having a herd as part of those year-round operations. This is another view of the of the same site. The photo demonstrates the ability for installations to accommodate slope. As a side note, this is the only facility I visited that washes their panels, and then it was more for research purposes.

This is a 550-megawatt energy project in California. This project is on 12,000 acres with 3,200 acres of solar panels. You can see the Google Maps image of the project's footprint. This project is an example of why I prefer to use the term "shared-land use" rather than "dual-land use" for agrivoltaics and ecovoltaics projects—because here they have three priorities: solar, agriculture, and wildlife conservation. They grow their own forage also and contract out to graze 6,000 sheep seasonally. They do require mowers for the rest of the year—quite a few mowers. I did see opportunities for improvement on their range management practices, but this is a good example of a solar developer making efforts to embrace a co-priority project into their business model.

As we look at ways to encourage shared-land use strategies like agrivoltaics and ecovoltaics, I recommend a three-prong approach. Research and demonstration projects ideally across the State—and UNR would be a great partner. We have 18 experiment stations and 10 extension demonstration gardens across the State. Second is education for the general public—decision-makers, "ag" producers, and solar industry partners. We have, through Extension, 22 county-based offices to partner and disseminate information and statewide programs that get developed. The interest for agrivoltaics is already here from producers, natural resource managers, water managers, leaders, or tribal partners, particularly with communities in over-appropriated water basins trying to find ways to keep their farms and ranches afloat when faced with increasing water scarcity and loss of water rights. They have been reaching out to me for guidance from all over the State. I am seeing public interest already with agrivoltaics. The limiting factor, though, is legislation. All the researchers and operators I talked to on this tour told me their success would not have been possible without the community solar legislation. I see agrivoltaics in Nevada hinging on legislation.

Looking broadly at potential policy needs surrounding this issue, I would suggest we first start by learning from other states' community solar legislation and their impacts. I wonder if there is a need for a policy analysis project. Same thing with terminology—I would consider defining the types of shared-land use projects that co-prioritize solar. I can provide an example of definitions. I also wonder if the solar industry needs guidance and education on land stewardship goals or State expectations. Finally, I encourage you to consider community capacity in all this when you are looking at large-scale projects in particular, not solar, but mining and other large-scale projects. My work focuses on sustainability across systems, so lands, people, and industry. For industry to be sustainable, they need to rely on a sustainable community. Sustainable communities rely on sustainable industry. They go hand in hand. I would be happy to return for a separate presentation on how to co-create that community support of these large-scale projects in tandem with creating project support of community needs. Thank you for allowing me this time to present. I hope you find this informative as you consider agrivoltaics in Nevada moving forward. I love talking agrivoltaics. Feel free to email me with questions or comments.

Chair Harris:

Committee Members, any questions for Ms. Allen? Vice Chair Watts.

Vice Chair Watts:

Thank you for the presentation. My first question is, based on the sites you have seen, can you talk about what that process has looked like? Has it primarily been the integration of solar energy generation onto agricultural land that was already in production? With that, has there been modifications to how those agricultural activities occur, and/or have there been changes to what the agricultural production is—changes in crops or changes in activity?

Ms. Allen:

There are a couple of components to your question. Most of the research sites I visited were developed to be agrivoltaics operations. Going back to Jack's Solar Garden—that one was an existing farm in production, and they were struggling with water issues very similar to what we are experiencing here in Nevada. The Nature Conservancy provided public comment in regard to Eureka in Diamond Valley—very similar issues there of folks at risk of coming out of production simply because of lack of water. Jack's Solar Garden added solar to a portion of their property—those four acres. He is a huge advocate for agrivoltaics, how it has reduced their water requirements. He designed it in a way to where he can bring his agricultural equipment through there. He is using the exact same equipment. The design would be different for each producer based off the realities of what they are working with. They do not want to have to buy new machines; that is a heavy investment. He is seeing great production with a decrease in water use. He is also trialing different projects of not using any irrigation to see that cost-benefit analysis. It is possible.

Vice Chair Watts:

That is great. You mentioned demonstration projects. One of the big issues we would need to address here is to have projects on the ground and help our major industries in our climate understand what the different forms of that could look like. Particularly, in Diamond Valley with the severe water issues they are facing, there are conversations about transforming what the production looks like on that land. It is worthwhile to look into what those alternatives are that can reduce the water use but still keep land in production, so we

are not seeing the elimination of agricultural land but the transformation of it, and then helping address the lost income from the prior production with power—being able to have a range of projects we can deploy that folks in agriculture could see to understand what it would look like, what the economics could be, and what benefits could be realized. You mentioned water use could be lowered. There is some research that shows that depending on the production, you can get increased yields from what is being grown. Being able to understand those things and then figure out the electric-side issues of figuring out how we get things connected into the grid and if that is producing more than the power needs of that individual producer—you discuss that in your presentation. How do we get that out there and provide benefits to the surrounding community as well? That makes a lot of sense as the next step and being able to show what the possibilities would look like here in Nevada in our different agricultural areas before we then move into potentially broader policies to scale up adoption of this.

Ms. Allen:

I completely agree. The demonstration projects are important. In essence, what I showed were pictures to demonstrate the ability, the feasibility, and the viability of it. What is happening in Eureka is an opportunity for us. They are showing us what the producer questions are. They are showing us the producer interest. They have a lot of concrete questions. It is important we start addressing those in some kind of a workshop-type format. I have a grant request out for travel to visit a couple of other states that provide workshops for both landowners and solar installers. That concrete, show-me type of workshop is also important. That is important now—not in another year; not in another five years—which a research or demonstration garden—we need these things in tandem, urgently. There is an urgent need here in Nevada.

Vice Chair Watts:

I agree with that. Also, the collaborations with the various electric providers—whether that is the utilities, the rural co-ops—also have to be involved in figuring out how we can get these projects built and then connected into the grid and connected to the rest of the community. The other question I wanted to put out there that I do not think came up in this—I have heard there are federal funding opportunities for these things. The Rural Energy for America Program is one that I know of. I do not know if there are others out there. Is there any information you could provide to us on how looking into these programs could potentially leverage federal dollars to support those projects, or bring in additional support to make these things happen and increase economic activity in our community?

Ms. Allen:

Definitely, that would be an important component to be incorporating into workshops with producers. This is part of those concrete, "How do I? How does this work?" I have colleagues in OSU who have done this many times, so they are familiar with the Inflation Reduction Act (IRA), where the funds are helping to offset the ROI significantly in this project they are working on now. I have not been able to get that far on any of our projects. For me, it is difficult to identify the incentive of being able to do this as a producer when you do not get to use your own power. With the current legislation, they cannot use the power for themselves. There are a lot of challenges there. The current situation and legislation is not supportive of agrivoltaics development.

Vice Chair Watts:

I would like to continue this conversation and get all the stakeholders together. It sounds like there is quite a bit of momentum in Eureka County around this. When we look at this overlapping of energy opportunities, economic opportunities, and also water scarcity and constraints—there are a lot of opportunities in the southern portion of Nye County. I would love to continue to discuss this and figure out the informal things we could do to bring together all the different stakeholders and help identify locations and producers and figure out the opportunities and barriers to being able to do this—figure out how we can partner with those folks in the private sector as well as look at these demonstration facilities you have, look at partnerships with the Desert Research Institute and our other higher education institutions, and figure out how we might be able to all work together and see if there is any need for State policy or other support that could help get these things moving forward in the next year. I appreciate you bringing this to our attention and providing additional detail.

Assemblyman Carter:

I will say ditto on everything that Assembly Member Watts said. We need to visit the UNR Cooperative Extension orchard here in Las Vegas—the demonstration orchard where they have been in use for a long time proving the viability of backyard orchard culture here. It seems like a perfect intersection of resources to do a trial on.

Chair Harris:

Committee Members, any more questions, comments, suggestions? Not seeing any. Thank you for being with us. We appreciate it. We will go ahead and close out Item VII and open up Item VIII, which is a presentation on clean energy supply chains.

AGENDA ITEM VIII—PRESENTATION ON CLEAN ENERGY SUPPLY CHAINS

Chair Harris:

We have the National Conference of State Legislatures (NCSL) with us. Go ahead and begin your presentation whenever you are ready.

Alex McWard, Policy Specialist, Environment, Energy and Transportation, NCSL:

The NCSL is the bipartisan organization representing the legislators of our nation's states, commonwealth, and territories. Our mission is to advance the effectiveness, independence, and integrity of legislators and to foster interstate cooperation and facilitate the exchange of information among legislators. Today, I will be giving a brief presentation on the legislative trends concerning clean energy supply chains (Agenda Item VIII).

Clean energy supply chains is a vast topic, so I will be giving a broad overview of the different parts of the supply chain while providing examples of recently introduced enacted state legislation relevant to each part of the supply chain. There are five different parts of the supply chain I will primarily be focusing on, and that is raw materials, research and development, manufacturing, end of life or waste management of energy systems, and then clean energy workforce. I am highlighting these specific parts of the supply chain because they were the key points discussed in the U.S. Department of Energy (DOE) report a couple of years ago called *America's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition*. This report details the country's needs to achieve a sufficient supply chain to develop a clean energy development. This report provides more detailed

information regarding supply chain needs, and it lays out the federal plan for supply chain development. It may be a valuable resource for additional information after this presentation.

The first part of the supply chain we will focus on is the raw materials. The key aspect of the clean energy supply chain is raw material availability. Raw materials consist of critical minerals and materials that are necessary for the manufacturing of clean energy supplies and technologies. The DOE has a full list of what it defines as a "critical mineral" or "critical material," but they generally consist of rare earth elements—resources such as cobalt, lithium, or nickel, that are necessary for components of clean energy systems.

In terms of state legislation, we see a lot of states considering legislation regarding lithium specifically. That is typically for batteries, energy storage, or EVs. It is my understanding that you have another presentation today focusing specifically on energy storage, so I am not going to go into that too much today, but we have not seen too much legislation recently considering broadly raw materials. However, I would like to mention this bill from Minnesota that was introduced this year. It focuses on recovery of critical minerals from products at the end of their life through the creation of an advisory task force. This task force is required to focus specifically on critical materials from renewable energy systems.

The next part of the supply chain we will look at is research and development. Research is an important part of establishing the supply chain. Research provides a better understanding of clean energy technologies and can help implement them in a more efficient and cost-effective manner. Last year, we saw a decent amount of legislation enacted regarding clean energy research. First, Virginia enacted legislation expanding the powers of the Southwest Virginia Energy Research and Development Authority to support the development of hydrogen production and various forms of renewable energy, including geothermal, solar, and wind energy. The Authority is directed to focus particularly on the development of energy on closed powerplant sites, such as former coal sites. Next, Texas enacted a bill to establish the Semiconductor Innovation Consortium. Semiconductors are considered a critical component for clean energy technology, as they are used for converting and transferring energy in various types of renewable energy systems. Further, in the research and manufacturing of semiconductors, it is seen as a priority for a strong supply chain development. We see a decent amount of state legislation targeted specifically towards semiconductors. Finally, we have seen a few pieces of legislation from Utah enacted to promote energy research. Last year, they created the Utah Energy Research Grant Program. This Program is designed to provide matching grants to applicants that have received federal or private grants for energy-related research. This year, they established the Utah San Rafael Energy Lab. This lab is meant to conduct energy technology research, enter into financial contracts with entities looking to use the lab, and assess the viability of new energy solutions for deployment in the state.

The next phase I am going to discuss is the manufacturing of clean energy systems. This is part of the supply chain where we are seeing the most legislative action from states. Establishing a strong domestic manufacturing base is critical for reaching the clean energy targets that many states have set for the next few decades. States are looking to reduce the reliance on foreign-built components by attracting domestic manufacturers, supporting local workforce opportunities, and building new manufacturing facilities. States are at different phases and taking different approaches to this issue right now. A couple of years ago, South Carolina passed a resolution for a study to evaluate the state assets necessary to create a road map to attracting offshore wind energy supply chain industries to the state. Offshore wind is the area we are seeing the most action being taken in terms of improving manufacturing capacity. Last year, we saw a couple of offshore wind projects on the

East Coast get canceled due to inflation and supply chain constraints. This is an issue that states are concerned about right now. I know that offshore wind is not as relevant to all you in Nevada as it is to our coastal states, but I wanted to mention it because it is the sector of renewable energy we are seeing the most legislation considered right now regarding manufacturing and supply chain issues. I included two more examples of offshore wind legislation with California and Maryland. California enacted AB 3, requiring plans to be developed for seaport readiness and in-state offshore wind manufacturing. We have seen a lot more bills like this targeted towards offshore wind compared to other renewable resources because offshore wind is in its early stages of implementation and has a lot of unique requirements for manufacturing. States are having to develop specific port facilities for manufacturing, and transporting the wind turbines requires specific vessels offshore. That is why we are seeing states like California and South Carolina implementing these studies and plans to gather an understanding of the development needed for in-state manufacturing.

In addition to conducting studies on manufacturing and supply chain readiness, states are also implementing incentives for in-state manufacturing. Washington enacted a bill that allows renewable energy manufacturers to apply for tax deferrals in the state. Meanwhile, Colorado created a tax credit for semiconductor manufacturers in the state, which are critical components for renewable energy systems. Finally, Maryland's bill requires offshore wind developments to sign a community benefit agreement, which requires projects to use locally manufactured components for turbines and employ a local workforce for projects.

I want to highlight a couple of manufacturing trends we are seeing in this current legislative session. First, while we have states who are looking to promote domestic manufacturing through tax incentives or these agreements, we do see some states that have gone a bit further to introduce legislation creating requirements for renewable energy systems to be manufactured in the United States. For example, Illinois introduced a bill this year that would prevent the Illinois Power Agency from using ratepayer funds for solar panels not manufactured in North America. The next trend we are seeing is states looking to make the manufacturing process itself emission-free. We are seeing examples of legislation like those introduced in Rhode Island and New York, which would require renewable system components to be manufactured using renewable energy.

Now I want to discuss the end-of-life process for clean energy systems. The lifespan for solar panels and wind turbines ranges from 20 to 35 years. We are seeing a decent amount of legislation tackling this issue, as states are preparing for the end-of-life management of these systems. Last year Indiana, Texas, and Washington all enacted legislation to conduct studies on the decommissioning of solar and wind facilities. These studies are required to consider things such as best practices for disposal and recycling, the potential for financial assistance to promote decommissioning, or the creation of a state program to manage the decommissioning process for solar and wind projects. Another example of enacted legislation from last year was Maine expanded upon its definition of *decommissioning* to include provisions for the recycling of solar energy waste components. The previous definition had only accounted for the revegetation of the land disturbed but not the disposal of the components of the energy system itself. North Carolina enacted new decommissioning requirements for owners of utility-scale solar projects. This bill lays out the steps for the decommissioning process and also requires owners to submit decommissioning plans and establish financial assurance. Financial assurance is a standard requirement among state decommissioning laws. It basically ensures the owner of the system has the financial means to decommission the system. This insurance can come in various forms, such as insurance trusts or bonds. Those are examples of 2023 legislation.

So far this year, we have seen 61 bills that have been introduced regarding end-of-life management for renewable energy systems. Some examples include this one from Arizona, which was introduced proposing a solar panel disposable fund. The fund would be used to issue grants to local governments to support with the decommissioning, disposal, and recycling of solar panels. Finally, Minnesota also introduced legislation which required the implementation of a stewardship program, which is a plan for managing discarded renewable waste throughout the State. Both those Arizona and Minnesota [bills] are introduced but have not been enacted.

Finally, I want to go over legislation that has been enacted regarding workforce development. The expansion of a domestic supply chain will make a significant number of jobs available throughout the country, and a lot of these require highly-skilled workers, so developing this workforce through the proper training and education is necessary for supporting that domestic supply chain. You can see examples of legislation states have enacted regarding workforce preparedness. In Oklahoma, they enacted a bill that allows the State Board of Career and Technology Education to establish new courses focused on hydrogen energy to expand awareness and educate students on the topic. Illinois enacted a bill that applies the prevailing wage requirements for projects receiving incentives as part of the Illinois Solar for All Program. This means the construction of the project must be performed by workers receiving wages greater than or equal to the defined Prevailing Wage Act. Illinois's Prevailing Wage Act requires contractors to pay workers working on a public project the general wage that prevails for that type of work in the locality. This bill would extend that wage protection to solar workers as well. New Hampshire's SB 152 established the Workforce Development and Innovation Fund and creates the Offshore Wind Industry Workforce Training Center Committee. This Committee is meant to examine offshore workforce needs and make recommendations regarding workforce training efforts. Oregon established the Semiconductor Talent Sustaining Fund to support the training and research in terms of the semiconductor industry. Finally, I want to mention this California bill, AB 1593. The Salton Sea geothermal resources area is a region in California that is abundant in lithium. The bill would have established the Equitable Access Program to prioritize employment opportunities in the construction, maintenance, manufacturing, or reclamation activities for local residents, prioritizing a local workforce. Although this bill passed the Assembly in the legislature, it was vetoed by Governor Newsom, as the efforts of the bill were considered to be duplicative of work that was already underway.

I want to wrap up my presentation by mentioning a couple of NCSL resources and events coming up. Our Energy Program released our *2023 Legislative Trends* report last month. A lot of what I have talked about today is mentioned in this *Trends* report as well as other topics, such as fossil fuels, EVs, and energy storage. I highly recommend checking this out, and I can share this resource after the presentation. I would also like to mention NCSL's Legislative Summit this year. This is the largest convening of legislative staff and legislators each year. This year, it is in Louisville from August 5 to 7. I highly recommend your attendance. Registration is open now on NCSL's website for the Summit. That concludes my presentation today. I know that was a lot of examples of legislation. I would be happy to share a more formal list of this legislation as well as any other examples with you after the presentation today.

Chair Harris:

Thank you for that detailed presentation. Do any of Committee Members have any questions? Please feel free to supplement with any additional information you think might be helpful for us. We will close out Item VIII and open up Item IX, which is a presentation on lithium battery recycling.

AGENDA ITEM IX—PRESENTATION ON LITHIUM BATTERY RECYCLING

Chair Harris:

You all can begin whenever you are ready.

Caleb Cage, Executive Director, Nevada Battery Coalition:

Good afternoon, Chair Harris. Before we get started, I would like to make sure Mr. Melsert is on the phone.

Tiffany Moehring, Head of Corporate Communications, American Battery Technology Company (ABTC):

I am going to be filling in for Mr. Melsert, as he had a conflict at this time.

Mr. Cage:

I am pleased to provide for you an opportunity to talk about who we are, but more importantly, to talk about our members who are here today: Aqua Metals, ABTC, and Redwood Materials, who are all recyclers within the lithium supply chain (Agenda Item IX). The previous presentation was a perfect table setting for this presentation, which talked a lot about the need for manufacturing and the need for work to be done within the United States around critical minerals. Nevada is a place right now that is leading the nation in providing for the lithium supply chain. Nevada is the only state in the nation with all seven stages of the lithium supply chain present, and we are continuing to grow and continuing to lead the way. We started as an organization in 2023. We formed in the latter part of the year and have recently elected our first officers. We have 21 member companies who have joined and are helping us continue our work. Our work is focused on ensuring residents within the State of Nevada understand the importance of this industry to our State, making sure we have opportunities like these to talk to decision-makers and policymakers like yourself, and to work with our partners throughout the State to ensure we have the workforce development and economic development opportunities to ensure Nevada continues to be the national leader, and one of the global leaders in providing battery storage and the manufacturing related to that. With that, I would like to turn it over to our members to provide comments and an overview on what they are doing.

Ms. Moehring:

We are excited to be here to share about our company, ABTC. We are a very proud Nevada company of currently about 80 employees. We are all working to facilitate a transition to a closed-loop circular energy economy for domestic battery manufacturing supply chain where we are using new innovative technologies that can do this with lower environmental impact, at lower cost, and with strong strategic partnerships at the local, state, and federal levels. We are a unique company in that we have developed first-of-kind technologies we are commercializing to build out this domestic supply chain. We are doing that in two ways, predominantly; one through commercial-scale lithium ion battery recycling operations outside of Reno in the TRI. We are also doing it through the development of a primary resource that is located outside of Tonopah, which is called the Tonopah Flats Lithium Project. It currently has one of the largest known lithium deposits in North America right now. We are unique also in that, not only are we doing primary resource development and refining and manufacturing of the claystone materials, but we are also doing recycling. We are able to do that with inhouse talent and resources. We currently have five laboratories at UNR, and we are working closely with other national laboratories like Argonne National Lab

and through support with four different DOE grants. A few weeks ago, we also announced two different tax credit incentives that we were awarded as well to make sure we are able to continue developing out these technologies, and then scaling them up to be able to access battery metals and get them into the battery metal supply chain.

Our team comes from a background of fundamentally understanding how to design the manufacturing of battery cells, since a good majority of our team has worked as the founding design team that helped build out and commission the first battery gigafactory within the United States. With this understanding of how to build these batteries, we have been able to develop a de-manufacturing of those batteries, so we can recycle them with that first-of-kind technology to be able to recycle these battery packs, get to a reverse manufacturing situation, get to the metals, and get them back into the supply chain. Last year, we built out our first commercial scale recycling plants and have employed that technology. We are running that facility right now and making recycled products that will be supplying the domestic battery recycling chain. We are ramping them through this factory every day, and we are pleased with the current progress there. We have secured about 10,000 acres in central Nevada, just outside Tonopah. We have been working for the last three years conducting geological mapping, sampling, drilling, and analysis; building out a proprietary first-of-kind technology extraction process. We have received two DOE grants we are employing on this project. One was to build out a multi-ton per day, pilot plant demonstration system, which we have been working on building out. We simultaneously have also been working to build out, design, and construct a commercial-scale refinery that will use that same technology and be located in Tonopah at our Tonopah Flats Lithium site to be able to refine the claystone that we pull out from that site. We are excited and honored to be part of supporting the build out of the domestic battery supply chain for the United States, and also to position Nevada and my colleagues representing the Coalition to be at the forefront of these efforts.

Dave McMurtry, Chief Business Officer, Aqua Metals, Inc.:

I am the Chief Business Officer at Aqua Metals, a sustainable lithium ion battery recycling company that is headquartered right here in Nevada. Our headquarters is in Reno. Our first pilot plant, that you heard Senator Cortez Masto speak about last year in her State of the State address, is in the TRI, and that is where we have proven our technology. Down the road from that is our first commercial plant that we are building currently. It is a 10,000-ton annual throughput capacity plant that we plan to be finished with at the end of this year.

We appreciate the opportunity to share insights into our innovative efforts in recycling and the broader industry landscape. The previous speaker could not dovetail better with my colleagues in the sector speaking with you today. At Aqua Metals, we are deeply committed to the economic development and environmental health of Nevada. Our advanced recycling technology not only safeguards our environment but also drives economic growth by creating high-quality clean energy jobs. Our operations enhance the job market with roles ranging from engineering to Ph.D. chemists to administrative, boosting local employment and providing extensive training on next-generation recycling processes through our partnerships with UNR, Truckee Meadows Community College, and Western Nevada College.

We are pioneering a closed-loop supply chain for lithium batteries, an approach that reduces reliance on overseas materials, including those from conflict zones, while minimizing environmental impact here in Nevada to establish a secure local supply of critical minerals that we have been discussing all day. By recycling materials, such as lithium, nickel, and cobalt, we retain these valuable resources within the State of Nevada, contributing to

Nevada's reputation as a hub for clean technology and innovation. Aqua Metals leverages its proprietary AquaRefining technology. It is a method that is fundamentally cleaner, safer, and more efficient than traditional recycling methods because we use water-based hydro-electrical solutions instead of fire and harsh chemicals. Our technology has set industry benchmarks by successfully recovering high-purity, battery-grade materials from spent batteries, which are then reintroduced into the battery production cycle, reducing the need for raw materials.

Nevada stands at the forefront of the battery recycling revolution with companies like Aqua Metals, Redwood Materials, and ABTC leading the way. Our presence strengthens Nevada's position in the national and global markets as a critical player in the green economy. The State's proactive stance on supporting renewable energy and recycling initiatives aligns perfectly with our mission, helping to attract further investments and partnerships in Nevada. As the demand for EVs and renewable energy storage solution grows globally, Nevada's role becomes increasingly vital. With Aqua Metal's innovative practices, we are setting global standards right from our backyard, ensuring the world looks to Nevada, not just for ideas, but also for leadership and sustainable practices.

In conclusion, with the support of the Nevada Legislature and the community, companies like Aqua Metals can continue to innovate and drive the industry forward. We are not recycling batteries; we are powering a sustainable future and ensuring Nevada remains at the cutting edge of the clean energy revolution. Thank you for the opportunity to speak today. We look forward to continuing to work together to make Nevada a global leader in sustainable technology and battery recycling.

Don Tatro, Director, State and Local Policy, Redwood Materials Inc.:

I appreciate the time and interest in what Redwood and the others are doing. Redwood Materials was started by J.B. Straubel, who is a co-founder and Chief Technology Officer at Tesla. While he was scaling up the Gigafactory here in Nevada, he was inspired by two key issues he saw. It was, where are we going to get this material for these batteries in the future, and what are we going to do with them at the end of life? He started Redwood Materials with the mission of increasing the supply of this material for the batteries, reducing the cost of batteries, making EVs more affordable for everyone, and reducing the environmental impact, as well as increasing U.S. manufacturing of these materials for the first time.

Currently, the battery supply chain is a 50,000-mile supply chain that covers the entire world. A large part of that is over in Asia, and the reliance on China—for national security strategic interests, we want to reduce our reliance there, and we also want to bring these great jobs to the United States. One by one, we are trying to reduce the reliance on these additional routes and do it all here in the United States. Our focus is recycling all types of batteries—everything from your Airpods, cell phones, laptop batteries, all the way up to EV batteries—with a focus on producing the anode and cathode portions of the battery, the two most expensive portions that go in the anode copper foil. [I am] excited to say we are the first, I believe, ever to produce copper foil in the United States, onshoring that, and we have it in testing with multiple partners, and hopefully in vehicles soon, as well as the cathode active material. That is under construction currently at our facility here in Nevada and eventually in South Carolina.

In our facility, it is entirely closed loop. [We are] looking to use entirely sustainable energy. [We are] currently producing recycling material. That would be 10-gigawatt hours, which equals about 100,000 vehicles, 788 million cell phones, or 40,000 metric tons per year. The

goal is to get that up to 100,000 gigawatts, which would be enough for a million EVs here at our facility in Northern Nevada as well as our facility in South Carolina that is underway. We are planning to build about 5 million square feet under a roof at our facility. [We] currently have over 700 employees in Nevada, over 1,000 worldwide. Over 700 of those are showing up to work at our facility here in Nevada as well—headquartered in Nevada. We are excited about the future here, the industry, the Coalition, and all our partners and players in this industry.

Mr. Cage:

That concludes our remarks and presentation. We are happy to answer any questions you may have.

Chair Harris:

We have some questions. The first is from Vice Chair Watts.

Vice Chair Watts:

Thank you for the presentation. I appreciate hearing from the Coalition and your three companies. To take it to a higher level, I am wondering about what the recycling feedstock looks like. I am not an expert in this area, but we have relatively new utility-scale battery storage. There are home batteries. We have EVs and the battery packs in those. Then of course, Mr. Tatro, you mentioned cell phones. We have all the consumer items and smaller-level batteries. Can you talk about what your current or prospective feedstock looks like? Are you focusing on particular types of batteries as what you are bringing in to recycle? At a high level, how are you acquiring those feedstocks? Where is that coming from? Is it direct business-to-business relationships? Explain a little bit of that.

Mr. Tatro:

We currently receive all types of feedstock. Everything from your iPhones—it takes us about 200 cell phones to get enough cobalt for an EV battery. Decreasing our reliance on that mined material and putting that recycled feedstock into batteries here in the United States—it is exciting. We have great partnerships across the country. We have over 100 collection bins across the nation where we receive everything from watch batteries, iPhones, and laptops. We would be happy to have a collection for the State agencies as well when their things are too old and no longer needed. We have multiple business partners. Rotary has been a great partner. I believe we have 24 or 25 Earth Day events coming up over the weekend and Monday to collect consumer goods. We always say the largest lithium mine in the world is in everyone's junk drawer. The more of these items we can keep out of landfills to reduce the risk of fire at these landfills and transfer stations and bring them into our facilities, the better. We have partnerships with a variety of auto manufacturers to receive their end-of-life batteries or recalled batteries as well and process those and collect over 95 percent of the material in those that can be reused indefinitely. When we receive this feedstock, recycle it, and put it through our process, and an atom stays an atom—your nickels, your cobalt—everything. If anything, it becomes purer through these processes, and it is not like the recycled paper that rips; this is a great product to be put back in the battery. I hope that answers your question.

Mr. McMurtry:

I agree completely with what Mr. Tatro said, and I will simply add to it by saying the challenge today of battery collection will be a different challenge in five to ten years. Today,

the majority comes from consumer electronics. It is laptops and phones. In the future when the batteries and EVs we are currently driving with their eight- to ten-year warranties, when they come up, they will have very clear, much larger form factors. We will know what is in those batteries. Today, the biggest challenge is if you do not know what a battery is, much of the recycling outside of our Coalition happens with smelting, because you do not know what is in the battery. In the future, when we get QR codes on batteries, get battery passports, we are going to know what is in those batteries, and it will be much easier to shred them and put them into form and to align our processes with what is known in the battery. The challenge of today is around consumer electronics logistics, collections, and shredding. In the future, it is going to be about large form battery factory recycling.

Vice Chair Watts:

That is helpful to get that background. Is there anything you have identified at this point—we had the presentation from NCSL. They have talked about places that are looking at policies related to recycling and waste diversion of these materials. Is there any role you potentially see for policy? It sounds like while the overall volume will increase, you will have a smaller potential base of folks to work with in terms of auto manufacturers and potentially utilities or power production companies. Is there any role you see for policy as we move towards that in the future? You are talking about QR codes and having that clear information on what is in the battery so you can harness the materials out of that. In the short term, I assume that while you are scaling those things up, there are still quite a bit of those consumer materials that are not being captured and diverted out of the waste stream. Without putting you too much on the spot, from your perspective, is there anything that is on the horizon to consider in terms of policies that can help get that feedstock to you, help divert things out of the landfill, and help you understand what it is so you can effectively recycle it?

Mr. Tatro:

We have seen several states attempt a sledgehammer approach to it that I think will backfire a little bit, but we would be happy to meet with you at another time to walk through the finer points. I believe there is a role in keeping them out of the mervs, out of the landfills, and ensuring they are not finding their way into landfills. Finding a way to prop that up and support that effort would be great. I want to mention we were active in the State of Hawaii after the fires and receiving a lot of the burned batteries and decommissioning some stationary storage sites there as well, so that is another feedstock coming in. On the consumer side, reducing the amount that makes its way into the landfill is critical for a whole host of other reasons. We would be happy to talk with you about the nuances of that we are seeing work and not work in other states.

Mr. McMurtry:

You mentioned our original equipment manufacturer (OEM) partners—the automakers. Most folks do not realize that 40 percent of the cost of an EV today is in the battery. It has 20 percent of the moving parts. That is an industry that is aligning with this new reality. It is in their best interest that their scrap and end-of-life batteries get to us because they are closing the loop with us. We do not worry about the OEM side of the business. It is the customer side. It is the end consumer. I came from Washington, D.C., where I was testifying on the Senate Armed Security and House Foreign Affairs, talking about critical minerals. The truth is the European Union (EU) is ahead of the United States in legislation. It is currently illegal to throw batteries into a landfill in the EU, and it is not here. In a perfect world, I would love it if the consumer wanted to do what is best for the environment

and bring that battery to one of the many collection points in our State. If not, I would love for regulation to be in place, so they do it, if not for the good of the environment, at least for the good of the State. A final thought is that we are headed to a world where people will soon be reimbursed for the value of those batteries. It is a financial incentive. I do not know if that is legislation that needs to be put in place, but as a comparison, anyone who has replaced the 12-volt battery in their car recently knows that you go to your local auto store. They will pay you anywhere from $10 to $20 to come out and pull the old battery out and put the new battery in and install it for you. If you are like me, my first thought was this feels too much like a free lunch. It is too good to be true. Then, what I learned is there is a lot of regulation in place. It is a $65 billion annual business—that is a 100-year-old market. There are incentives in place. We need to get to the same place with lithium ion batteries. There has to be incentive, and there has to be a reason for consumers to want to give those batteries back.

Vice Chair Watts:

I look forward to continuing that conversation offline with all of you, and figuring out how we can find that balance that supports the economic development here in the State while also supporting the goals of continuing to close that loop and divert waste out of our landfills.

Senator Daly:

Do you currently pay for people to give you batteries, or do you go out and purchase it at all, or is it, "Hey, if you are going to throw it away anyway, we will take it"? Here is a cell phone, and I am sure there is a battery in there somewhere. For a small piece of it, you will take the whole thing because otherwise, I have given it to an electronic store who is then going to try to sell it to you. What is the state of that, and where are you guys at on buying batteries?

Mr. Tatro:

There is a variety of different ways we receive that material. We have our consumer collection bins. There are several in the State. Audi has been a great partner. The Audi dealership in Henderson has one of our bins there. We have a direct mail-in where we will take the entire device. We also partner with other e-waste folks. If you were going to give it to them, we also have a partnership where the things we do not need, we can give to them. They will give us the batteries. For the larger EV batteries, we have for auto dismantlers, a portal where they can get a quote of what that battery is worth. We arrange logistics and shipping to our facility as well, so there is a wide variety of items. Even on our website, there is a direct mail. Another thing is the IRA passed by the Biden Administration incentivizes the use of recycled material in the batteries, so there is a strong desire by the manufacturers to maintain some sort of ability to collect that battery at end-of-life. It is a wide spectrum of opportunities, and we are pushing on the consumer side as well to collect those batteries.

Senator Daly:

Is there going to be at some point where people are going to be incentivized to say, "Hey, you can get—" whatever it might be. I do not know how much a small battery would be worth, but if we are going to try to capture those—there are already rules against throwing your computer into the dumpster—at least you are not supposed to, but I know it happens. There are places that will take those electronics and break it down to every little component. I am sure there are places that are feeding you guys with that stuff because

they do not have the capability to recycle it, but they are selling that, generally. They are not giving it away. They are taking it for free from the consumer. That is in the future somewhere where there is going to be a compensation for that.

Mr. Tatro:

It is an evolving market. Some of those things, they will pay for. Some, they are not right now, but as we continue to put pressure on the commodities market around these, it will increase in value. I know a lot of the e-waste companies will pay for it. Different states—I know California has something where you can receive a rebate. There are those in the works, and five years from now when you ask that same question, it will be a very different answer because we may have solidified that market a little better.

Senator Daly:

I try to do the recycling whether I am going to get paid for it or not because I hate to see the copper wire go in the garbage. If someone is going to use it and recycle it, I will give it to them. My other question is for ABTC. I had a question on the lithium—I am assuming it is a mine site—in Tonopah. You said you had secured 10,000 acres. Is that on Bureau of Land Management (BLM) land or private land? When you say secured, do you just have mining rights? What stage are you in that? You developed the resource; you know it is there, but where are you at on the development of the mine?

Ms. Moehring:

It is 10,340 acres of land that is administered by the BLM. It is on public land. We have 517 unpatented load planes as part of that project. We are still in the process of developing the resource, but we have gone through the process already of doing the work to publish an initial assessment. We have done a resource report to be able to classify and characterize the amount and the kind of lithium there on site in that claystone. Our next step will be looking at our prefeasibility studies.

Senator Daly:

Is it going to be open pit or stripping?

Ms. Moehring:

Yes, it would be open pit at this point. That is what we are looking at.

Chair Harris:

Any additional questions from Committee Members, either here in Las Vegas or online? Not seeing any. We will go ahead and thank you all for your time and for doing business here in our great State. We appreciate you coming and letting us know more about what you are doing. We will go ahead and close out Item IX.

AGENDA ITEM X—PRESENTATION ON MODEL BUILDING BENCHMARKING AND PERFORMANCE STANDARDS ORDINANCE

[This agenda item was taken out of order.]

Sarah Sawyer, Student Attorney, Poverty Law and Policy Clinic (PLPC), Thomas and Mack Legal Clinic, William S. Boyd School of Law, UNLV:

Good morning, Chair Harris and Members of the Committee. I am not speaking for UNLV, the William S. Boyd School of Law, or the Thomas and Mack Legal Clinic in giving this presentation. The PLPC teaches law students how to use law and policy to help Nevadans with the greatest needs (Agenda Item X A-1). It does this by providing needed resources to help identify specific ways to reduce poverty and economic insecurity and ameliorate adverse collateral consequences, so Nevadans can live lives full of opportunity. One of the unique aspects of the PLPC is student attorneys have the opportunity to develop and advance projects in their area of interest with supervision, guidance, and support. This presentation developed out of one such project. I am here today to talk about a proposal to help businesses by making existing buildings more energy efficient, protect Nevadans' health by reducing greenhouse gas emissions, and save Nevadans' money by reducing costs through the adoption of a benchmarking and building performance standards (BPS) law.

Climate change is creating a problem for Nevadans by increasing energy utility costs and harming their health. According to the Nevada Housing Division, from 2017 to 2021, approximately 42 percent of Nevada households rented their residence. Climate change creates a free market problem. When landlords own their home, they are incentivized to upgrade it with energy efficient measures to save on utility costs. However, in rental units, utility bills are the responsibility of the tenants, removing the incentive for landlords to upgrade their buildings. How can we address this problem? One solution to these problems could be the model building benchmarking and performance standards ordinance. The ordinance was drafted by students in the William S. Boyd School of Law's 2023 climate law practicum headed by Professor Frank Fritz, which I had the honor of being a part of. The stated purpose of the ordinance is to improve building performance, reduce operating costs, conserve resources for the equitable benefit of the residents of the jurisdiction, and mitigate climate change. The ordinance is divided into two consecutive parts with benchmarking to be implemented first. Benchmarking is the measuring of an existing building's energy and water consumption. A building owner will input its building's energy and water use for the previous calendar year into the Environmental Protection Agency's (EPA) ENERGY STAR portfolio manager, which is an interactive energy management tool that is cost-free for building owners and jurisdictions to use. In addition, benchmarking provides building owners with a host of benefits. It allows building owners to gain a baseline understanding of how their building is using energy and water, allows them to compare their building's energy and water use to other similar buildings and competitors, and incentivizes them to upgrade their building with energy-efficient materials to decrease energy use and utility bills.

The second phase of the ordinance is BPS. Building performance standards are custom plans designed for each existing building with the purpose of decreasing that building's energy use over time, thereby reducing its greenhouse gas emissions. This is achieved through a trajectory model set by the jurisdiction, which works by requiring building owners to improve their building to meet specific performance targets in energy efficiency at specified time intervals. Because BPS plans are custom, they will vary for each building by a number of factors, such as the age of the building and how many improvements are already in place. Building performance standards also provide benefits to building owners. By

implementing BPS, building owners decreased energy use, which increased consumer savings. The EPA found that after one year of implementing BPS, building owners saved approximately 2.4 percent in utility costs, and after three years, 7 percent.

What is the poverty aspect to this proposal? The ordinance has a unique focus on protecting low-income communities, which it terms *frontline communities*. *Frontline communities* are defined in the ordinance as "those that experience the most immediate and worst impacts of climate change and are most often communities of color, Indigenous, or low-income." Climate change affects these communities by decreasing air quality, increasing temperature-related deaths, increasing vehicular traffic, decreasing work hours in weather-exposed labor industries, destroying cultural and natural resources due to flooding from heavy rainfall, and increasing the prevalence of health conditions, such as chronically elevated blood pressures, chronically high blood sugar, and chronic immune system suppression.

The ordinance prioritizes frontline communities in a few key ways. First, the ordinance establishes the Community Accountability Board. The primary responsibilities of the Board in relation to frontline communities include, among other things, overseeing the ordinance's impact on frontline communities, ensuring the rights of frontline communities are not infringed upon, and conducting outreach to frontline communities to seek participation in Board meetings. Second, the ordinance requires a percentage of the funds collected from penalties for noncompliance with the ordinance to be allocated to improve the performance of existing buildings that serve frontline communities. Finally, the ordinance exempts from benchmarking existing buildings in which the owner is experiencing financial hardship for the current reporting year.

I am proposing the ordinance be implemented as a statewide act applicable to large counties, specifically, Clark and Washoe. State-level implementation is proposed to unify standards for counties and businesses. Further, jurisdictions will be able to compare their energy efficiency against another jurisdiction in the State, furthering market competition. The model ordinance language requires mandatory benchmarking and BPS; however, I am suggesting mandatory benchmarking and a voluntary BPS program for at least the first few years of implementation. Under this model for implementation, owners of existing commercial, residential, and State and local government buildings that are 25,000 square feet and larger would be required to benchmark and may opt into the BPS program.

Why implement mandatory benchmarking and voluntary BPS? First, benchmarking is relatively low cost to implement, while BPS would be a higher cost to implement. As to the BPS portion, voluntary programs increase cooperation and strengthen the relationship between private building owners and governments. Further, by enacting a voluntary program, building owners will have a longer time period to learn the technical aspects of BPS, how their building functions, and how to increase energy efficiency. This education serves to increase collaboration among building owners and shift corporate attitudes, leading to more widespread improvements over time.

What has Nevada done in this area so far? The City of Reno and Clark County have taken steps to utilize benchmarking and BPS programs to increase energy efficiency in their jurisdiction and reduce greenhouse gas emissions. In 2015, the City of Reno committed to taking steps to reduce greenhouse gas emissions 28 percent by 2025 and 40 percent by 2030. To do this, they enacted the Energy and Water Efficiency Program, requiring city properties 10,000 square feet and larger and local agency properties and public or private properties 30,000 square feet and larger to annually benchmark their energy and water use. The first reporting date for benchmarking occurred in 2019. Clark County is

presently developing an all-in plan, which is a community-wide plan to address greenhouse gas emission reductions; economic, environmental, and social resilience; and transparency and equity. Limited information about the all-in plan is available at this time; however, the all-in plan sets goals to require commercial and public buildings 100,000 square feet and larger to benchmark and require residential and commercial buildings to undergo deep retrofits for energy efficiency by 2050.

Where does Nevada fit on a national perspective? Jurisdictions across the country have implemented benchmarking laws, BPS laws, or both. Presently, at least 41 cities or counties across the country have enacted benchmarking laws, and at least 5 cities or counties have enacted BPS laws. According to the Office of Energy Efficiency and Renewable Energy, 16 additional cities or counties across the country are considering implementing BPS laws. Jurisdictions are also trending towards statewide implementation of benchmarking and BPS laws. In 2019, Washington State was the first state to do so when it enacted the Clean Buildings Act, which required nonresidential buildings 50,000 square feet and larger to benchmark and meet BPS. In 2022, the Act was expanded to require commercial buildings 20,000 square feet and larger and residential buildings 50,000 square feet and larger to benchmark. The expansion did not require newly covered buildings to meet BPS; however, it did establish an incentive plan in which owners will receive 30 cents per square foot for developing an energy management plan and an operations and maintenance program. Maryland, Oregon, Colorado, and Massachusetts have adopted similar laws.

What are the costs of implementation, and is there available funding? Jurisdictions who have implemented statewide benchmarking and BPS laws have appropriated approximately $1.3 million for implementation. In terms of benchmarking, the EPA’s ENERGY STAR portfolio manager is a completely cost-free tool. Beyond the tool, benchmarking is a relatively low-cost method for tracking energy and water use. The highest cost associated with benchmarking is if the jurisdiction chooses to enforce compliance with the ordinance. The main source of cost associated with these laws results from implementing building performance standards, as additional jurisdictional staffing will be required to analyze existing buildings’ energy and water use, create a trajectory for existing buildings to improve their building with energy efficiency measures, inspect existing buildings’ improvements, and ensure overall compliance with the ordinance. However, there is federal funding available. For instance, the DOE Office of Energy Efficiency and Renewable Energy offers annual funding to states through its State Energy Program. The Program works with states to increase the energy efficiency of the U.S. economy; implement plans for energy security, resiliency, and emergency preparedness; reduce energy costs and waste; increase investments to expand the use of energy resources that are abundant in the state; and promote economic growth with improved environmental quality. Since 2010, the Program has provided states and territories with more than $540 million in financial assistance to achieve these goals. States must match up to 20 percent of federal funding; however, they may seek funding from third-party contributors. Other sources of funding are available through the Energy Efficiency Revolving Loan Fund Capitalization Grant Program and the IRA of 2022. Assistance for the adoption of the latest and zero building energy codes.

Finally, the ordinance contains a fee structure for building owners who fail to comply with the ordinance. Collected fees are placed into the Building Performance Fund. A portion of the funds must be used to improve buildings serving frontline communities; however, the remainder of the funds may be used to improve public properties within the jurisdiction or support the administration of the ordinance. Thank you for this opportunity to present. I hope you will consider helping businesses make existing buildings more energy efficient, protect Nevada's health by reducing greenhouse gas emissions, and save Nevadans’ money by reducing costs by adopting a benchmarking and BPS law.

Chair Harris:

I know you have spent a lot of time and effort on this, and it shows. We appreciate that. Do Committee Members have any questions?

Assemblywoman Brown-May:

Thank you for the presentation—very comprehensive. Well done. What is the state-federal match for your proposal?

Ms. Sawyer:

It is a 20 percent state-federal match, but third-party contributor funds may be used for that federal match.

Assemblywoman Brown-May:

Have you had conversations with local jurisdictions with regard to your proposal? If you have, how has that been received?

Ms. Sawyer:

No, not yet; however, the ordinance has measures built in to increase stakeholder engagement throughout the process, specifically with building owners, to help building owners understand the provisions of the ordinance. I also recognize the great importance of not only meeting with Clark County and Washoe County, but also meeting with associations, such as the Nevada Association of Counties (NACO), to gauge their understanding of these concepts how they want to move their plans forward, and how this ordinance could fit in with those plans.

Assemblywoman Brown-May:

While the initial presentation you delivered is relative to the two largest counties we have, I am pleased to hear you talk about working with NACO and all our counties in Nevada. Would you see this as an option to include all counties? Since much of the language you are promos proposing is permissive, would that be advantageous to the overall project you are proposing?

Ms. Sawyer:

It depends on the composition of those counties. If there are not a lot of large buildings in those counties, then the ordinance would not serve as much of a purpose in those counties. It may also impose burdens on very small counties who do not have a lot of funding to support a new ordinance of this type. That is why I suggest implementing to those large counties first. Then, you can expand outward as Nevada expands outward.

Chair Harris:

Does your model ordinance apply to multifamily homes?

Ms. Sawyer:

It does. It applies to residential buildings 25,000 square feet and larger. What is exempted from the ordinance is buildings that use a majority of their energy for manufacturing,

electric power generation, communications infrastructure, and data centers, and then also federal government buildings.

Chair Harris:

Does the ordinance require that the utility make this data available to building owners?

Ms. Sawyer:

Yes. Specifically with the benchmarking provision, landlords work with their tenants to get the data from them; however, if they are unable to do that, they work directly with the utility.

Chair Harris:

Is that in the ordinance, though?

Ms. Sawyer:

Yes.

Vice Chair Watts:

I appreciate you making the presentation, and also appreciate everything the Law School has done. I have had several conversations with students that have engaged in policy research. I had the opportunity to work with students that were engaged in doing this policy research during the last legislative session and were able to incorporate that into law. It is a great example of the potential partnerships between our higher education institutions and our government institutions in advancing policy. I look forward to diving into this more, and appreciate you coming and sharing this with us.

Chair Harris:

Any additional questions? Not seeing any. We will now go ahead and close out Item X.

[Ms. Sawyer also submitted the model building benchmarking and performance standards ordinance for the record (Agenda Item X A-2).]

AGENDA ITEM XI—PUBLIC COMMENT

Chair Harris:

You will have two minutes for public comment. You can do it in Las Vegas, Carson City, or on the phone. I would ask if there is anyone here in Las Vegas who would like to provide public comment, but there is no one here in Las Vegas, period. How about Carson City?

Marc Ellis, Executive Vice President, AFL-CIO Nevada:

I am the Executive Vice President for the AFL-CIO, representing 120 locals and 150,000 members. I am also the President of Communication Workers of America and the point person for Broadband Brigade in Nevada, California, and Hawaii. Earlier, I heard Brian Mitchell from OSIT mention what a great relationship we had, so I decided I need to come down here and testify under public comment. I always try to come up with a unique and new way to testify. I do not like coming in and regurgitating the same stuff, and I am

sure you guys do not like to hear the same stuff. While I was thinking about it, I was texting my wife. I am going to go over what I went through with her. I sent her a text saying "I got pulled into Growth and Infrastructure. The Office of Science Innovation and Technology mentioned me by name, saying how great our relationship was working together." My wife's reply was, "Wow. Are they referring to pre-Lombardo? My reply was, "I guess." Her reply, "Because they have not even dealt with you since he has been in office, right?" My reply: "Correct." My wife's reply: "Wow."

Let me back up a little bit. When BEAD first came out, it is in part of the BEAD project that OSIT was required to work with and collaborate with the unions. In this case, that would be myself and IBEW. I sent him several emails saying, "Hey, we need to meet. We need to meet." He refused—or did not reply. I do not want to put words in his mouth. He did not refuse; he would not even reply to my emails. Finally, I got an invitation to meet Vice President Kamala Harris. I was one of the four labor leaders. I sent an email to him, Governor Sisolak, stating that OSIT was going to be the primary subject of my conversation with Vice President Kamala Harris. Next thing you know, I am having bimonthly meetings. At no point in time did we ever work together or collaborate. It was always him telling me what OSIT was doing, which is why we came up with SB 384—to try to put into statute what was the recommendations. At which point, I had a brief conversation with Brian Mitchell, to which he stated, "We do not need this bill. I feel like we are already doing it." In a nutshell, that is my relationship with OSIT and Brian Mitchell. There is not a whole lot there. Thank you for your time.

Chair Harris:

Thank you. Is there anyone else in Carson City to give public comment? Not seeing anyone. Broadcast and Production Services, is there anyone on the phone line?

Broadcast and Production Services:

The public line is open and working; however, there is no one wishing to testify at this moment.

Chair Harris:

Thank you again to all the Committee Members for being on time and engaging today. It is very much appreciated. Thank you to all our presenters for coming and giving us a lot of great information. We will see you all at our next scheduled meeting, which is on May 29, 2024. That will begin at 9 a.m. I will be chairing that meeting from Carson City.

Written public comment was submitted by Olivia Tanager, Director, Sierra Club Toiyabe Chapter (Agenda Item XI).

AGENDA ITEM XII—ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 2:26 p.m.

Respectfully submitted,

_____

Julianne King
Assistant Manager of Research Policy Assistants

_____

Kristin Rossiter
Senior Policy Analyst

APPROVED BY:

_____

Senator Dallas Harris, Chair

Date: _____

MEETING MATERIALS

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item II	Jaina Moan, Director, External Affairs, The Nature Conservancy, Nevada	Written Public Comment
Agenda Item IV	Brian Mitchell, Director, Office of Science, Innovation and Technology, Office of the Governor	PowerPoint Presentation
Agenda Item V	Kandee Bahr Worley, Chief, Division of Sustainability and Emerging Transportation, Nevada Department of Transportation (NDOT) Sondra Rosenberg, Deputy Director, Planning and Administration, NDOT	PowerPoint Presentation
Agenda Item VI A	M.J. Maynard, Chief Executive Officer (CEO), Regional Transportation Commission (RTC) of Southern Nevada	PowerPoint Presentation
Agenda Item VI B	Bill Thomas, Executive Director, RTC of Washoe County	PowerPoint Presentation
Agenda Item VII	Misha Allen, Extension Educator, Northern Nye County, University of Nevada, Reno (UNR)	PowerPoint Presentation
Agenda Item VIII	Alex McWard, Policy Specialist, Environment, Energy and Transportation, National Conference of State Legislatures	PowerPoint Presentation
Agenda Item IX	Caleb Cage, Executive Director, Nevada Battery Coalition Ryan Melsert, CEO, American Battery Technology Company Dave McMurtry, Chief Business Officer, Aqua Metals, Inc. Don Tatro, Director, State and Local Policy, Redwood Materials Inc.	PowerPoint Presentation

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item X A-1	Sarah Sawyer, Student Attorney, Poverty Law and Policy Clinic (PLPC), Thomas and Mack Legal Clinic, William S. Boyd School of Law, University of Nevada, Las Vegas (UNLV)	PowerPoint Presentation
Agenda Item X A-2	Sarah Sawyer, Student Attorney, PLPC, Thomas and Mack Legal Clinic, William S. Boyd School of Law, UNLV	Model Building Benchmarking and Performance Standards
Agenda Item XI	Olivia Tanager, Director, Sierra Club Toiyabe Chapter	Written Public Comment

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