



NEVADA LEGISLATURE JOINT INTERIM STANDING COMMITTEE ON GROWTH AND INFRASTRUCTURE

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

MINUTES

July 27, 2022

The fourth meeting and work session of the Joint Interim Standing Committee on Growth and Infrastructure for the 2021–2022 Interim was held on Wednesday, July 27, 2022, at 10 a.m. in Room 4401, Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. The meeting was videoconferenced to Room 3137, 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 Joint Interim Standing 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:

Assemblywoman Daniele Monroe-Moreno, Chair
Senator Scott T. Hammond
Assemblyman Glen Leavitt
Assemblywoman Tracy Brown-May (Alternate for Senator Brooks)

COMMITTEE MEMBER PRESENT IN CARSON CITY:

Assemblyman John C. Ellison

COMMITTEE MEMBERS ATTENDING VIA REMOTELY:

Senator Dallas Harris, Vice Chair
Assemblyman C. H. Miller
Assemblywoman Shondra Summers-Armstrong (Alternate for Assemblyman Watts III)

COMMITTEE MEMBERS ABSENT:

Senator Chris Brooks – excused
Assemblyman Howard Watts III – excused

LEGISLATIVE COUNSEL BUREAU STAFF PRESENT:

Marjorie Paslov Thomas, Senior Principal Policy Analyst, Research Division
Christina Harper, Manager of Research Policy Assistants, Research Division
Jessica Dummer, Principal Deputy Legislative Counsel, Legal Division

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

AGENDA ITEM I—CALL TO ORDER AND OPENING REMARKS

[Chair Monroe-Moreno called the meeting to order. She welcomed members, presenters, and the public to the fourth and final meeting of the Joint Interim Standing Committee on Growth and Infrastructure.]

[Roll call is reflected in Committee members present.]

[Chair Monroe-Moreno reviewed meeting and testimony guidelines.]

AGENDA ITEM II—PUBLIC COMMENT

Chair Monroe-Moreno:

We will move to our first agenda item which is public comment. Today, in addition to our committee meeting, we will hold our work session.

Broadcast and Production Services (BPS) do we have anyone waiting to make public comment?

If there is anyone here in Las Vegas, you can take a seat at the table. If there is anyone in Carson City, go ahead and take a seat at the table there. Do not forget to state your name for the record each time you speak. We will start here in Las Vegas.

Danny Thompson, International Brotherhood of Electrical Workers (IBW) Local 396:

Good morning, Madam Chair. I am here today representing IBW Local 396 and operating engineers statewide and in California. We are excited about the prospects of the presentation you have today on hydrogen, and hydrogen while it seems like some space age thing, I think a little history would be in order for understanding in Nevada. In 1940, as part of the war effort, the Black Mountain Industrial (BMI) Complex was built in Henderson, Nevada. At that Complex, through the process of electrolysis, they used saltwater and put saltwater into these giant cells. The buildings were an acre in size. There were two buildings, they had 790 of these cells. Their power came from Hoover Dam—directly from the Dam—because it was a war effort, they built the power lines underground for fear that Germany or Japan would bomb them and disrupt the manufacturer of magnesium. But if you take electrolysis and you take saltwater—and if you all remember your high school chemistry— NaClH_2O —it is that process that separates the molecules. So, you would get Cl , which is chlorine, hydrogen, oxygen, and sodium hydroxide. Now, since 1940 up until about 2010 that plant operated, it made massive quantities of green hydrogen. And I tell you that story to tell you this. I know because as a 19-year-old kid who did not know too much better, I was a cutout electrician on those cells because you had to cut them out live—600 volts DC from Hoover Dam—and you could not shut the Dam off, and so when you want to change one of these things that had to be done live. But you know hydrogen is the most abundant element in the universe, and because that hydrogen was made from hydropower, it literally was green hydrogen. Now they utilized that hydrogen to make hydrochloric acid. They would burn the hydrogen and chlorine together and then you get the condensation that makes food grade hydrochloric acid—and they sold that acid. You could go to that same location today/tomorrow and put those cells back in order by simply putting water in them and you would make pure hydrogen H_2O —2 hydrogens and oxygen—you get

oxygen and hydrogen and in massive quantities, because you have the power of Hoover Dam. We are excited about the prospects and like I said, hydrogen sounds like some far-fetched idea or some space age thing, but it is not. We are excited about the opportunity to listen to the presentation today. Thank you.

Chair Monroe-Moreno:

Thank you. Go ahead.

Tiffany Qualls, Nevada Resident:

Good morning, Assemblywoman Monroe-Moreno. Thank you for facilitating this event. My question today for you is, are you looking to have President Biden's support in your upcoming election?

Chair Monroe-Moreno:

Two things, could you state your first and last name for the record. Generally, the dais does not make comments during public comment.

Tiffany Qualls, Nevada Resident:

My name is Tiffany Qualls for the record.

Chair Monroe-Moreno:

Is there anyone else here in Las Vegas that would like to make public comment? Come on up. Thank you for joining us.

Tony Simmons, Nevada Resident:

Good morning. Thanks for facilitating this meeting. I want to make the Committee aware; I have filed a complaint with the Public Utility Commission of Nevada (PUCN) seeking revocation of Nevada Power and Sierra Pacific certificates of public convenience. The complaint alleges that Nevada Power and Sierra Pacific have unlawfully undercharged customer generators since the inception of net metering. This problem was first recognized in 2005. It was recognized by the Legislature again in 2013, Assembly Bill 428 created the predecessor to this Committee to investigate that mistake. I am going to let you know that I have already taken steps and I would be more than glad to testify under oath to explain the entire problem that has occurred since 1997, and all the missteps along the way so that this problem can be solved before the next legislative session. Thank you.

Chair Monroe-Moreno:

Thank you for your comments. Anyone else here Las Vegas before we move to Carson City? Seeing none.

Do we have anyone in Carson City wishing to make public comment. Seeing none.

Broadcast and Production Services do we have anyone joining us online or by phone that would like to make public comment?

BPS:

To make public comment, please press *9 on your phone to take your place in the queue.

Bari E. Levinson, M.D., Nevada Resident:

I am a resident of Reno and a retired physician from San Rafael, California. I am also a volunteer with Sierra Club, although these comments are my own. One thing I noticed when we moved to Reno is the paucity of rooftop solar panels. I am dismayed given that Nevada has the perfect environment for solar power generation. I learned the lack of rooftop solar was primarily due to the reduction in net metering rates by the PUCN in 2015; fortunately, the Legislature reversed this. This was a very good bill in 2017—AB 405 restored adequate net metering rate. Thank you. I am currently taking advantage of this law and putting solar on my roof this year. But rooftop solar is not available to many people in Nevada. Whether they rent, cannot afford to put panels on the roof, or have a roof that is not situated well for solar panels, many Nevadans simply cannot take advantage of solar energy. They are missing out on the financial benefits over time and being part of the transition to renewable energy. Access to solar energy is also an environmental justice issue. The Black, Brown, and Indigenous communities are most likely to suffer from increased energy burden, spending a greater percentage of their income on electricity. They also live in areas most affected by pollution from fossil fuel power plants. We must do more to provide affordable clean energy to these frontline communities.

One excellent solution is to use urban solar arrays otherwise known as Community Solar. This provides an opportunity for all Nevadans, including renters and others that cannot take advantage of net metering to access solar power. As you all know, the Legislature did pass an expanded solar access bill—AB 465 in 2019. The goal of this bill is to expand solar access and lower electricity prices for thousands of Nevadans priced out of traditional rooftop solar systems. Assembly Bill 465 requires NV Energy to provide for at least three and not more than ten community-based solar resources. This is a pilot program to see how community solar sites can work in our state. Three years after the passage of AB 465, NV Energy has only one operational community solar site at the Mojave High School in Las Vegas, with two other sites under construction and plans for completion late this year or early next—one is in Reno and the other is in Las Vegas. While this may be considered progress, it is not expansive nor fast enough for the people suffering right now with high energy burden. It is also too slow in helping Nevada quickly ramp up its supply of renewable solar energy and reduce its use of fossil fuel power production. I am asking the Nevada Legislature or the PUCN to hold NV Energy accountable to quickly expand this program to the maximum of ten community solar sites allowed in AB 465 and move from there to expanding to more community solar in Nevada. The climate emergency is now, and we must address it in a speedy and equitable manner. Thank you very much. ([Agenda Item II](#))

Chair Monroe-Moreno:

Thank you for your comments.

BPS:

The public line is open and working. There are no more callers.

Chair Monroe-Moreno:

We will close this section of public comment. We will have another opportunity for public comment at the end of today's meeting.

AGENDA ITEM III—APPROVAL OF THE MINUTES FOR THE MEETING ON MAY 11, 2022

Chair Monroe-Moreno:

We will go on to the third item on our agenda which is the approval of the minutes from the May 11 meeting. Members you have the minutes in front of you. I hope you have had an opportunity to review the minutes

ASSEMBLYMAN ELLISON MOVED TO APPROVE THE MINUTES FOR THE MEETING ON MAY 11, 2022.

ASSEMBLYMAN C. H. MILLER SECONDED THE MOTION.

THE MOTION PASSED UNANIMOUSLY.

AGENDA ITEM IV—PRESENTATION ON THE FINDINGS OF THE SOUTHERN NEVADA STRATEGIC INFRASTRUCTURE DEVELOPMENT WORKING GROUP

Chair Monroe-Moreno:

Our next agenda item is a presentation on the findings of the Southern Nevada Strategic Infrastructure Development Working Group (Working Group). We have Mr. Sanchez, Deputy Director, who will be joining us from the Governor's Office of Economic Development (GOED), and Mr. James Hue, Director of Public Policy and Government Affairs of GOED, and Mr. John Restrepo, Principal, RCG Economics. Gentlemen, the floor is yours for a presentation on the Working Group that was established to bring the region's organizations and stakeholders together to identify infrastructure projects that will enhance the growth of new industries, build strong long-term sustainable job growth, and growth across sectors throughout the region. Transportation is a key sector. Good morning and welcome to Growth and Infrastructure.

Kristopher Sanchez, Southern Deputy Director, GOED:

Good morning, Chair. A couple of things today. I would like to provide a background on how we arrived at establishing this Working Group, subsequently the process of the Working Group, and then the findings. Please keep in mind that the overall report is about 100 pages with an executive summary, which we have left copies with the Committee staff to distribute to Committee members and can be found on our website at GOED.nv.gov. We are happy to answer any questions that may arise.

In terms of the presentation, ([Agenda Item IV A-1](#)) ([Agenda Item IV A-2](#)), I will start with one of the things that we are looking at. Economic development is what we call the megapolitan clusters; this is out of the Brookings Mountain West's research where Southern Nevada fits into the broader picture of the southwest. This is important for us to consider because it helps us understand where freight is moving, where people are moving, and economic development at its core is being able to move goods and people and do so efficiently—especially when it comes to infrastructure. We view things through the lens of these three megapolitan regions in economic development.

One of the things that is important to understand too is our industry clusters and the growth that we have seen. So, this year (2021) is Southern Nevada industry base—this comes from SRI International, a research firm that we have used over the years in putting together our resiliency plan—for instance that we issued after the pandemic. This comes out of that resiliency plan. What you are looking at here is the maturity of industries as they relate to the national average. You can see on the top left quadrant that tourism, gaming, and entertainment is very mature—no surprise there for Southern Nevada. I think what is most interesting here is the rise of logistics and operations. If we had pulled a similar slide about two years ago, you would see logistics and operations probably hovering around that .0 to .5 range; but post-pandemic we see a tremendous growth, and this gets to why we set up this committee.

We recognized coming out of the pandemic that we had seen ten years of growth in E-commerce in Q2 of 2020. We had been getting a sense from industry that companies were needing to be more responsive to their customers. We are looking at putting facilities into the central part of the country as well as the West. I am sure the Committee over the years has heard about reshoring, which became more pertinent as we were coming out of the pandemic because of supply chain challenges, but also, because more recently of what is going on with Ukraine and Russia and the stability factor there. The takeaway is that we have rapidly growing industries in Southern Nevada that include health, medical services, logistics, and operations. No surprises. You drive around the valley and see North Las Vegas and Henderson and the growth that is occurring there. We will talk a little bit about the other clusters here as we move through our discussion on infrastructure.

The purpose of the Working Group, as the Chair had indicated in the summary, essentially, we wanted to pull leaders in the community together to understand what our growth potential was, what our assets were, how we can leverage those assets to grow the economy strategically, where our gaps were, and what we need to do moving forward to be strategic in growing the economy in the region. The mission was to identify those opportunities, discover the niches, add significant value to the state's overall ecosystem, and identify the assets. So how do we approach this? We held six meetings; we started in February and ended in July of 2021. Each meeting had a theme; we brought in experts and a number of speakers that were from all over the country.

Chris Gutierrez, President—from the Kansas City SmartPort, Inc; the reason that we brought in Chris is that he is a principal at the Kansas City SmartPort. This is a region that has about 52 municipal governments, 17 counties, and 2 states that came together in the late 1990s that went through a similar process that we are probably at here in southern Nevada, which is to identify the assets and look at how that region could grow, strategically leveraging those assets. Now, if you have been through Kansas City, you know that they have a lot of rail and industrial—heavy industrial presence and that is historic. But they were at a crossroads in the late 1990s as they were looking to grow thoughtfully and develop a strategy that would keep them relevant—you will hear me use that term as we work through this presentation and that is being relevant to industry in their region.

Each meeting had a theme. We covered a wide swath of topics from industrial development, land, water, smart ports, and trends in electrification and autonomy. John Restrepo also joins me here on the dais—we conducted one-on-one interviews with all the Working Group members, which were a good cross section of utility providers, county, cities, Nevada System of Higher Education (NSHE), as well as individual institutions. The questions that were posed ranged from their perspective, what do they see as our assets? What do they see as opportunities? What do they see as things that we need to focus on that may prevent us from achieving our goals in Southern Nevada?

The central points. One of the things that came out of this is that Southern Nevada needs a bold strategy to drive the type of evolutionary change that is needed. You will hear me say this in this presentation that came up repeatedly in all of our interviews—was that there needs to be an ability for the region to come together to make decisions that are regional in focus. I started with that megapolitan slide, one thing that is important to consider—there are a few things here—if you consider the inland empire for instance, think of the Port of Long Beach/Port of Los Angeles (L.A.)—there is about two billion square feet of warehousing space there, but they only have 1 percent of that available—they are at capacity. They are experiencing about 10 percent growth annually; 5 to 10 percent is expected this year and for 2020–2021 we are over 5 percent growth. They have gotten into a strategic partnership with our friends in Utah. The Utah Inland Port Authority long term vision includes moving freight from the Port to Salt Lake City that would then be distributed across the intermountain West. We see development occurring rapidly in our surrounding states. This idea of a bold strategy is one that we think needs to be informed by a good understanding of what is happening around us and how the region fits into the greater Southwest and the trends that are happening in California from a policy standpoint as well as in the states that I mentioned—Arizona and Utah.

And so, how we grow and the strategies that we put behind that growth, it matters across all jurisdictions of government here in Southern Nevada. One of the things that is an advantage, to some extent, is that all the infrastructure in Southern Nevada, and we should say all most of is relatively new. We do not have 150-year-old infrastructure in the ground that hinders our growth or requires large capital expenditures to modernize. So, that is an advantage that also cuts both ways and that we do not have infrastructure in key areas of our valley because we are opening those up for development for the first time. This allows us to think about things in terms of new technology and new trends in infrastructure, and how we may be able to leap—because we do not have legacy infrastructure—to the most technologically advanced infrastructure that exists today and look at how that could be a differentiator for our region and help keep us competitive long term. One note and this will probably come up again in this presentation—but one of the things to think about is water; so much of what has been communicated around water, especially in the national press is the deficit of Lake Mead. But the hidden story here is that the Southern Nevada Water Authority (SNWA) and the Las Vegas Valley Water District have done a tremendous job in reuse and recycle—in fact, they are leaders globally, not just nationally. We do not tell that story often enough and it is an economic differentiator and an asset. We should be thinking about how we can export that knowledge base, how we can help the surrounding Colorado River Basin states and signatories to the Colorado River Compact, better utilize that resource by drawing on that expertise that we have here. This early adopter of technology piece ties into that because the SNWA test of new technology in real-time on the existing infrastructure, which is unique because it is a risk averse industry.

Second point, Southern Nevada is not using a standard originally adopted planning model for forecasting. One of the things that, we like many regions have multiple jurisdictions, a lot of research being done, a lot of planning being done, this happens at the state level as well. One of the things that came up repeatedly is the ability to reduce barriers and silos, start to look at things more holistically, pull resources where we can, and help reduce duplication but also arrive at better decisions, because of more readily available data and modeling.

This third point is what needs to be done to address the needs to move towards a more diverse population in Southern Nevada. One of the things that was important as we thought about the structure, both of the committees and in our dialogue with everybody, was looking through the lens of all of our communities and understanding where each of our

communities currently are and what we may need to do to help them be successful and achieve their goals both at the community level and regionally.

One of the things you have heard me mention already—is land. Essentially, we have to start with land and then secondarily the infrastructure that goes to the land so that we can basically entertain the idea of growth, and economic development. We see through site selectors and through companies that are coming in and kicking the tires and wondering where they might be able to land in Southern Nevada to accomplish their goals. We are in a situation presently—where I think you probably have all heard by now—we have a land deficit. The challenge we have in Southern Nevada is that we do not have enough contiguous land available and large enough footprints to meet the demands of our industries. And where we do have cases where we do have sizeable footprints of land—there are not many, but where we have them—we do not have the infrastructure. This is really goes to the heart of our competitiveness. If you think about Utah for instance. Utah is working on their western valley/Salt Lake Valley expansion right now—32,000 acres. Phoenix has announced a 3,500 acre, what they are calling employment corridor, where it is unlocking land for the purposes of facilitating better transit and availability of the work force to where the jobs are. And so, for us to maintain our competitiveness over time, our ability to drawdown federal land and then subsequently match that with a strategic and thoughtful intent around infrastructure will speak to our ability to compete in the region as time goes on.

The other economic diversification—the globalization of the lodging and hospitality industry, especially the digitalization of gaming could become a significant threat to Southern Nevada, but it also has an opportunity. We use the word opportunity many times through this. So even though we face some adversity in the region, we have through all adversity—opportunity. It depends on how we come together as a region to both address the challenges but capitalize on those hidden opportunities; the globalization of gaming as one, and the other is that the industry is changing. As the industry changes and evolves, we need to be mindful of that as there is more automation brought to bear in the industry and that impacts the workforce in the industry. What does that mean? It means for us that the tech worker, if you will, that supports those software systems, those robotic systems, those autonomous systems that support our primary industry will have transferable skills that can help with our high-tech manufacturing industries. We need to look at where those threads lie across industries and the skill sets that exist, and the training programs we will need to support the growth of our primary industry, our emerging sports economy, and our growth industries.

Second point is economic development diversification should analyze in terms of degrees of separation from the Strip—essentially what this means are those opportunities in sports and hospitality. So, let us say because of the stadium, we have a company that comes in and develops a new app specific to football in the stadium. But then it discovers that app can be used in healthcare, and it repurposes the app in healthcare and then the third iteration—it is used in some other industry. What that means is that we are getting different degrees of separation from the initial intent—the initial industry that the technology was adapted in. So, as a region focusing on how we can bring those innovative companies in to accelerate their activity and provide supports for them so they can move through those steps of expanding the opportunities that they might have in another industry. Eventually what you are left with is you get so far from where they started that you do not even recognize the initial technology.

The third is more must be done to mature the secondary industries related to lodging and hospitality. I talked about that in terms of the opportunity as the hospitality industry grows and matures, as well as the convention industry.

Also, economic resiliency is dependent on infrastructure. How is it prioritized while still protecting the natural environment? One of the things that is very important—the governor, his team, and GOED in partnership, as well as with the Department of Conservation and Natural Resources, have worked with Kristen Averyt, Ph.D., our lead in this area on our climate strategy for the state. One of the things moving forward is that we are cognizant of affecting change and ensuring that economic development—that we use as a wide lens as we start to think about growth and its impact throughout the state and in the region. There is no secret with water scarcity, we need to be mindful of the companies coming in, their water usage, and if they are a fit for our region. Emissions—as we all have talked about, and I know the Committee has looked at closely—what those emissions will mean for the environment. The other broader context here that fits into this megapolitan region concept is that the policies are being developed in surrounding states, especially California, matter as we plan and strategize in Southern Nevada. As California adopts very robust carbon mitigation plans and strategies, much of the fleets may have to redomiciled where those fleets are domiciled, which will potentially be in the southwest states. As we see a more enhanced growth and supply chain those trucks are coming right through Southern Nevada and there is going to be more.

We need to be thinking, and segway a little bit here, but it ties into the environment. There has been a lot of discussion over the years and one thing item has been the induced demand on the I-15 corridor. I think many of you have heard about the Brightline, which is the planned high-speed rail from Southern California to Las Vegas—great project. But because of the idea of induced demand, which basically means that even though we will add rail capacity, it will not solve the capacity issues on the I-15. So, we need to be approaching it with multiple solutions. Not quite a year ago, Governor Sisolak and Governor Newsom had announced that the two states, Nevada’s Department of Transportation (NDOT), and California’s Department of Transportation (Caltrans) would work together on a plan to add capacity where there are chokepoints on I-15. We need that—it is essential—especially for our tourism corridor. We are seeing driving behavior is changing because of the I-15 congestion that happens on weekend travel to our state’s destinations. Folks are flying more, driving less which is good, but we also know that even with the rail and with the additional lane capacity, we still stand to have congestion issues on I-15. We need to advance multiple solutions simultaneously to solve our problems. There are no silver bullets, and it is going to take time—I-15 is one example. We are in conversations with individual properties located in the resort corridor on solutions to address staggering checkout times to a litany of other things—probably more in-depth conversations at a later date. We all will need to advance those things.

One thing that we need to look at is—you will hear the word economic development to ecosystems and networks—defining our place in this region. How do we add value to industry and to our partners? Yesterday, I, along with members of the GOED team, the head of the Regional Transit Commission of Southern Nevada, and the Las Vegas Global Economic Alliance (LVGEA), was able to visit the Long Beach Port. We had a lot of dialogue around how Southern Nevada can fit into the freight conveyance ecosystem in the southwestern region. We have partnered with the Utah Inland Port; we are going to be bringing industry together—multiple industries over the next year. We will be holding these meetings, both in Utah and in Nevada where we will be looking at the supply chains. We are going to consider how freight moves specifically across the different industries through our state. The added value potentially here is where in the supply—with what is being built in

Salt Lake City, Arizona, Phoenix, and what is being built at the Port—can Nevada build that will compliment those things that will be additive? We are working with all the parties—that I mentioned—to answer those questions at this early-stage development. The important thing is that each of the entities that I have mentioned in the respective states have all had an open door and willing partners in the discussion. Stay tuned on that. We will have more as we close out this year and as we get into Q1 of 2023.

A couple of things on transportation distribution. Funding of public transit in Southern Nevada in 2021 is at the same level as it was in 2002. Please keep in mind that this final report was reported out in late 2021; the Biden Administration had not yet passed the Infrastructure Investment and Jobs Act (IIJA), which brought about \$1.5 trillion in infrastructure investment, and a significant plus up to formula funding as well as about 32 new grant programs that spanned the United States Department of Transportation, Department of Energy, and Department of Commerce as well as other federal agencies, including the Federal Railroad Administration and a number of other entities that channel grant funds into the state. There are a lot more resources available for both transit and infrastructure as it relates to what would fall under NDOT's jurisdictions.

At the time of our Working Group, these statistics held true. Nevada's Department of Transportation currently has a \$530 million annual budget shortfall. We—in our focus on planning both at the state level and in the regional level—are starting to align the capital budgets around where we are seeing the most growth in the state, in our regions, such as flyovers in Henderson that are ready when our warehousing and distribution centers are finished. We are matching transportation infrastructure with the speed and rapidity that we are finding in the development community, investing, and building out our region.

I talked about induced demand already. Minimum parking requirements came upon the context of mitigating congestion, which will impact our ability to meet our carbon mitigation goals. Local jurisdictions should move toward eliminating minimum requirements, which drive car ownership and traffic congestion, and evolve toward maximum parking regulations. The key here though is that these are complex and when you build on the young—and everything is related—we have to make sure that we have the ability to move people across the Valley in our transit planning. We see migration from North Las Vegas over to Henderson, which will continue as more warehouses are built in Henderson. Haas Automation is coming over time here—they are not built out yet, but it will be a significant job generator for the Valley. We need to make sure that folks can get to work and can do so effective and efficiently. We are already having these conversations and working with our private industry partners that are already in the region as well as coming to the state.

One of the things we have looked at from a technological standpoint are autonomous driving and trucks. It is interesting that one of the things that came out of all these conversations, and this is a case in point, is that trucks are unlikely to be viable for the foreseeable future because of potential payload liability risk. But there are other issues. The way that I think about autonomy, I think about electrification and other technologies that are in the news almost every day and using the same metaphor—we have got to peel back the onion to see where we should start. What type of enabling infrastructure do we need to put physically on the ground now, or bring into the state, or bring into the region that will facilitate the utilization of those technologies as they mature. We must work with private industry and the companies that are here and those that are looking to come into Nevada in order to understand smart city initiatives. For example, the City of Las Vegas is pursuing and working on how vehicles will communicate with the infrastructure. What do we need to invest in now to make sure that infrastructure that we are investing in remains

relevant in five and ten years so that we do not need to reinvest at a later date. When we think about in the context of the discussions that we had with the Working Group, it was getting at that level of discussion—where do we need to be focused now to talk about? It is not so much the platform or the cool, great new vehicle on the road, or the platform flying in the sky; it is the things that underpin our ability to make those things happen and that will be the added value to industry.

One of the other things that came up is the possibility to create a separate highway lane for the trucking industry, which is in the report. Developing an electric highway from California to Nevada also came up in multiple conversations—it is an interest. I am not an expert, and I should have started with this—I am going to surface level in all these things—but as you talk to experts it goes back to the idea that we have to know when we start to enable these things and how we can facilitate greater mobility on the I-15 corridor. This perhaps could be a solution, but there are a lot of immediate things we can do in the short term that may support a grander vision like this, such as the Henderson flyover exits I mentioned.

I would like to turn over to John Restrepo, Principal, RCG Economics, our technical lead during the Working Group, who will discuss the recommendations that came out of the process. Thank you.

John Restrepo, Principal, RCG Economics

Good morning, Committee. A spin-off of something Kris said earlier. Right now, the main thing that we learned through all of this—all these meetings and the interviews that we did—was the variety of silos that have been created or that have been existing here in Southern Nevada for many years between public agencies, between private companies, and between private companies and public agencies. It has held us back a little bit, I think in terms of how we become a more resilient economy. What I think happened is the pandemic exposed a lot of the underlying issues that we have been able to avoid because we depended on general growth and that sort of thing. The other thing that came out of this Working Group was it is going to take an incredible amount of time, talent, treasure, and political will to make ourselves a more resilient economy. We did learn we were the least resilient metro area in the country economically speaking and now we are dealing with the land issue, and equally if not more importantly the long-term drought and climate change related drought issues, and how we are going to deal with that and how we work with the states surrounding us.

We can no longer view ourselves as an isolated community in the middle of the desert. We are part of the ecosystem, in the western United States and the West is seeing a lot of challenges facing it from fires to drought to cost of living—all sorts of things. And so, one of the things that we thought of when we did the study for Kris and coordinated all these activities and meetings, is how do we most effectively move forward in this issue of infrastructure, coordination, and development—and not only physical infrastructure. I think one of the things that came out of this meeting as well is that we have the issue of human infrastructure—jobs, quality of life, wages, all these things we talked about. But a lot of the folks we interviewed—in addition to the traditional roads and bridges—how do we address these social infrastructure issues as well over time. One of the things we thought of was the most effective way to do it. Among our tools under Senate Bill 430—the Infrastructure Bank, to establish a technical Working Group that will report to the Board of the Infrastructure Bank; this technical Working Group would have maybe 9 to 15 people. It does not have to be big, but the important part would be the expertise. We thought folks in urban planning, transportation, public works, real estate development, because sometimes we do not talk well to each other from the development side with the public sector

folks—conservation groups, construction industry, civil engineering—to understand the technical physical constraints of what we are talking about here. And economic development folks, how do we target industries? What industries do we target in the context of becoming more resilient over the long term? And underlying a lot of this, what is happening as the economy becomes more driven by automation and robotics. There have been a number of studies done pre-pandemic by universities looking at the issues of automation and its expansion in around the United States and its effect on job markets. In a number of these studies Las Vegas is one of the metros looked at because it is an important metro area around the country. 50 to 65 percent of the jobs that existed in 2018 would not exist by 2035. How do we deal with that as part of a long-term plan? It is a form of our infrastructure in an expanded view of infrastructure in terms of the social infrastructure. There are a lot of things we had ahead of us that we have to deal with and coordinating with the other states. We think establishing this Working Group to do that would be an effective way to make sure our voices are heard in other states and that we are using our dollars and public dollars as best as we can and most effectively. That is my presentation for today.

Mr. Sanchez:

One of the things to update the Committee on, I mentioned this report was issued at the end of 2020. One of the \$540 billion that was included in the IIJA, a portion of that went to the Economic Development Administration for a new grant program—or series of grant programs—one of which was the Build Back, Better Regional Challenge. The LVGEA, our local economic development authority, pulled the region together and put a series of projects forward in applying for that grant. The first instance of the application was around \$79 million. We received feedback from media and as did all the 60 finalists—it is worth pointing out that there were 529 applications. We in this region were 1 of 60 finalists that made that first cut. The Economic Development Administration (EDA) asked us to cut that down to about \$45 million. So, what you see here is the pre and post of that cut; and basically, what we have done is focused on high-tech manufacturing brought together. When I say “we” I mean the region and it is worth noting that the Lesbian, Gay, Bisexual and Transgender (LGBT) a did a tremendous job in bringing together the community and all the jurisdictions to arrive at these projects and they serve as a barometer of the things that we need moving forward in the region specifically.

The growth collaborative is focused on the LVGEA is basically keeping the momentum going around this grant and this activity at the high level. This is in high-tech manufacturing, both training and the physical locations for the ability to be competitive and bring in additional industry to grow. The City of Henderson and the College of Southern Nevada (CSN) are partners to develop trained workforce The initiative, which includes a physical site for training in Henderson includes workforce training and tied specifically to the work that has automation. The CSN has a robust plan and multiple facilities like this across the Valley. We wanted to include that framework in this grant and so we are waiting; we should know in September about the final decision of LVGEA whether or not we received the \$45.9 million we requested or some variation of that. It is worth noting that this is potentially coming to us by the end of the year. This concludes my presentation and happy to answer any questions the Committee may have.

Chair Monroe-Moreno:

Thank you for the presentation. Members, any questions for the presenters?

Assemblyman Leavitt:

You covered a lot and questions kept popping up as a new topic came up. With Mr. Restrepo's recommendations, it answered some of them with your Working Group findings. The first thing is the land issue. When you were discussing this with this Group, what is your plan to our recommendations to draw down more federal land? Because it seems like if we are going to diversify our economy—which we scream diverse economy—you need the land, you need the growth, and you need the development to do that. Is there some recommendation or plan to draw down that federal land that is currently not there?

Mr. Sanchez:

Yes, historically this has been done through lands bills at the federal level. I think we, as a community, need to come together and think about what is needed. Referring to my earlier comments about defining our place in the broader Southwest, the value proposition is important and as well as how we fit in to what industry is looking for right now. What we see is that there is a window of opportunity that has arisen nationally by looking at companies and states announcing new developments. For our competitiveness, we need to figure out how we are going to bring more federal land—draw that down that land for development. Then, the timelines are important because that window is not a long-term window—perhaps we have two years left. One advantage we have is the availability of say 900 acres plus parcels since nationally these are limited. For example, Apex has a pad just over 900 acres. Getting infrastructure where we have the land assets is important right now as well.

If I were to think about this in a nuanced way, we need to look at infill and what opportunities we have infill in the Valley. We need to look at the current land that is available, make sure we have infrastructure, and have a plan and funding in place to get infrastructure to it so that we can respond to industry. Then, we have to develop a plan that the entire region can stand behind and that we can then take to our congressional leaders to drawdown more federal land. I think we need to advance all those balls at the same time. There are a lot of complexities there with environmental concerns and urban sprawl concerns, but the long-term viability of this region will be dependent on our ability to solve this problem. I mentioned earlier that Utah and Arizona are moving forward with large tracts of land; Texas is booming. We see it all the time in our site selected visits and the companies that come in and talk to us. They are looking at all those three states and us. What is that differentiator now, workforce obviously is at the top of the list but also availability and our ability to move quickly conversations if we do not have the infrastructure and the land is not available and will not be ready for 18 months or 2 years.

Assemblyman Leavitt:

A follow up to that is we talk about water, which has been a big topic of conversation and in developing depending on who you listen to. We have a scarcity of water and how do we develop with the scarcity of water? But the other side of the coin is do we really have a water problem? I mean I cannot get a straight answer on it because it seems to me the facts would suggest that we do not even use—or we put back water—we dedicate water back. We do not even use that so it would suggest that we do not even use our full allocation of water we are drawing, and it is not a Southern Nevada problem—it is more of a down river problem. I agree with you that the SNWA or its subsidiary, whatever the other part of it, has done certain things to promote conservation. I think we have done a good job

of that. Did you find anything while you were discussing with your Working Group to shed some light on that issue? We can have an idea of what is going on as far as water goes.

Mr. Sanchez:

Yes, to all the above. I find myself grappling with this issue in the same way and that is that—we have done a tremendous job in conservation. We are dealing with an overall resource that over time is diminishing; I think is true. However, our ability in the region in the way that we approach utilizing that resource is basically unmatched along that corridor as you referenced. Not to be repetitive, but I do think there is an opportunity for us to export that knowledge base. I think sometimes the way things are characterized do not always tell the whole story. We want to, I think from our end, go ahead or our aim is to ensure that we are good stewards of the resource. It is probably where economic development ultimately ends up landing. What do I mean by that? Well, if we have a company that is looking to come in and they bottled water and want to take it to California, that is not a good idea—stuff like that, right? But we are going to have to be mindful of long-term planning—and I am not an expert in this area. I do not want to pretend to be, and I do not want to say things that may not be inaccurate, but I would say this and that is that the water authority in SNWA—it has done a lot of long-term strategic planning. It has looked at and projected all this out, and there are different scenarios. Those scenarios are based on certain types of action, both holistically and at the micro-level locally.

The question we have to ask ourselves as a region is where we are comfortable in those scenarios, given what we know now. Where is our comfort zone? What does that mean for us? I do not mean that to be a non-answer. It is that there are a lot of complexities in this and the decisions that we make now we are going to impact where we end up further down that timeline and those decision points will pivot. I think we need, as a region, to come together and do a little bit more work on this. I know that is occurring with the development community and our office—GOED is working with the water authorities closely on this as well.

Mr. Restrepo:

Could I add something to that? I have been a member of several committees for the Nevada Water Authority—they are called “IRPAC”—the Integrated Resource Planning Advisory Committee. A citizen’s committee based on business, industry, and individuals. It has been clear over the last few years that—and over many years now—the SNWA, the Las Vegas Valley Water District, the Henderson Water District, and the North Las Vegas are all managing the water resources well in terms of per capita per day, gallons per capita per day—for example. There are things that have been put in place for taking out ornamental turf and all these other things that are going right now all around the Valley. And so, there is movement in a very strategic and smart way. The challenge that we are facing is this drought is not isolated to Southern Nevada where part of the Western United States and the West is suffering serious historical drought conditions. We have two states that are having to deal with as part of this process, particularly Arizona and California and have large agricultural interests. Those agricultural interests are very powerful because they produce food and produce hay for livestock. Those states have a lot to say about how the water is used, where the water is going, and what is going to happen. That is why, as we mentioned earlier, an Integrated Western U.S response to whether it is infrastructure, water, land, whatever it may be, it is critical and understanding that is important.

One final thing I will say, which is a number that struck me recently—70 percent of the water that is used in Lake Mead is used for agriculture, mostly in California, secondarily in

Arizona; and 70 percent is used for alfalfa and hay to feed cattle, horses, sheep, pigs, and things like that—is not almonds, tomatoes, and all those sorts, it is part of it, but it is largely an issue of how we manage our water resources for agricultural uses and how much meat we eat and all those things came into place. It is a much bigger global thing of how we are dealing with things.

I wanted to add on to it, Kris, the only other thing he failed to mention earlier in his Working Group, the other members that we are recommending in addition to the private sector.

Assemblywoman Summers-Armstrong:

I want clarification that most of the transportation funding that you are looking for has to do with expanding roads; asphalt between California and Nevada. Is that correct?

Mr. Sanchez:

Yes and no—that is part of it—but there is also the investment in transit networks throughout our Valley to make sure folks can move back and throughout the Valley efficiently and effectively to get to work. So, it is not just investment in physical roads, it is the networks to support the networks for people to move more efficiently.

Assemblywoman Summers-Armstrong:

Are you speaking of road networks for people to get back and forth to work or are you speaking of other types of ways for people to get to work?

Mr. Sanchez:

I am thinking about mass transit like bus systems, and I know light rail has been talked about many times; but the physical platforms. We need to move people and so whether that is the monorail, or the Boring Company, or whatever it may be, but the planning around facilitating getting folks to where they can work.

Assemblywoman Summers-Armstrong:

Thank you for that clarification. In your presentation, it seems to be centered around California and Nevada. I was listening to what you were saying about opening and taking advantage of opportunities because we have hundreds of acres for large development. I am wondering if you have talked to people outside of this particular group of folks that you listed above about how this will also affect our housing situation. How all that is going to be the nexus—the connection between them—because if we are growing industry, which it appears we need to have more diversification. We are going to have more demand for housing, which is historically more expensive than people can afford and there is very little of it that is affordable right now. How are we going to deal with that issue? I think this has to be part of the discussion, because I do not know what those other places like Utah—and that you spoke of earlier—are doing about their housing situation. I know that we have a crisis here. I would like to hear if you looked at housing in those places, and how they are dealing with their issues about housing costs.

Mr. Sanchez:

Absolutely, in this particular Working Group, we did not focus on housing, but that was intentional because there are other groups within the community that have been the lead on

looking for solutions for affordable housing. Our agency is involved in those discussions, and we are working hand in glove with the leaders in the community around those discussions. It is not that we were not mindful of it, it is that we did not want to duplicate the effort that was already occurring in the community with the other state agencies and some of the locally led activity. But you raise a great point, and it goes to planning and zoning at the local level, and how we support our growth and how we think about the influx of people coming in as a result of opening up more land assets. I think that it is a great segue into the point that Mr. Restrepo brought up, which is what we need. The idea is that a regional planning body sits above all the jurisdictions, which could be helpful in this instance looking and mapping out—making sure we have the housing availability and that we are anticipating the number of employees that could be coming in based on the acreage of land available and our forward leaning in those conversations over time.

Mr. Restrepo:

If I could add to that, I think we all know from the Infrastructure Bank set up, it is instrumental in a lot of this \$20 million, it has been put in for bonding for affordable housing should leverage around \$200 million that Kris touched on too. It is what the cities and the counties—the jurisdictions are going to have to do in terms of revamping, revising, updating, reforming—whatever term you want to use—their zoning laws to allow for more creative ways to do infill development. How do we have more inclusionary zoning as opposed to exclusionary zoning? It is all part of this equation as well as the whole zoning, a part of this at the local governmental level.

Mr. Sanchez:

If I may add one more point. This has also been a priority of the governor and the governor's senior team. There has been senior staff leading the charge in this area as well. We were mindful of that too as we went into this process.

Chair Monroe-Moreno:

Next up Assemblywoman Brown-May and then Assemblyman Ellison.

Assemblywoman Brown-May:

Thank you, for this robust report. First, I want to echo many of the comments of my colleagues relative to balancing water and availability of land as we know that plays directly into how we will grow strategically to meet the needs of our existing residents throughout our community. Currently, many of the conversations that I am a part of throughout our community are about that. How do we ensure the stability of the water resources that we have given the fact that we are not the only entity drawing on that water? I think it is a stark visual when you see the lake diminishing as quickly as it is. I am sure you are all aware, there are a number of articles done locally and nationally, relative to the water source shortage in the western part of our states. It is a huge concern, and I am thrilled to hear that there is a lot of consideration and have met with our leaders in water and understand that we have a 50-year plan, and that 50-year plan is revised every year for another 50 years. We continue to address those issues. The availability and affordability of housing is the secondary key consideration as we work on economic diversification—understanding that and balancing that as we grow.

Mr. Restrepo, I would like to address a comment you made. In your presentation, you noted that we are the least resilient metro area in the country, economically speaking, I am wondering if you could detail the specifics of that a little bit more.

Mr. Restrepo:

The question of economic resilience is different types of resilience. Obviously this physical-social and the one we focus on most of the time in our practice is a question of economic resiliency as it relates to the structure of our workforce and our economy. We are an economy. It is largely based on the kindness of strangers as they say, so when people are feeling comfortable and they are feeling they can spend money, travel, and visit us. There is the issue of discretionary spending-based economy. We were the reason we got hit so hard after every great recession. The great recession is a great example, not to sound too redundant what is happening with the pandemic recession is when people quit spending money for a variety of purposes, whether they are closing businesses/the casinos because of the pandemic or they are feeling uncomfortable nationally with inflation or maybe recession fears whatever that may be, that consumer confidence is a huge driver of the challenges we face here in Southern Nevada. When we speak about resiliency from an economic standpoint; how our economic, our job workforce is structured, what we pay our workforce, and what are the industries that are driving our economy here. It is a different story in Reno, which is much more diversified, economically developed, and a more resilient, stronger economy because of the types of businesses they have been able to attract. It is because a variety of reasons, not the least of which is its location on the I-80 corridor. This is what I mean by resilience, the issue of the structure of our economy.

Assemblywoman Brown-May:

I appreciate that. I want clarification, have you studied this previously? Given that you are in economics, and I know it is a passion of yours for many years. If you have, have you seen any improvements in the diversification or any improvements at all relative to our economic stability as a result of investments in education or bringing in new industry?

Mr. Restrepo:

We are much better off than we were when I moved here 30 years ago. Are we where we want to be? No, we are still behind the schedule a bit, so to speak. Unfortunately, I think maybe it has changed this time in terms of our mindset here in southern Nevada. As soon as things start getting a little bit better in the economy, we forget about the hard work that diversification and economic development require. Unfortunately, we forgot the lessons of the Great Recession pretty quickly after things started getting better in 2014, 2015, 2016, 2017, and 2018, until the pandemic this time. I am hearing a lot more serious discussions by the business community, our political leaders, public leaders, and business leaders that we are challenged, and we have to do something different now. We cannot fall back on waiting for the next resort to be built, so to speak. I think we made progress, but there is a lot of work that needs to be done and not the least of which is not the subject today, but it is part of this discussion. It has to be. What does our tax structure look like? Does our tax structure emulate a resilient economy? Does it have to be revised and changed or reformed? I am not suggesting higher taxes, but what do we need to do in terms of providing the public funding to be a more resilient economy.

Mr. Sanchez:

One thing I can extrapolate more on is this idea that we have these emerging industries, and I will provide this additional material to the Committee. It is fascinating to see that over

the short term, here in the last two years, we have seen a significant increase in the jobs available in warehousing and distribution, and you can almost see it in our charts right out of hospitality, you see it carry over. I will follow up and make sure that you have that as well because it shows a pictograph of what is happening with our industries as they are changing. We are diversifying the tremendous growth in warehousing and distribution that you drive by and see in the Valley, and it is having a significant impact in terms of the makeup of our workforce. It is important to keep in mind that our gaming, hospitality, and entertainment industries are such a large share of our economy that even though we are growing these other aspects of our economy, you may not feel it as much because of the large share of our predominant industry, and there is still growth potential in that industry as we were talking about with the technology focus.

Assemblyman Ellison:

I have got a couple of questions to ask. Number one, this study was done by Nevada government, GOED, but it shows also up here that you have Northern Nevada—which is Washoe down to there and then eastern Nevada. Are there three studies out there? Or just one?

Mr. Sanchez:

This particular study was focused on the activity we did for the Southern Nevada Working Group. We do not have separate studies for the one I think you are referring to; the metropolitan clusters slide. We do not have individual studies for the other two regions, but we want to point there as we look at right now. We have engaged SRI International, and we are working with them on an update to our resiliency plan. There will be more detail around the individual megapolitan regions in that document.

Assemblyman Ellison:

I agree because every one of these has the same issues and problems that you are seeing in Southern Nevada as in Northern Nevada, and you are talking about I-15, but I-80 has the same issues. We have a lot of major development and industrial-commercial all down I-80, so Northern Nevada is growing and some of the biggest companies in the world are moving into these areas. I am hoping we do not look back on these.

The last thing I wanted to bring up is, I hope you look at that study that was prepared by the National Association of Counties (NACo). It has been going on for five to eight years, the study about Nevada could change us around and mostly on the public lands being developed in the State of Nevada. If you could take a look at that study, I think the answer to about 90 percent of your questions on public lands and how this could be and how it can pay for every bit of this. It was Elko County Commissioner Demar Dahl that actually pushed on this, and we had that bill here several times. If you look at that study, you might find there is a lot of information in there that you can use and the Governor's office.

Mr. Sanchez:

Thank you for that recommendation and I should say, you are exactly right. I spent a lot of time up in the north and in the rurals looking at opportunities for infrastructure. One of the things we are focused on is the development of rail north-south, especially in the Ely corridor, and in the north and the ability to connect on 120 miles stretch of the railway. I mentioned earlier, we are working with Utah closely on industry focus; mining and agriculture. A lot of that is anchored in what we are experiencing along the I-80 Corridor and anchored in the idea that we know we are seeing significant growth in the mining

industry. As you astutely recognize, we are bringing in potentially more acreage of development along I-80 in the Fernley area and in fact, I toured that area the week before last and so you are spot on, correct. We have to be equally as in tune with what is happening in Northern Nevada.

When I mentioned the ecosystems and what I was remiss in not saying is that our state is an entire ecosystem and network, and all nodes have to be functioning efficiently and effectively within that ecosystem for our entire state to benefit—the southwest region if you will and industry. How do we tie in rail for instance, if we were able to connect rail north and south that we are able to utilize short lines and connect to the main lines. This is a completely different scenario for our value proposition to not only the southwest but the rest of the country. We are looking at that as well, and the impact that the growth and anticipated growth will have on the I-80 Corridor in the north.

Chair Monroe-Moreno:

I have a few questions for you. Going back to the economic diversification as we look at our biggest competitors. Are they Arizona and Utah when we look at bringing in/attracting businesses to come to Nevada?

Mr. Sanchez:

Yes, they are our competition, but one thing I think is important to mention is the idea of regionalism. They are potential partners. So, when we see companies coming in and that list—the short list—usually will include Arizona, Utah, and Nevada depending on what they are looking for. They may not be a competitor, there may be specific things that we have here, or they have included us or take us out of the running, but for the most part generally that would be yes. But on the other hand, I mentioned this idea of these networks and we are trying to draw closer partnerships with our economic development counterparts in each of the states we are working with—the Governor’s Office of Economic Opportunity (Go Utah). We have had several meetings and will be meeting with them again soon on the areas that will enhance the entire state and help us grow strategically in the areas that we are looking to do. We want to do that in partnership with our sister states if you will.

Chair Monroe-Moreno:

When there was discussion about workforce; as we do diversify our economy and bring companies in, and it may be some smaller companies that are already here that have the ability to grow. He mentioned, some of the jobs of today will not be here tomorrow, how are we addressing that workforce and training for current workers? We have to prepare them for tomorrow's jobs.

Mr. Sanchez:

One of the ways we do it is through our WINN program and GOED. Essentially, we partner with our NSHE institutions and community colleges; we design programs with industry. One of the things that is important about workforce is making sure that we are preparing folks with the jobs of today and then tomorrow. To your point, and in order to do that, we have to have industry partnership because industry is on the cutting edge, they know what they need, and oftentimes through those partnerships they will bring in folks from their plants to help provide a lot of the curriculum development and the training. Then, the community colleges benefit because they are getting that expertise and knowledge and are able to expand that and grow those training opportunities. So, the work again, this workforce innovations for a new Nevada program is how we do GOED. We also work closely

within NSHE. One of the things that has been important that Director Brown has done is making sure that we have quarterly meetings with NSHE to talk about what we are seeing in trends in economic development and what we think is emerging and how we can try to close the gap. We have 27,000 folks that are unemployed still in Southern Nevada. I know there was reference to Northern Nevada, which is about 2.2 percent unemployment; we are at a little over 5 percent here in the South with about 27,000 folks unemployed. We need to be mindful of making sure that we have programs in place that they can take advantage of to gain new skills if they choose to do that. Second, we need to make sure that those programs are spread throughout our Valley so that people have access to them.

Chair Monroe-Moreno:

Thank you. Members, any other questions for our presenters. Seeing none, I thank you for today's presentation.

AGENDA ITEM V—PRESENTATION ON THE NEVADA SUSTAINABLE TRANSPORTATION FUNDING STUDY AND THE ADVISORY WORKING GROUP TO STUDY CERTAIN ISSUES RELATED TO TRANSPORTATION ESTABLISHED PURSUANT TO ASSEMBLY BILL 413 (2021)

[This item was taken out of order.]

Chair Monroe-Moreno:

Our next item on the agenda is a discussion of the Nevada Sustainable Transportation Study and the Advisory Working Group to study certain issues related to transportation, which was established in AB 413 during the 2021 Legislative Session. Members, you may recall that AB 413 requires to establish an advisory Working Group during the 2021–2022 Interim. The Working Group must consist of at least 20, but not more than 30 persons, including the chairs of the Assembly and Senate Standing Committees on Growth and Infrastructure with the additional members appointed by NDOT to represent a wide variety of interests and organizations. The Working Group was charged with studying transportation, equity, reduction in greenhouse gas (GHG) emissions, and the sustainability of the state's Highway Fund. The Department is required to submit a written report on the findings and recommendations to other Working Groups no later than December 31st of this year for it to be transmitted to the 2023 Legislative Session. We have the Director of NDOT and Mr. Jeff Doyle from the Project of Management at CDM Smith, Inc. to provide information on the progress of the Working Group to this Committee. Thank you for joining us and for your patience in taking things a little out of order today.

Kristina L. Swallow, P.E., Director, Director's Office, NDOT:

Madam Chair and members of the Committee, thank you for having us and I know we provided an update earlier during this interim. I am here to provide a little bit of background on the Working Group, but I am also here with a colleague, Jeff Doyle, Project Manager at CDM Smith, Inc., as was mentioned. ([Agenda Item V](#))

The funding that we are looking at specifically is primarily for the NDOT system, but this is an Advisory Working Group, and it is a group of many stakeholders. We hired a consultant to help lead this effort. So, it was not an NDOT driven effort as much as it was a community driven effort and that is why he is going to be here to provide the update as to where we are and what the next steps are on this study. As I provide a little bit of background and Madam Chair, you provided this a little bit, but this stems from SCR 3 in the 2019 Session,

which established an interim committee to look at a sustainable funding source for the NDOT system—the statewide transportation system. During that effort, we had a lot of good conversations, but we recognized that this was more comprehensive and a little bit greater of a challenge than what could be accomplished in that format. And so, we came out with AB 413—and thank you for passing it—in this effort we are looking at the needs of all users of the transportation system. We are looking at the equity of that system—both social and user equity of the system. We are looking at this in context of the state's goals to reduce GHG emissions, and we are looking at it to make sure that it is sustainable financially—is this going to last? The last thing we are looking at and I should note—spoiler alert, we were also tasked with looking at the way land use plays with transportation. I think we heard a little bit of that from the prior presentation as well, the impact of land use on all of the infrastructure. We are going to—I think have a little bit of a kick through can on the land use because the committee that we comprised is focused on transportation and we think that might be a slightly different committee, but Jeff will get into that.

The Advisory Working Group, no less than 20, no more than 30—we ended up right at 29 members, and those members of the Working Group represent a diverse group across the state. We have the metropolitan planning organizations as part of this group; the Regional Transportation Commission (RTC) of Southern Nevada, the RTC of Washoe County, as well as Tahoe and Carson area metro planning organizations. We have environmental agencies and organizations representing clean energy. We have tax policy represented, tribal representation, local chambers including the Reno, Sparks, Las Vegas Chamber, Urban Chamber, and Latin Chamber. We have the Nevada Resort Association. It is diverse—and labor is represented it has been interesting being part of this group as we have been learning together. We all came to the table with different levels of expertise on transportation and transportation funding. And so, we have been learning together and exploring a lot of different opportunities on how we might fund the system, which Jeff will get into in a bit.

But why are we doing this? The real reason why we are doing this is—and I am going to note on the chart in front of you—almost all of those numbers are based on since 2010, but we have not taken a wholesale look at how we fund our transportation system and much longer than that. The fuel tax has not been adjusted since the early 1990s and while we did get an increase of good and service tax (GST), we have not looked at the impact of inflation. The impact, I will note that locally in Clark and Washoe they have added an index for inflation, but that is primarily for local roads and local needs. So as a state, we have not looked at inflation. We have not looked at the impact of growth, the impact of growth and land use on how much we drive. You can see that we are driving far more than we drove ever in the past, so we have not taken a detailed look at that, nor have we looked at what has happened to our vehicle fleet. This gets into those climate goals and again looking back to 2010, our vehicle fleet has become more fuel efficient. If you look back all the way to the 1990s when we first set our fuel tax, it was even higher amount that we collected on a per-mile basis. In 2010 we were collecting almost a penny per mile like 0.9 pennies, I do not know what that is, but almost a penny per mile for every mile that we drove on the road on a fleet wide basis based on the fuel economy. We know that fuel economy of the vehicles is improving annually. We also know that EVs (electronic vehicles) are coming in and EVs are not paying anything into the system. We have provided a projection out to 2040, which details the amount we will need in order to fund the current system and only the current system. If my system looks the same and they are driving twice as much, we are not going to be going very far—we are very fast.

This is what we have identified, and the previous presenter talked about the funding shortfall that we have identified. We have done a deeper dive into that and looked at what

the extent of that shortfall is and what the opportunities are and challenges in that space. Then we dove into how do we address that shortfall? What do we need to do? What are the recommendations? What is the Advisory Working Group going to provide to the Committee at the end of the study? I am going to turn it over to Jeff Doyle, Project Manager for CDM Smith, Inc. our consultant on this project.

Jeff Doyle, Project Manager, CDM Smith, Inc.:

Good morning, Madam Chair and members of the Committee. I do want to point out that in some advanced materials that we sent the Committee, we did make a couple of clarifications and updates to three slides, and I will point those out as we reach those slides—so everyone is working from the same piece of paper or slide. As Kristina mentioned, the Working Group as you can see here from the schedule, our first meeting of the 29 members was back in July of 2021. We are on pace to finish on time and to deliver what we hope will be something useful for the Legislature, not only your upcoming session but in future sessions as well. I should note this is one of the slides that had a correction—we are not sure yet which date in November we will have a final Working Group meeting. I think maybe some advanced materials indicated November 8, but there is something else happening that day, so we are not sure at the time or the format, so we will address that when we get to it. In front of us, we have the September meeting, which is very critical as the Working Group, they are not yet at the point where they are ready to vote or endorse certain findings and recommendations, but they are getting close.

The first thing the group did, and it is foundational for the report that ultimately will make its way to you, is it drafted and adopted guiding principles for future transportation revenue sources. It is operated basically as a measuring stick as the Working Group sifts through a number of options that you will see in a moment. Each of these principles either alone or all of the principles are used to measure the revenue mechanisms—but mechanisms themselves either alone or in combination. One or more mechanisms should be capable of achieving each of the, I think that there are seven of them. I will quickly mention them, I will not read all the words to you, but financial sustainability is a measure of whether the revenue to be produced from the recommended mechanism is going to be sufficient to meet the ongoing maintenance needs and the demand for future transportation services in the future, not just for tomorrow. A sufficiency is financial sufficiency—it is related. It is a measure to make sure that the amount of revenue raised from a mechanism “is the juice is worth the squeeze,” so we are not recommending mechanisms that are insufficient to meet the funding needs. User equity refers to drivers of vehicles, all paying their proportionate share of the impacts and for the use of the roadways. Social equity has more to do with improving the distributional impacts of the taxes or fees that are recommended, particularly to lower income households. Flexibility is a measure of the degree to which the revenue can be used for non-highway purposes. It is basically a pass/fail or a yes/no. If it is constitutionally restricted to highways, then it is considered at least for our working purposes inflexible.

For the Working Group to meet the goals of AB 413, all modes, all users have to at least have in the recommendations some mechanisms that are flexible and can be used for things other than roadways, GHG emissions of course prominent as a state policy priority. The recommended revenue mechanisms should be capable of being in alignment with those GHG reduction goals, and then finally, transparency, efficiency, and ease of compliance. Those are three separate principles, but they are all related and you can think of it as simple to explain to your constituents that everyone can track how the funds are collected and used, and the methods that are used for the collection are cost effective.

With having established these transportation funding revenue principals, we then looked at 24; you can see here on the screen basically in categories of taxes and fees on fuels, gas tax, diesel tax primarily, and then fees on vehicles which are not based on usage. It is if you own or operate a vehicle, you have certain fees that you have to pay. The third grouping has to do with usage-based fees. The amount of fee that a driver would pay is based on his or her use of the roadway. If it is a direct-usage fee, if it is an indirect-usage fee, much like the current gas taxes, then you could consider items such as a tax or a fee on batteries or on tires or even on electricity consumed by EVs. Finally, the fourth grouping, it was various other fees that as we assessed not only what exists in Nevada, but also what is being done around the nation. We collected other ideas and threw them all into the mix for the Working Group's consideration. As I mentioned before, the guiding principles were served as the ruler that we measure against to find out how each potential of the 24. How each of those revenue mechanisms performed relative to those principles.

Now, the slide that I have in front of you is not meant to be read, there are far too many words, it is intended to be an illustration to show you one way in which the Working Group received information and then used it to deliberate and discuss how they felt about those mechanisms and their performance. So, where you can see a red one, the first segment is to describe here, the example being used as the GST. It is an existing revenue mechanism; the one indicates the area where there is a description of how that mechanism might work. Now, the GST is already in current law, so it was not hard to describe, but we do describe the way in which at least at the time, we thought the GST could be potentially increased if the Legislature so chose and dedicated to transportation.

Moving back across the example, number two is the quantitative assessment of the sustainability and sufficiency principles. What that is trying to illustrate is how that revenue mechanism would perform in the future compared to vehicle miles traveled. Vehicle miles traveled is a surrogate for transportation demand, the usage on the system, how much, where, and what you might expect. The green line is the revenue that can be expected from that one source if the Legislature implemented it, not only mechanically, but also at the rates that we illustrated. Now, there is nothing magical about those rates. We were trying to play around with how robust each of them were. Certainly, you would not have a tire tax that was capable of filling a \$500 million a year funding backlog. This is to help the Committee illustrate that.

Finally, number three, this is a more qualitative assessment of how the revenue mechanisms performed. The Working Group members all—well first the staff put something in front of them to react to and then we had thorough discussions on each of the 24 different options, and how they felt they would perform on those principles that you see listed across the bottom. I should note this is another slide with the change. It used to say five remaining options for analysis and consideration. Actually, when we looked at it more carefully, we would now call it six remaining revenue options for analysis and consideration. The difference is an earlier version did not quite articulate where we think the Working Group is right now in its interest in fees on EVs. I will talk about that in a moment. But what you see in the left-hand column is there are long-term sustainable revenue sources that have been identified now that was the obviously the principal charge coming out of AB 413, but there are mechanisms already in place. Their current taxes that instead of brand-new mechanisms, current taxes may have some viability at least in the near term as the Legislature considers how you want to fund the transportation system going forward. We have created that bifurcation of the different options. In the middle column are ones that were interesting to the Working Group, but today perhaps we are better suited as a local or regional tax mechanism or fee mechanism rather than well-suited for statewide transportation funding sources.

The long list over in the far-right category or column are mechanisms that either eliminated or set aside because they are no longer under consideration. The Working Group seems to have moved the active consideration of the six listed in front of you. I will quickly mention them, and we can certainly talk about them more if you would like in the Q and A.

First is for the long-term sustainable statewide revenue sources. A distance space charge on light-duty vehicles, which is also referred to nationally as a road usage charge has been identified as “of interest” to deal with the eroding tax revenue that Kristina showed you, also increasing the current GST. It is the value-based tax on vehicles, which was of interest to the Committee, and it was particularly important because it is a flexible funding source. It could be used obviously for roadways, but if the Legislature should so choose, it could be used for other multimodal programs and priorities as well. The intent was to make sure there is an inclusion of a flexible source for the Legislature to apply. Mechanisms that are either currently in law—the first three below—or that could be popped up fairly soon, are listed under the near-term statewide revenue sources. Obviously increasing the current gas tax and the diesel tax would be possible in the new year term because it already exists as would increasing the basic vehicle license fee that all owners pay for vehicles. In addition, there is interest—so far among the Working Group—in exploring more about what can be done with an inflation index to the gasoline excise tax statewide, recognizing it is already in place at the local level in many areas.

Finally, this is the one that we had to reconsider to make sure we capture where we think the Working Group is at the moment. They seem to be in general agreement, not unanimous, but general agreement on a distance-based charge for EV road usage charge. However, with an option to pay a flat fee if a driver wanted unlimited mileage and did not want to have to pay a road-usage charge. This is the skinny down version of the longer-term road-usage charge for everybody someday in the future as revenues erode.

As we here have highlighted the GST in some respects, using our example, but also as the most viable flexible funding source for transportation. Fortunately, it was LCB that flagged an issue for us that we were not aware of, and it mostly has to do with the mechanisms by which the Legislature may or may not be able to increase the GST depending on how that would happen. I will try to hit the high points. Its recognition that the GST is constitutionally capped at 5 percent, and when you consider that the state rate is currently 4 percent and the largest county, plus Churchill, have imposed their option or the local option rate of 1 percent, that squeezes out most of the viable room under that 5 percent constitutional limit for that fund source. This was something the consulting team had not considered, and we appreciate LCB pointing that out. They also highlighted a couple different possibilities if the Legislature so chose, and if it is a recommendation of this Working Group ways to move forward that would allow the GST to be increased for transportation purposes. We are still taking in their advice and counsel on that, and we will pick it up again in September and summarize it for the Working Group members. So, they understand that it is not as simple as perhaps we thought it would have been early on.

There was a second possibility. We were not sure how the GST issue would play out. We wanted to resurface another flexible funding source for Nevada's consideration and that is a delivery fee. To be clear, it was a small fee that would be paid by the merchants—we will call them merchants—likely collected from the users like any fees that they pass along. It would not be paid by the postal service or UPS or FedEx. For example, Colorado has enacted such a fee, it is 35 cents per delivery, and it would be for tangible goods. The Legislature and the Working Group could make recommendations as well on the scope of what that would be and if there is an issue with that. First of all, I should point out that there was not unanimous agreement by the Working Group on this as a source. It has been set back to

the bench, but we still wanted to tease out these details so that we have a leave behind for you someday if that is of interest.

The issue has to do with the Streamlined Sales and Use Tax Agreement (SSUTA), which is a multi-state compact; some states must be members, other states can opt-in, and some states are not members. What it basically requires is states cannot add on various rates, taxes, or fees so that it is difficult to administer the sales tax across state borders. Colorado was not a member of the SSUTA, so they probably did not have to wrestle with this issue at least as it affected their compliance with that agreement. Whereas Nevada is a member of SSUTA and so more research is needed on that. Fortunately, we do not think that the Working Group is relying on this recommended source.

Wrapping up, it has been mentioned in the prior presentation but also by Kristina, the Advisory Working Group was also directed to consider the role of land use and smart growth strategies in reducing transportation emissions but also improving the system efficiency and equity. There is a lot of energy and interest on this topic among the Transportation Advisory Working Group members. We had several discussions over the course of several meetings, it became clear that because that issue touches on so many other aspects of life in Nevada, including natural resources, economic development, and critical housing, that asking the 29-member sector experts in transportation to reach out and try to make recommendations on land use as it affects areas well beyond transportation probably was not well advised. So, they seem to be in agreement, I would say unanimous, but we will find out when we vote that they will be recommending this issue be carried forward and a specific land use study commission be convened. They may have some recommendations on at least the transportation components of what ought to be considered. But as we have all recognized, it is more than transportation.

The final report to the Legislature—to set expectations—there will be more areas for findings and conclusions and there will be hard recommendations. For example, GST—I will use as an example that might be one where—I do not know what they do in terms of specific revenue sources—but there may be revenue options that they will not be recommending necessarily should be a certain rate to raise a certain amount of money for a certain purpose. But rather as the original charge was looking at mechanisms that are sustainable for the future. However, to provide maximum usefulness to the Legislature in the findings and conclusions. We are going to prepare rate tables for the mechanisms that were of interest to the Working Group so when you pick them up someday, either next session or in the future, and feel that the timing is right, you could calculate using all the information that we have provided, what rates would raise, which amounts, and for what purposes as you determine. Those will be included along with the recommendations to meet the requirements of AB 413 for a sustainable funding source for Nevada.

The final slide is the final report to the Legislature. We are on time in terms of being able to get the report to you. The next meeting will be critical. It will be in person. I think it is here in Las Vegas. We encourage everyone to watch or attend. We will be reviewing the findings statements that we floated to the Working Group members for first reactions in June. We are reshaping them now and they will go back to the Working Group members. Hopefully we are near the center of the dartboard by then and they will be prepared to vote and make recommendations to you. We will be trying to solicit their feedback on the final report including areas where there is not 100 percent unanimity. We still want to be able to—even if it is a recommendation—we want to be able to accurately reflect where there is dissent or differences of opinion among Working Group members so that you can turn to one source, and you would have the recommendation supporting information and if there are concerns

or dissent that still remains among the Working Group. That is all we have for prepared remarks today. I am happy to answer any questions.

Ms. Swallow:

One more slide has more information. This slide, I think it is important to point this out—all of our meetings have been public meetings and all of the information on the workings of the Working Group is available on this website. We have been soliciting comments as well as engaging broadly.

Chair Monroe-Moreno:

I would like to thank you both and the team of people that have been working with you to get us to this point. It has been a labor of love for everyone involved. When you look at the number of meetings that you all have had, both in person and virtually, this Working Group could have 30 people on it, and we got to 29, but for the members of this Committee, please know that the interests and the bodies involved have been well over 30 people watching virtually, attending in person, in the north, south, and rural. It has truly been a labor of love of stakeholders throughout the state to make sure that we get this right, so that we have a sustainable solution for how we fund our highways in Nevada as we look at transit issues, and as we look at land use issues. There has been a lot of work into it. I applaud both of your teams from NDOT and CDM and all the stakeholders that have given their time, because they do not get paid, to come out and do this; and these are day-long meetings, but people are truly committed to get this right in Nevada. I want to tell you, thank you. Members, do you have any questions?

Assemblywoman Brown-May:

Thank you, remarkable work, it is great to see how far you have come throughout the interim. Congratulations on really good work. My question is relative to bicyclists and pedestrians. Some of our multimodal users that are a little bit more at-risk. I am curious to know, what kind of reporting of the comments that you have received throughout the interim can we look forward to when the report is done relative to the vulnerable road users?

Ms. Swallow:

One of our tasks is to make sure that we are looking at it for all modes, all users. We are looking and considering the flexibility of the revenue to be used on infrastructure that would be supportive of non-drivers. I should note that we are primarily looking at the NDOT system. Our system is roughly 14,000 lane miles across the state, which is about 13 percent of the total road network, but while it is only 13 percent of the network, we carry 50 percent of the traffic and 70 percent of the heavy vehicle traffic. Our roads are not necessarily always the roads that have the most non-drivers on them, but we do have them. We are working to make sure we have flexible funding that we can use to build out and improve the system for non-drivers, but we are having those conversations more broadly with our local partners in the scope of what we deliver on the transportation program.

The previous speaker also spoke a little bit about the funding that we have through the bipartisan infrastructure. So, we are working on that in that space, but to the extent on this effort we are looking at where we have more flexible funding sources. Largely we can use the funding from revenue that we do have for sidewalks and bike lanes if it is within the right-of-way proper, it gets a little trickier when you start looking at multi-use passes that

might not be in the existing right-of-way, but largely we are already able to do that. The flexibility becomes more of an issue when we start talking about transit systems.

Assemblyman Leavitt:

I wanted to dig into a little bit of the findings or the discussion points of the Working Group, especially when you are talking about a street utility fee or land impact use fee. What would be the recommendation to those who already pay a tax because they pump gas? So would that be on top of what they are already paying in a fuel tax that they are paying for.

Ms. Swallow:

I am going to check back and get clarity; you are specifically asking like a street utility fee or your land use impact fee that would be on top of other revenue sources. The good news on this is that the Advisory Working Group is no longer looking at either of those options to advance as a recommendation for a statewide revenue source. Those are options that we will describe in as part of the research and findings in the report. But right now, those are options being left on the table for the local agencies to possibly consider, and if they chose to pick those up, they would dive into and figure out how those might layer on or who those might impact.

Assemblyman Leavitt:

You also mentioned increasing the fuel tax or potentially increasing the licensing fees for all users, and then you transition to maybe EVs, which has been a big topic of conversation as EVs utilize roads and they do not pay the fuel tax that is dedicated towards the repair and in the repair of the roads by which they use. When you are looking at a road usage charge for EVs, the per mile seems to be very problematic. Because it would be a self-reporting thing, correct? I do not know how you judge how far a vehicle is driven unless the driver reports it, unless you stick something on the vehicle. You also talked about a flat usage fee so maybe they pay when they register their vehicle, they pay an extra flat usage fee and that seems more realistic. Because you could get it at one point and then move on from there. But you guys seem like you were discussing that was the option they had potentially to either pay a road usage fee and track their mileage or if they did not want to do that, they can pay an upfront fee. Did I get that right?

Ms. Swallow:

Regarding EV contributions to the system, currently the Advisory Working Group is looking at a revenue option that would be a distance-based charge for EVs and with the option to pay a flat fee. This is something that the Advisory Working Group is looking at as a bridge to a long-term solution that were in all vehicles anticipating that Corporate Average Fuel Economy (CAFE) standards are going to continue to increase in fuel efficiency and at some point, we are going to have to make adjustments, but in the interim when EVs represent roughly 2 percent of the system or the fleet, this is a recommendation. This is not a new concept; it is already being implemented in Utah—they have implemented it for their EVs.

The question regarding self-reporting. In all of our vehicles, we have odometers and our gas-powered engines we get an annual check, I do not believe the EVs do, but that could be implemented so that at an annual smog check—for lack of another term—they would have an odometer reading and they would be able to then pay based off of the miles traveled. There were some members of the Advisory Working Group that had concerns regarding the flat fee around equity and the assumption that all EV drivers drive the same distance so they should all pay the same when we know that is not true. Some people drive more, some

people drive less. That was why we were looking at going straight to the road user fee but then providing a flat fee if there were concerns by the individual user.

Chair Monroe-Moreno:

In response to your question, I will remind you that during the 2019 Legislative Session, the Assembly Growth and Infrastructure Committee was able to pass the bill for a pilot program for the Department of Motor Vehicles (DMV) to capture miles being used of the different vehicles on our roadway and that pilot program is still going.

Any other questions? Assemblywoman Summers-Armstrong.

Assemblywoman Summers-Armstrong:

A question about road use. We know that heavier vehicles do more damage to the roads than lighter passenger vehicles, and I may have missed it, but did you bring that into consideration when you talked about fees? The difference in size and weight of vehicles and you talked about a Working Group already looking into this; is there a pilot out there? Did it also take into consideration the type and size of the vehicles in relation to the fees?

Ms. Swallow:

On slide 10 under the heading of those fees no longer under consideration, one of the fees considered was based on vehicle weight. There was some conversation—actually there was a robust amount of conversation regarding weight-based fees. At this point, the Advisory Working Group was not prepared to advance that as a recommendation. I should note that when we were looking at this fee, it was largely based on personal vehicle versus trucks—big heavy trucks. We started to see this; in one city so far in the nation where they are actually looking at weight on all vehicles; vehicles under 3,000 pounds versus vehicle over 3,000 to 5,000 pounds. It is starting to look and capture the increased weight that we are seeing in the EV fleet. So, in this case we were looking at personal vehicles versus heavy trucks and the Advisory Working Group did not decide to advance that as a recommendation.

Assemblywoman Summers-Armstrong:

Ms. Swallow, can you be a little bit more specific? I know the idea was put aside, but I think it is a cogent question to ask why. Can you give a little insight on why that idea did not pan out?

Ms. Swallow:

I am going to defer to Jeff. They have been taking the notes and managing the conversation. Thank you.

Mr. Doyle:

Yes, picking up from what Kristina explained; the rationale behind it is that although vehicles of heavier weights do more damage on the roadways, they are not currently subject to the most stringent CAFE standards, which is the principal driver behind the projected future erosion in the motor fuel tax. I think it was felt that the focus right now should be on light duty passenger vehicles. Where the miles per gallon (MPG) of the fleet including here in Nevada has steadily climbed, which means fuel tax revenues erode proportionately. But as these heavier duty vehicles do make meaningful improvements in

their fuel economy that ought to be reconsidered including if there are some transitions. This is probably in the future to alternative fuels, then they will represent the same challenge that passenger vehicles do today.

Ms. Swallow:

One additional piece, they are still buying fuel. I think that was one of the other key points that was brought up by members of the Advisory Working Group is that if we were to move forward or if the Legislature was to move forward with an increase in fuel taxes, those heavy vehicles are also buying that increased fuel so they would be contributing a larger proportion to the fund as a result of those increases.

Chair Monroe-Moreno:

Members, any other questions?

Assemblyman Ellison:

Yes, when you did this study did you look at some of the people that live in rural Nevada like Eureka, Tonopah, Hawthorne—all these places that are way out? They have to travel to big stores, medical reasons, or whatever. Is that taken into consideration because they are not living in the city? They can go ten blocks to whatever they get to, these people are hundreds of miles every day. Can you elaborate on that?

Ms. Swallow:

We did. We have rural representation on the Committee; Nevada Cattlemen's Association and Doug Musselman is representing rural Nevada on the Advisory Working Group, so we do have a rural voice. Our consulting team looked at that when we started looking at the ways these or the mechanisms could impact different types of drivers. One of those examples was a rural Nevada driver. I think it will be interesting to see in the findings when we produce the final report. Oftentimes those drivers are already paying an inequitable share because their vehicles tend to be less fuel efficient, tend to be older, and so we are going to be looking at those equity impacts and definitely considering the equity impacts broadly across the state; rural as well as some of the urban equity impacts as well.

Chair Monroe-Moreno:

Seeing no other questions from our Committee. I will thank you for joining us here today and for the work to get us to where we are at. I look forward to the September meeting and thank you for changing the November meeting date, appreciate that.

AGENDA ITEM VI—PRESENTATION ON THE NEVADA AIRPORT AND HELIPORT SYSTEM PLAN

[This item was taken out of order.]

Chair Monroe-Moreno:

Committee that moves us to our next agenda item, which is a presentation from the Nevada Airports and Heliports System Plan. As you all know, aviation is a crucial component of our transportation system. The Nevada Aviation System includes publicly owned airports, privately owned airports, heliports, and military installations. Today, the President of the Nevada Aviation Association (NvAA), Mr. Ken Moen is here to present an overview of

the recent completed system plan, which is used to provide guidance and direction to the NDOT aviation program, including how to help maintain the system, monitor its performance, and invest in the future. The floor is yours and thank you for joining us.

Kenneth G. Moen, A.A.E., C.A.E., President, NvAA:

Thank you, Madam Chair. I think it is appropriate today that both Kris Sanchez with GOED, and Kristina Swallow with NDOT both are here. I would like to share information about our organization first. ([Agenda Item VI A-1](#)) ([Agenda Item VI A-2](#)) ([Agenda Item VI A-3](#)) ([Agenda Item VI A-4](#))

Our organization was founded early in the 1990s and is a loose group of airport managers working together on common problems and has expanded over time becoming an airport's association primarily focusing on airport managers. The mission has changed over time and brought in advocacy for airports and helped lead to the passing of a fund called the State Fund for Aviation. However, this was focused primarily on the rules and the focus was about grant match from the federal government. I became involved in 2018; I was named manager at the Carson City Airport and attended my first association meeting in Douglas County, and subsequently walked out of the room becoming the first vice president. I think I must have stepped out for a glass of water or something and suddenly became thrust in the middle of the leadership. I assumed presidency after the resignation, for health reasons, by the current president and spent much of the lockdown period focusing on updating a strategic plan for the organization in collaboration with our board as well as other community members. We organized the Association to expand beyond airports, but to focus on aviation as a whole in the state. That goal formed a broader foundation of membership and expanded to airport operators, but also to users of the system: flight departments, fixed based operators, flight schools, et cetera.

Our mission is to promote aviation in the state and airports. Our vision is to be the primary stakeholder of this airport system plan that I am going to talk about. At a maximum, I would like to discuss in the dialogue about airports is that one mile of highway will take you one mile and one mile of runway will take you anywhere in the world. It is important in today's atmosphere of talking about funding for different modes of transportation, but also how transportation through aviation is a 21st century solution. You can see this evolving in the news with discussions of advanced air mobility and future needs or uses of aviation.

There are 44 public use airports in Nevada, 5 privately owned airports that are open to the public, there are 2 temporary airports for public events. One of them is the Burning Man Blackrock Airport and then there is also another area called Dead Cow for off airport flying. There are a total of 51 airports, but that is excluding the military facilities at Nellis-Creech and Navy Fallon; 4,600 approximately general registered general aviation aircraft and 63 heliports.

I was asked to comment quickly on the impacts of AB 161, which was a tax abatement put in place to attract aeronautical companies to the state. Since 2015, these numbers I received indicate there were 18 companies that took advantage of that, the impact was initially 250 jobs and build out was at 785. The hourly rate averaged \$34 an hour but was a \$1.3 billion impact to the economy. Now one of the reasons that we do not hear a lot of discussion about funding of airports in the state, primarily through NDOT, is as aviation came to its own, much of the early airport development was done by municipalities. As it matured after World War II, what was then known prior to the Federal Aviation Administration (FAA) was under the Commerce Department. The FAA filled out, with what they call the National Plan of Integrated Airport Systems (NPIAS), and that established the

National Plan of Airport Systems. Primarily most of the funding from the state comes from that Airport Improvement Grant.

The variety of different grants that impact Nevada airports, as recently as 2019, there were \$39 million plus airports. During the various funding mechanisms that came about during the lock down, \$144.5 million came to Nevada airports and there is an additional \$293 million over the next 5 years through the bill funding and there is an additional \$5 billion across the country that is going to be available through that process. Now, 21 of our airports are not in the national plan, they are primarily smaller airports and they do not receive any federal funding, and that has been some of the focus of the organization early to help support funding for those airports.

The slide here shows the impact of SB 26 from 2001. If you look under grant fund appropriation, the last deposit into that fund from the Legislature was around Fiscal Year (FY) 2019, and that fund is dwindling. I think today it indicates it is, as of February, around \$69,000, which is insufficient for most grant matching. The Infrastructure Bank is another opportunity that the Legislature established in AB 399 and then SB 430, and there are \$75 million of general obligation bonds available. It is a competitive environment, but it is an opportunity for reports to apply for additional funding; NDOT's aviation program is nominal. Kurt Haukohl is the planner in the department; he does a lot of airport inspections, and the FAA compensates the Department for that, a lot of those funds come from there. You do see a big jump in FY 21, that is primarily from the grant that was used to evaluate the study of airport systems.

This was rolled out at our statewide conference in March; prepared for NDOT by Kimberly Horn, who is a consultant on this project. The goal was to analyze the needs of the system but also to determine the economic impact to the state. Similar information that they came across; 79 runways in the state, 1.35 million annual miles and over 50 million commercial passengers.

The helipads were added to help designate where those are and ensure that they are all appropriate whether they are a private, military, and what the supporting facilities were. There are some program milestones that were identified for both safety and security, preserving infrastructure, transforming local economies, fostering sustainability, and primarily one of the goals was to look at financial sustainability, connect communities, and optimize mobility. There are a variety of performance measures—I do not want to belabor each one of these as I wanted to save room for some discussion, but these are available for a deeper dive—you can see the areas that looked at both rural and urban. There was a unique portion of the study, however, that was identified, it was called the airport regional value and what it tried to help do was determine what would cost to replace that infrastructure but also value, not just the economic impact but the type of operations that you can conduct an airport; let us say Fernley or Hawthorne for example. There are a variety of categories and sector descriptions and there was a scoring system based on that. Primarily, facility and service objectives which are important to airports and helps define their significance based upon their locality and the type of facilities and access available. This part of the study also included a forecasting mechanism both for commercial and noncommercial operations, and you can see that trend is going to continue. I do not think anybody is surprised by that.

There is a little flattening of the general aviation side. There are primarily a number of reasons for that. Early aviation used to be like owning a boat, now it is like owning a second house; it does become a considerable cost. But the civilian fleet of general aviation is important to the nation and used under a variety of circumstances; it can be mobilized if

necessary for that, especially in community emergencies. They did a study for each individual airport, and this is critical, especially for representatives in their local community because for each airport, there is one of these specific reviews and it talks about what they currently have, what their needs might be. I encourage you to look at that. There are some funding sources that come as part of this. One of them was to identify what those needs are under the performance measures and the various facilities that is a significant dollar amount of \$1 billion for addressing some of those.

Other airports investment needs—I am going to explain a little bit of how the FAA process works because that is important to understand. We look at a comprehensive picture of what the total investment needs were and this comes across covering both Clark County and Washoe as well. We wanted to make sure that we understood the impact to keeping the system updated and why it is important to have included those. The methodology for the economic impact is also important to understand. This is not a new method of analyzing it, but it did look at everything from tenant information, capital improvements, and employer labor income output. I am going to make a quick comparison not just of what the airports look like, I am also going to compare it to some of the other industries in the state. But aviation contributes to over 285,000 jobs in the state. Labor income alone was over \$12 billion, with a statewide output of \$40 billion. I do want to emphasize that does not include aviation activity not associated with an airport or the three military airports in the state; those numbers would rise significantly. One thing I would like to do is to be able to quantify that information and share that with you at a later date.

If we look at mining, the latest numbers that I was able to obtain included over 15,000 jobs, \$2.4 billion in labor income and an output of over \$13 billion. Gaming results, and probably not just gaming, but hospitality, you can see that number is significant as well, statewide output over \$73 billion. One thing I do want to emphasize is that without aviation, the hospitality sector would not have these kinds of numbers, so they go hand and glove.

What I want to talk about before I get onto the initiatives, let me focus on how the FAA funding works. Federal Aviation Administration funding is identified through the FAA reauthorization bill, and a pool of money will become available and what we do in each of our districts, we fall under the airport district office out of Phoenix for most of Nevada; there are some airports that are in the Los Angeles airport district office. We determine the airport capital improvement program, and we identify those by priorities; it is a five-year plan. For example, let me talk about Carson City because that is my most recent experience as an airport manager. We always start with the pavement at the runway surface and work out as that becomes the highest priority like maintaining your roadways; maintaining your runway and taxiway infrastructures are critical. Every three years we have a rehabilitation program in the plan and then we look at other aspects. One of the programs that was completed this year was an update to the automatic weather observation system, the acquisition of a new snowplow, and a study on a nighttime instrument landing approach. We identified those rough order magnitude of costs with engineering estimates; we did all the environmental. When the funding is released, the airport district office will identify which programs they fund, and it is usually based on how prepared you are. It is important for the communities to stay on top of those. What is taking place is that funding for airports relying on the federal government and less so on state governments. What I observed through my involvement in regional and statewide aviation organizations is that there are more robust aviation programs at the state level in our neighboring states. I will use Arizona for an example, and I will use that because I spent a significant amount of time there in the last couple of years. The ADOT (Arizona Department of Transportation) does several things for

their airports of which include pavement maintenance as one of the top priorities. They also fund things that may not otherwise be FAA grant eligible.

Much like the highway system, the aviation system is a network—it is a network of airports that connects communities, and it plays a big role, not just in recreational flying, but it plays a big role in business aviation. It also plays a role in medical services, especially in the rural communities. If your family members are experiencing a medical emergency, the idea of getting in an ambulance and driving five or six miles to a trauma center could be the difference of life or death. The rural airports have to meet that need and support those types of medical operations, whether reporting broadband internet so they can access flight plan information, being able to know what the conditions are going to be on the ground when they arrive and sometimes, they change in route; weather observation, snow removal—those sorts of pieces are very important. In order to have a system, you have to be able to connect these airports together and much like the NDOT system for highways or the federal system for interstate, a lot of airmen do not use airports outside of maybe two or three that they are used to. However, like roadways, they may not use all of them either, but they are still supportive to a statewide network—so that is critical.

One of the things that we have done recently, and working with the Treasurer's office, is our organizations submitted for a \$5 million ARPA (American Rescue Plan Act) request for the State Fund of Aviation. I was in a conversation with Nevada State Treasurer Conine, and I was about three minutes into my spiel explaining how \$5 million can leverage \$50 million in federal funding—local grant matches start out at most regions about 10 percent of 100 percent match. If a dollar is being allocated through grant funding, it is 10 cents for a local match. Nevada being a rural state, our matches weigh down to 6.25 percent—I am not sure about you, but I love a good sale. If I can get something 94 percent off, I am all about that, and the State of Nevada should be about that too. We do not want to walk away from money on the table. This happens a lot, especially in the rules where they do not have the funding for local match. If they have a big project, let us say it is a runway rehab project or installation of a fuel system and they cannot make the local match, they have to walk away from it. However, there are other FAA funds that sometimes step in, fill in the gap, and those are usually what they call supplemental funding and some of that opportunity might be able to bid for those or there might be an opportunity for roles to swap grants when they do not have the money and they can save up for it. There are work arounds that we do to that.

One thing we have been doing with the Aviation Department, they called us earlier in the year about a BDR (bill draft request). We asked for a BDR for a \$5 million request. This sounds like big money when you look at the comparison of what we have had interjected in previous years in the \$100,000 range—this is a way that we change the legacy of aviation in the state, and how we improve it as we build this fund so we can identify priorities and help fund projects that may not be otherwise fundable through FAA grants. In 2021, the legislature passed AB 242 which I have listed here as essential air service, but it really was an air service board, but there was no funding attached to it. Early in my career in aviation, I was an air traffic controller at the Reno-Tahoe Airport, and we had regular flights to Elko and connecting that community to the rest of the state. Some of the current challenges in aviation are the regional carriers are reducing their operations to communities like Elko, and they are going to lose their service to Salt Lake, which is the only commercial service they have had. Right now, it is scheduled to continue through December. Through that bill, it is critical to reestablish service—not just to Salt Lake—I would like to see that come back towards Reno and then ultimately allowing those passengers to connect back to Las Vegas and then ultimately anywhere in the world.

While I was in Carson City, I had done some research on being able to have service between Las Vegas and Carson City during the legislative session. As you know, currently several flights basically Southwest—I know Frontier is operating in that space and Spirit has had some discussions, but those flights still require you to drive 40 minutes from Reno down to Carson City and service directly to Carson City airport from Las Vegas—even if it is a couple of days a week—a Monday/Friday type arrival/departure would be critical for supporting the Legislature and as well as the communities that rely on that transportation. Then from this part of the state, there is obviously a lot of access through Las Vegas to any destination in the United States or across the globe. I think this is something that is worthy of a study group and that is how do we expand aviation within NDOT. I sat on the One Nevada Transportation Advisory Committee. We had many discussions about what that plan means and how aviation is integrated into that; ultimately, it had very little discussion about how aviation is looked at. Interesting enough—I am certainly not trying to disparage anything; I am trying to bring light on the subject of how do we fund it and why it is critical—and that is the issue of the sustainable funding for transportation, and what we talked about previously in the presentation by Kristina and Jeff was about all modes, and I did not hear aviation mentioned in that. There is a real critical issue that is going to come up for Southern Nevada and that is the idea of constructing a brand new airport in that area—the Southern Nevada supplemental plan. The Clark County Department Aviation made a presentation at our conference about the plan, its importance, and why it is critical for Southern Nevada. There has not been a brand new airport constructed in the United States since Denver International was built 27 years ago. It is going to be a national level project. It is going to require support from the FAA, but it is also going to require support from the state, and I think those are critical to connecting that. Ultimately, if I have my dream list, I would like to be able to see some sort of connection of air service across the state on some level, where perhaps it starts out as a three-legged stool from Las Vegas, Reno, Elko, and somehow back. If there is a way to support, through mining and other industries to be able to move not only personnel, but equipment, I think that there is a value in how that will grow the economies across the state. With that I will conclude, and I return it back over to you Madam Chair for any questions.

Chair Monroe-Moreno:

Thank you for the presentation. Members, any questions? I believe Assemblyman Ellison up north does have a question.

Assemblyman Ellison:

For several years, Senator Goicoechea and I have been working on trying to get flights out of Las Vegas to Elko to Reno, part of Oregon and then back; we have been working on this forever. Now that SkyWest is pulling out, there is a lot of—hundreds of people use those flights to go back and forth to Salt Lake for medical reasons, or to visit Salt Lake and then come back to Reno. Mostly our educators, they do that. This is devastating to rural Nevada. You can figure about three quarters of the state area will be impacted by this. We tried to get flights into Eureka or Ely, Las Vegas, Elko, Reno, and then then back. Now that SkyWest is pulling out there, I hope they pull some of their federal funds away from them for what they have done to rural Nevada because they are still going to Idaho. I have a problem with that. We have been working on this for years, I thought we had it and then we lost it, and we had it and then we lost it—so, we have been working on this for years. I am hoping we can do something that can get these planes back in the air. We even looked at a private business that had a med flight We have tried everything.

Mr. Moen:

I will go ahead and take a stab at that one first. There are a couple of factors involved. One is the aging workforce and there is a pilot shortage as a result of that. Most of the pilots had historically transition from some sort of military experience and then the civilian workforce, and now the airlines are even experiencing such a challenge that they have created their own flight schools. A lot of that training is taking place in the southwest because of the great weather. There is something at the federal level could help address this. One of those issues is they instituted a 1,500-hour ATP (Air Transport Pilot rating) rule for all members of the flight deck. It used to be the first officer could have a lower experience level and the captain would meet the criteria. It takes a tremendous amount of flying to get to that 1,500-hour level. There has been some talk—and SkyWest is one of the leaders on this—about pulling the number of seats out of the aircraft to be able to fall into a different category and have a right seater with lower time. There is some work that can be done on that level. The other option is that we could and should look at a private operation to do that and create within our state, utilizing whether it is GOED or other groups, and bring people together and figure out how to fund an operation like that. I do not think it would fund at a deficit because I think the demand would help meet it. It could start with as small as a PC-12, which is a nine-seat aircraft and has a lab in it, and you could do that kind of operation and meet across the state. You see that happening at a lot of—what they call, it is almost like an Uber Air type operation. One of them is called Surf Air and there was another group called Blackbird, where they went out and you could buy memberships, et cetera. I think you can expand it to support various industries, whether it is ag [agriculture], hospitality, or mining for example. I think there are some possibilities, and I kicked that idea around with different folks that I know, but I think that it is definitely worth exploring further.

Assemblyman Ellison:

Follow up madam.

Chair Monroe-Moreno:

Go ahead.

Assemblyman Ellison:

The other thing is years ago we lost all the flight services around the United States, and is there any...

Mr. Moen:

Flight service stations, sir?

Assemblyman Ellison:

Right. A lot of them went to control towers and some did not, it is there. So, is there any excitement to get them back into some of these areas? I love flight service—every time I fly into a flight service station it was great. But I had some instances in Wendover, where you have to have your eyes open and keep calling, calling, and calling before you set your plane down.

Mr. Moen:

I was in the FAA during that consolidation period and what they have done is they contracted that out to a group that manages very large flight service areas. What Assemblyman Ellison's referring to is that airports used to have them on the field, and you can walk in there and get a weather briefing file, your flight plan, and it was a personal interaction. Now much of that is going digital and electronic as you are aware through different programs, flight being one of them. I think automated weather service observation stations now at airports reduce some of that. I mean it is not perfect. I think one thing we were instituting at Carson City was putting in weather cams, so that pilots can log in and take a look at actual conditions. At our conference, we had REMSA Health and Reach Aeromedical, discuss the challenges they experience in operating in rural Nevada. One of those issues was they might call somebody in the town—let us say the sheriff's office—ask what the local weather was, and to them it was fine but to the pilot it was not so fine. So, they would depart, they get some sort of weather enroute and then they would get to the destination and have to make a decision about whether to try to land or not land. This is the situation we can rectify relatively easy by the installation of, not only weather cams, but also weather observation stations, and for the cost they are pretty nominal in that respect. Those are some of the work arounds that have come from some of the consolidations that we have seen.

Assemblyman Ellison:

Thank you for your presentation. Thank you, Madam Chair.

Chair Monroe-Moreno:

You are welcome. Assemblywoman Summers-Armstrong, do you have a question?

Assemblywoman Summers-Armstrong:

I do, thank you for your presentation. You mentioned AB 161 from 2015 and that 18 companies took advantage of a tax abatement to the tune of \$1.3 billion at the beginning of your presentation. I was not around then in the Assembly, and if you could talk a little bit about what that meant, what it is, and if this company that you are speaking of that is pulling out of the Elko area was 1 of those 18 companies that was able to take advantage of the tax abatement.

Mr. Moen:

I want to make sure that I clarify a point; it was not the amount of tax abatement was at \$1.3 billion, that was the CapX from those 18 companies. I would have to dig in the data a little bit and I can give you an I.O.U. on who those companies were and what was done. I do know a couple of them off the top of my head; I know that Deutsche aircraft services at the Reno-Tahoe Airport was one of the firms that applied for it. I also know that there is a company that is planning to relocate—I do not know what the status of that is from McClelland to Carson City. Originally—I do not know the status of that—but there was another off top of my head. I think it was another flight school/maintenance repair operation at the Reno-Tahoe Airport, Advanced Aviation—they also applied for it. What they were required to do was both Capital X but also primarily jobs related. They had to identify the number of jobs that they were going to be able to support, what those wages were, and what I liked about this bill was that if they did not do it, they did not get the abatement. It was stringent on the follow up and a very high-level of compliance. I will get you an I.O.U. on that.

Chair Monroe-Moreno:

When you send that I.O.U., if you could send it to our Committee secretary and then they can get the information to all of the Committee members. That would be great. Thank you. Any follow up, Assemblywoman?

Assemblywoman Summers-Armstrong:

No, I think the thing that I like about what I heard is that they had to do the prove up first or actually do the work first before they got the abatement. Any other data would be wonderful, and I appreciate that. Thank you.

Chair Monroe-Moreno:

Thank you, members. Any other questions for this presenter? Seeing none. I thank you for your presentation today and for the information you have given us. We have a lot to think about and some work to do.

Mr. Moen:

Thank you. I look forward for the opportunity during this session to work with you as well. Have a wonderful day.

AGENDA ITEM VII—PRESENTATION ON THE HYDROGEN LANDSCAPE IN NEVADA

[This item was taken out of order.]

Chair Monroe-Moreno:

Members, that takes us up to our final presentation of the day. It is a presentation on the hydrogen landscape in Nevada. We will have the founder and executive director of the U.S. Hydrogen Alliance joining us. We have heard how hydrogen has so many uses. One of those uses includes playing a larger role in the transportation sector and potentially helping us meet our zero emissions goals. If you can go ahead and introduce yourself. Unfortunately, we did not receive that. I am going to ask at the end of your presentation if you could please send that to our staff so that anyone that is joining us online or goes back to review this Committee meeting would have that and then the members of the Committee would also have that. So, at the end of the presentation, please send it to our Committee staff. I appreciate that. Now the floor is yours.

Roxana Bekemohammadi, Founder and Executive Director, U.S. Hydrogen Alliance

Good afternoon, Chair and Committee members, it is an honor to speak to you today about the hydrogen landscape in Nevada. I come to you as an environmentalist, energy engineer, and an advocate. I hope to provide you with a pragmatic and honest assessment of the industry. The U.S. Hydrogen Alliance is a national hydrogen fuel cell business trade association, focused on policy and economic development. You may be familiar with one of our members, Southwest Gas. I will be talking about some other hydrogen activities. We execute our mission by educating policymakers on the advantages of hydrogen and fuel cells and creating sensible homogeneous and harmonized policies across all 50 states. We are focused on the strategic planning between and across states for the deployment of hydrogen fuel cells via hydrogen hubs, which I will define later. As well as freight corridors—that work is housed within our H₂Net initiative. ([Agenda Item VII](#))

A common question is why hydrogen? Let us start with reimagining our energy and transportation systems. How do we best architect those systems? How do we truly displace fossil fuels? Hydrogen is one of the many solutions that synergistically works across clean energy and transportation systems. The Department of Energy has depicted these synergies on the image displayed—on the left-hand side, you see power generation options including renewables like solar, geothermal, and wind. You can use this power to produce hydrogen, which can fuel zero emission vehicles, vessels, aircraft equipment, and also feed into industrial processes. Hydrogen can also be used to generate electricity, which closes the loop. There are major economic environmental benefits associated with the deployment of pageant fuel cells. A recent McKinsey report concluded that by 2050, hydrogen can meet 14 percent of the global energy demand, generate upwards of almost a \$1 trillion per year, support the development of 3.4 million jobs, and reduce carbon emissions by 16 percent, as well as 36 percent of NOx emissions. Hydrogen can also enable adoption of solar and wind power—additional adoption of solar and wind—by storing not intermittent power for long periods of time. Currently overgeneration of solar and wind is a limiting factor to additional deployment. You may be aware that Air Lockheed has built a large-scale hydrogen production facility in North Las Vegas. We also have BayoTech Inc. that is actively looking for sites right now across the state to produce hydrogen and the distributed manner to support hydrogen fuel cell, electric trucks, buses, and passenger vehicles.

There is ongoing research on how to distribute hydrogen across long distances and provide storage capacity. Southwest Gas is actively working with the University of Nevada, Las Vegas (UNLV) to pilot the blending of pageant and natural gas pipelines for residential, commercial, and industrial applications. Southwest Gas is on the cutting edge of this assessment in the country. We can also store vast amounts of hydrogen underground for seasons, unlike battery energy storage solutions that started discharging electricity after four to six hours. This is certainly a way to store all intermittent renewable power produced in the state. We also have the opportunity to generate electricity with hydrogen combustion and fuel cells on a utility and distributed scale.

You can see a Siemens engine on the top right and a zero-emission solution on the left, which shows the Ballard fuel system generating that power. These fuel cells are frequently seen providing base load and backup power, data centers like Microsoft, Google, and others as well as for the crypto mining industry, hospitals, and other critical power consumers. Fuel cells have proven to provide power during grid disruptions, natural disasters, and other applications that have run the reliability and resilience of the grid. We are seeing more disruptions in recent times. One of my favorite topics is that hydrogen is the only solution to decarbonizing freight. The heavy duty sector contributes to the greatest percentage of the harmful emissions from the transportation sectors, especially affecting those in low-income communities. Hydrogen is the only way to replace diesel, bunker fuel, and aviation fuel. Airbus has recently made many announcements about hydrogen planes for long range flights. Zero Emission Industries is working towards fuel cell oceangoing vessels. Ballard fuel cell systems are powering freight trains. And Tyson Motors is actively taking orders for long distance fuel cell electric trucks, that we anticipate traveling along the I-80 and I-15 to transport freight from western coast supports to inland ports and distribution centers as discussed earlier—these are a few major examples.

Not only can we decarbonize freight, but we can also decarbonize passenger mobility. The Regional Transportation Commission received \$3.8 million from the U.S. Food and Drug Administration (FDA) recently to purchase Ballard fuel cell electric buses. On the waterfront, Zero Emission Industries deployed the first commercial fuel cell ferry in the world and are actively looking at deploying potentially recreational small boats in Tahoe. We also have in the air—since we just talked about airports—Supernal, a Hyundai company. They are

building hydrogen air taxis as well as battery electric taxis. We also have Stadler Rail, which is building a fuel cell passenger rail car. We need accompanying infrastructure for these transportation modes. As a result, traditional fuel station builders like Lancer Energy and TLM Petro Labor Force, Inc. are building hydrogen fueling stations in other states, but they are all looking actively to find sites around I-80 and I-15 to support fuel cell electric trucks and cars that will be deployed in upcoming years. This is a summary of deployed hydrogen fuel cell applications across the U.S. as provided by the U.S. Department of Energy (DOE). There is a desire by the industry to create a hydrogen economy in the state.

To summarize, we probably have heard about hydrogen hubs, but what are hydrogen hubs? There is a simplified graphic of what a hub can look like. Renewables, biomass, renewable natural gas can be used as a feedstock for hydrogen production, which can then be stored and then distributed for transportation, energy generation, industrial and grid related purposes. Interestingly, we also see the opportunity for hydrogen in areas that may not be top of mind. For example, we can move heavy offered equipment like mining and farming to hydrogen. This is a near and dear topic to Senator Spearman—hydrogen can also be a solution to avoiding dust associated with acquiring fuel in hostile areas. Also, it is a little known fact that the U.S. Army is actively planning for the production of hydrogen as it is deemed as the next tactical field, especially with over 80 countries across the globe investing in hydrogen. Hydrogen and fuel cells fill gaps across our future energy and transportation systems, especially when we are looking at them being clean. Hydrogen can also enable other clean technologies and decarbonized transportation. Essentially, the hydrogen industry is here and looking to expand exponentially and provide additional economic and environmental benefits locally.

There is a reason why I am here now speaking with great urgency. President Biden signed into law, at the end of last year, the bipartisan infrastructure bill that included \$8 billion for the build out of regional hydrogen hubs. The U.S. DOE is responsible for distributing this \$8 billion and we now have 30 states in our great nation announcing their intent to apply for these dollars, including your neighbors California, Washington, Arizona, and a multi-state hub called the Western Interstates Hydrogen Hub comprised of Wyoming, Utah, New Mexico, and Colorado. With the state's infrastructure bank, the industry's interest in the state, the I-80 and I-15 being critical freight corridors, and the state's commitment to clean energy and transport, Nevada could be a strong competitor partner to these other neighboring states for these dollars. I respectfully thank you for your time and consideration. My contact information is shown, and I would be honored to your service. Thank you.

Chair Monroe-Moreno:

Thank you for your presentation. Members, questions? Senator Hammond.

Senator Hammond:

Thank you, Madam Chair. One question, when we are talking about the storage of hydrogen, you had mentioned in your presentation that there were several large storage facilities. Can you speak to the instability, if there is any instability, with storage of hydrogen, especially in large quantities? On top of that, how long can you store it for?

Ms. Bekemohammadi:

I am not aware of any issues with it, but I can follow up with those industry members that can provide more technical information about that. We can store it for months, seasons, or years; so, it has great potential.

Senator Hammond:

Along with that, when you are asking for the technical information—if I may Madam Chair—so you can store for weeks, months, years, seasons but if you have it all stored in one place, is there a need not to mix it with other? You want to make sure you use up whatever you are storing in one place and not mix it with some of the newer stuff. I am looking at; do you have to make sure you keep it siloed separately from new batches of hydrogen cells? Or can you add it in there, if it lasts indefinitely?

Ms. Bekemohammadi:

Hydrogen is utilized at a certain purity rate. We would store hydrogen exclusively in, let us say, this underground storage or cavern. Basically, we could use distribution systems, like the National Gas pipeline, in order to transport this to different places, even across the country. You can be continuously, in a sense, replenishing this vast energy source system over time as well. It is not like a closed capsule and then you reopen it, it is a continuous system if you can think of it that way.

Chair Monroe-Moreno:

Any other questions for the presenter? Seeing none. I will say—Assemblywoman Summers-Armstrong, do you have a question?

Assemblywoman Summers-Armstrong:

First of all, thank you so much for your presentation. I attended the presentation UNLV when they launched the program, the coordination with Southwest Gas to talk about hydrogen production. One of the ways that they talked about producing hydrogen was with water, and as you heard earlier, we have quite a scarcity within our state of water, and to use it for production of hydrogen of course raises questions and alarm. There is another way to produce hydrogen, and if you could speak to that so that we have some understanding about the difference between the two processes and which one of, if both, of these processes are ready to produce hydrogen in large quantities so that it could be used effectively in our communities.

Ms. Bekemohammadi:

This is a perfect question; this comes up very often. I would like to first say that this came up even last year when we were presenting Senate Concurrent Resolution 10 and I know that NV Energy brought up this question about using electrolysis. The thing is that every state has different resources in hand and water is certainly an issue. There are actually many pathways to producing hydrogen from many different feedstocks as well as processes. The most traditional way of producing hydrogen right now is through what is called steam methane reformation; 98 percent of it is being produced that way. It basically is warming up water to the point that it is steam, about 700°C, and then actually having that react with methane typically. Now methane can be, it can be coming from fossil fuel, or it can come from a renewable source like renewable natural gas, so it can come from off your

wastewater treatment facilities, from your landfills, et cetera. And you can produce renewable hydrogen in that way.

I would like to remind people, that as long as there are people, you will have local renewable natural gas readily available. But there are many other processes like paralysis; you can actually take plastics and produce hydrogen. You could take, instead of, even fossil natural gas instead of clearing it, you can produce hydrogen, you can of course produce hydrogen from electricity as well. But you know woody biomass—there are multiple methods of producing hydrogen. I encourage a diverse portfolio.

Assemblywoman Summers-Armstrong:

Thank you.

Chair Monroe-Moreno:

Seeing no other questions from our Committee members, I want to thank you for joining us today and for the presentation. Again, ask that you email that presentation; it becomes part of the public record for today's meeting. Thank you.

AGENDA ITEM VIII—WORK SESSION—DISCUSSION AND POSSIBLE ACTION ON RECOMMENDATIONS RELATING TO:

[This item was taken out of order.]

Chair Monroe-Moreno:

Members, as I mentioned at the beginning of our meeting, we do have a few of our members who are joining us virtually, they are multitasking so in the fear of losing them to other obligations they have, I am going to go out of order and move to our Work Session, and then go back to our presentations. I am going to turn it over to Ms. Thomas.

Ms. Thomas:

The Work Session Document (WSD) has been uploaded to the Committee's webpage and members have a hard copy as well. The Chair and staff prepared the WSD to assist the Committee in determining which legislative measures that will request for the 2023 Session as well as other actions the Committee may endorse, such as providing a statement in the final report or drafting a letter. The WSD contains a summary of recommendations, the members of the Committee do not necessarily support or oppose the recommendations in this document. Instead, it has been compiled and organized so that Committee members can review them and decide whether they want to accept, reject, modify, or take no action on the recommendations. The Committee is limited to ten legislative measures pursuant to NRS 218D.1816. The Committee may also vote to send as many statements or letters of recommendation or support as it chooses and may also include statements in the Committee's final report. ([Agenda Item VIII](#))

A. BROADBAND

Ms. Thomas:

The first recommendation is under broadband, it is to draft a letter urging the Department of Employment, Training and Rehabilitation (DETR) as well as the Department of Health and Human Services (DHHS) to coordinate with providers of broadband in Nevada to better identify households that qualify for affordable or low-cost Internet programs, such as the

Affordable Connectivity Program and specific programs offered by providers of broadband. The members may remember that this was discussed at the May 11 meeting.

Chair Monroe-Moreno:

Members, any questions? I will entertain a motion.

SENATOR HAMMOND MOVED TO APPROVE TO DRAFT A LETTER URGING THE DETR AS WELL AS THE DHHS TO COORDINATE WITH PROVIDERS OF BROADBAND IN NEVADA TO BETTER IDENTIFY HOUSEHOLDS THAT QUALIFY FOR AFFORDABLE OR LOW-COST INTERNET PROGRAMS, SUCH AS THE AFFORDABLE CONNECTIVITY PROGRAM AND SPECIFIC PROGRAMS OFFERED BY PROVIDERS OF THE BROADBAND.

SENATOR HARRIS SECONDED THE MOTION.

THE MOTION PASSED UNANIMOUSLY.

Ms. Thomas:

The second item is also regarding broadband. It would be to include a statement in the Committee's final report urging the State of Nevada to maximize current federal funding and grants to connect unserved persons and communities throughout the state with broadband. Again, this was discussed at the May 11 meeting.

Chair Monroe-Moreno:

Members, any questions? I will entertain a motion.

SENATOR HAMMOND MOVED TO INCLUDE A STATEMENT IN THE COMMITTEE'S FINAL REPORT URGING THE STATE OF NEVADA TO MAXIMIZE CURRENT FEDERAL FUNDING AND GRANTS TO CONNECT UNSERVED PERSONS AND COMMUNITIES THROUGHOUT THE STATE WITH BROADBAND.

ASSEMBLYWOMAN BROWN-MAY SECONDED THE MOTION.

THE MOTION PASSED UNANIMOUSLY.

B. ELECTRIC VEHICLES

Ms. Thomas:

Next item is regarding EVs, it is to include a statement in the Committee's final report encouraging the Department of Administration to prioritize EVs as replacement options for fleet inventory at locations throughout Nevada that have available EV charging infrastructure. This was also discussed at the May 11 meeting.

Chair Monroe-Moreno:

Members, any questions? I will entertain a motion.

SENATOR HAMMOND MOVED TO INCLUDE A STATEMENT IN THE COMMITTEE'S FINAL REPORT ENCOURAGING THE DEPARTMENT OF ADMINISTRATION TO PRIORITIZE EVS AS REPLACEMENT OPTIONS FOR FLEET INVENTORY AT LOCATIONS THROUGHOUT NEVADA THAT HAVE AVAILABLE LEVY CHARGING INFRASTRUCTURE.

ASSEMBLYWOMAN BROWN-MAY SECONDED THE MOTION.

THE MOTION PASSED WITH ASSEMBLYMAN ELLISON IN OPPOSITION.

C. IN-PERSON APPOINTMENTS AT NEVADA'S DEPARTMENT OF MOTOR VEHICLES RURAL FIELD OFFICES

Chair Monroe-Moreno:

The next item on our work session agenda was a letter that was going to encourage the DMV to change the way they do appointments. Since the printing of our WSD, we have found out that the DMV has already implemented that change. We will be pulling that from today's work session, and we will move on.

D. SCHOOL ZONE SAFETY AND ROAD SAFETY CAMERAS

Ms. Thomas:

The final one is recommendation number five regarding school zone safety and road safety cameras. It would be to draft a bill authorizing the installation and use of an automated traffic enforcement system by a governmental entity to enforce the provision of NRS 484B.363 which prohibits certain vehicle maneuvers within and established speed limits for a school zone or school crossing zone during certain times. This was discussed at the March 9 meeting.

Chair Monroe-Moreno:

Members, any questions?

Assemblyman Ellison:

Does this money come out of the federal or is that under a grant? How does that get paid for? I cannot remember.

Chair Monroe-Moreno:

This would not be mandating; it would be authorizing the local municipalities if they so choose to put in cameras in school zones. It depends on where they wanted to use that funding for that. It is not a mandate; it is authorizing language that was a similar level.

Assemblyman Leavitt:

I do not recall this either. So, with these cameras if they are installed are they for a very specific purpose or can they be used by law enforcement in any way they see fit?

Chair Monroe-Moreno:

The way the bill would be drafted would be for a very specific purpose in school zones, during school hours to protect our children. Does that answer the question?

Assemblyman Leavitt:

Yes, I know that was the main purpose, but I was wondering if a law enforcement agency needed to use those cameras to identify some other potential crime or whatever, if that was even possible for them to do so. I do not remember whether we discussed it or not.

Chair Monroe-Moreno:

I do not know if we discussed it in that detail, but I think that discussion would be hammered out during the legislative process as we draft and work the bill.

Any other questions?

I will entertain a motion.

ASSEMBLYWOMAN BROWN-MAY MOVED TO DRAFT A BILL AUTHORIZING THE INSTALLATION AND USE OF AN AUTOMATED TRAFFIC ENFORCEMENT SYSTEM BY A GOVERNMENTAL ENTITY TO ENFORCE THE PROVISION OF NRS 484B.363 WHICH PROHIBITS CERTAIN VEHICLE MANEUVERS WITHIN AND ESTABLISHED SPEED LIMITS FOR A SCHOOL ZONE OR SCHOOL CROSSING ZONE DURING CERTAIN TIMES.

ASSEMBLYMAN LEAVITT SECONDED THE MOTION.

THE MOTION PASSED UNANIMOUSLY.

Chair Monroe-Moreno:

I believe that ends our Work Session. Thank you all and if those who are joining us in the conference, if you have to leave, I understand but I wanted to make sure we got our Work Session done before you had to leave. Thank you.

AGENDA ITEM IX—PUBLIC COMMENT

Chair Monroe-Moreno:

Members, that brings us to our final agenda item, which is public comment.

[Chair Monroe-Moreno reviewed public comment guidelines.]

Is there anyone here in Las Vegas that would like to provide public comment? Then we will move up north to Carson City and then take anyone who is joining us by phone. We have one person here in Las Vegas.

Mr. Simmons:

Earlier today, a woman talked about net metering, and she mentioned the reduction and the value of energy produced in 2015. This ruling by the Commission was affirmed by the

District Court in Washoe County. It was the law of the land when in 2017, AB 405 was approved. The second thing is the primary sponsor of AB 405 was Chris Brooks. Senator Chris Brooks announced his resignation two weeks after I filed my complaint against Nevada Power. The third thing is Nevada Power misquoted AB 405 in its application before the Commission; so, AB 405 was never implemented correctly. It was never intended to restore rooftop solar. It was intended to codify the findings of the docket in 2015. We have a real issue with net metering and there is an open docket before the Commission. There is a chance that may not go well, there is a lot of push back from the Commission on this, and this Committee was created to understand what the problem was with net metering. You have the authority; you have a month to find out what is going on. I would urge you to start an investigation, and call me as a witness, as I can explain this under oath. Thank you.

Chair Monroe-Moreno:

Thank you. Anyone else here? All right, how about in Carson City? Is there anyone in Carson City that would like to make public comment?

Assemblyman Ellison:

No ma'am.

Chair Monroe-Moreno:

Thank you, Assemblyman. Mr. Simmons, did you have something else that you wanted to? Go ahead and turn the mic on and state your name again for the record.

Mr. Simmons:

Can we submit written comments to this meeting? What is the cut off time?

Chair Monroe-Moreno:

Within 24 hours of the meeting.

Mr. Simmons:

So up until noon tomorrow?

Chair Monroe-Moreno:

Correct. Thank you. BPS, do we have anyone on the phone wishing to make public comment?

Sean Sever, Deputy Administrator and Legislative Liaison, Division of Research and Project Management, DMV:

Good afternoon, Chair and Committee members. I wanted to comment briefly on the DMV item that was pulled from the Work Session. I do appreciate you pulling that item. After a meeting with Senator Brooks in March of this year, the DMV did change the policy that prevented Nevada residents from visiting DMV offices in towns in which they do not reside. I did want to point out that this is a bit of a catch 22 for the DMV as residents from the larger cities can quickly overwhelm the small staff and offices in our rural Nevada towns. We saw this happen during the height of the pandemic, and we had to put this policy in place.

There were dozens of people lining up overnight outside our Pahrump office for example, which as you can imagine made things much worse for everyone. This was up to the office's discretion on whether they needed to enforce this policy or not, because of course we want to serve any Nevadan at any office. As you know, our way out of this is our transformation, which will move most of our services online. We are in the midst of that effort now and we will be rolling out more services online in 2023. We do offer registration and driver's license renewal online among other services. We could use your help to remind Nevadans that they should check online first to see if they can do their DMV business on our website, instead of waiting in line in an office. Thank you for your ongoing support and your time today.

Chair Monroe-Moreno:

Thank you so much for calling in with that update. As a Chair of the Committee, I did not get an update from Senator Brooks on that issue or from you before the meeting. I appreciate you giving that information to us now.

BPS, do we have any other callers on the line?

Caroline Jones, Environmental Defense Fund:

Hello, I am here on behalf of the Environmental Defense Fund (EDF). The EDF sees hydrogen as a potential climate solution in hard to decarbonized sectors, but only if leaks are accounted for and prevented. Hydrogen can be an important climate strategy in Nevada and around the United States but scaling up the use of hydrogen to decarbonize heavy duty transportation, aviation, shipping, or industrial applications requires careful consideration of hydrogen's environmental and climate impacts, which recent EDF research clients have been historically underestimated. Before states begin to rely too heavily on hydrogen to meet their climate goals, we have to understand how and where it is best suited for use and how it can itself contribute to climate change if it is implemented poorly and without sufficient safeguards. There is emerging consensus in the scientific community about hydrogen's warming impact as a powerful short lived indirect GHG.

Hydrogen itself, as a leak prone gas, has owned potent and often overlooked warming effects. Based on the latest science, the actual warming power of hydrogen in the atmosphere is two to six times higher than standard estimates depending on the timeframe. When we consider the near term climate impact, EDF research shows that climate benefits from hydrogen usage can be severely diminished for high to moderate emission rights. Minimizing or eliminating hydrogen leakage is absolutely critical to the success of hydrogen as part of the solution to climate change. Furthermore, hydrogen is not an inherently climate neutral source of energy. Its effect on the climate—positive or negative, depends on where and how it is produced. Hydrogen boost by fossil fuels without carbon capture and storage, known as grey hydrogen, is not a climate solution and should not be considered in Nevada's plan for development. Furthermore, EDF findings point out that carbon dioxide is not the only important pollutant produced in hydrogen generation, especially when it is not produced with renewable energy. In the case of hydrogen produced through feedstocks paired with CCS, methane can also be released at significant levels in addition to hydrogen emissions contributing to the overall climate warming effects of fossil fuel-based hydrogen. Specifically, methane leakage from producing hydrogen using natural gas and CCS is a significant concern. The climate effects of methane leakage are often underestimated in hydrogen assessments and methane is a powerful GHG with a high global warming potential. A level of climate harm only increases if there is embedded carbon lifecycle analysis of hydrogen. Across all methods of hydrogen production, leak monitoring implementation is of the utmost importance and should be a primary concern for any

hydrogen build out in Nevada. Given the risks of a rapid large scale build out hydrogen should be prioritized only for hard to decarbonized sectors like steel and cement manufacturing or as an alternative, fuel for shipping and aviation. I appreciate the presentation and thank you for the opportunity to speak. ([Agenda Item IX A](#))

Chair Monroe-Moreno:

Thank you so much for joining us for public comment. BPS, do we have any other callers waiting for public comment?

BPS:

Thank you, Chair. The public line is open and working but there are no callers wishing to offer public comment at this time.

The following written comment was received following the meeting:

- Susan Fisher, Vice President, Government Affairs, McDonald Carano LLP.
([Agenda Item IX B](#))

Chair Monroe-Moreno:

Thank you. With that, members, thank you for your time in participating in this Committee over several months and for those that sat in today, thank you for answering the call to step up and be a substitute, we truly appreciate it. I had the chance to work with you during session, so I knew you knew the subject matter and could trust that you would make objective opinions. This is our last meeting. It is a hot summer, it is a little humid, stay hydrated out there, and I will see you soon.

Assemblyman Ellison:

Madam Chair. I wanted to say that you have done a fantastic job. You have been very fair, and I thought you did a great job. Thank you.

Chair Monroe-Moreno:

Thank you so much. That means a lot coming from you. I will get up to see you soon. We are adjourned.

AGENDA ITEM X—ADJOURNMENT

There being no further business to come before the Joint Interim Standing Committee on Growth and Infrastructure, the meeting was adjourned at 1:30 p.m.

Respectfully submitted,

Christina Harper
Manager of Research Policy Assistants

Marjorie Paslov Thomas
Senior Principal Policy Analyst

APPROVED BY:

Assemblywoman Daniele Monroe-Moreno, Chair

Date: _____

MEETING MATERIALS

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item II	Bari Levinson, Nevada Resident	Written Public Comment
Agenda Item IV A-1	Kristopher Sanchez, Deputy Director, Governor's Office of Economic Development (GOED) James Hue, Director of Public Policy and Government Affairs, GOED John Restrepo, Principal, RCG	Microsoft PowerPoint Presentation
Agenda Item IV A-2	Kristopher Sanchez, Deputy Director, Governor's Office of Economic Development (GOED) James Hue, Director of Public Policy and Government Affairs, GOED John Restrepo, Principal, RCG	Report
Agenda Item V	Kristina L. Swallow, P.E., Director, Director's Office, Nevada's Department of Transportation Jeff Doyle, Project Manager, CDM Smith, Inc.	Microsoft PowerPoint Presentation
Agenda Item VI A-1	Kenneth G. Moen, A.A.E., C.A.E., President, Nevada Aviation Association (NvAA)	Microsoft PowerPoint Presentation
Agenda Item VI A-2	Kenneth G. Moen, A.A.E., C.A.E., President, NvAA	Link to Brochure
Agenda Item VI A-3	Kenneth G. Moen, A.A.E., C.A.E., President, NvAA	Executive Summary
Agenda Item VI A-4	Kenneth G. Moen, A.A.E., C.A.E., President, NvAA	Abatement Report
Agenda Item VII	Kenneth G. Moen, A.A.E., C.A.E., President, NvAA	Microsoft PowerPoint Presentation
Agenda Item VIII	Research Division, Legislative Counsel Bureau	Work Session Document

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
<u>Agenda Item IX A</u>	Caroline Jones, Analyst, U.S. Climate, Environmental Defense Fund (EDF) Katelyn Roedner Sutter Senior Manager, U.S. Climate, (EDF)	Written Public Comment
<u>Agenda Item IX B</u>	Susan Fisher, Vice President, Government Affairs, McDonald Carano LLP	Written Public Comment

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