MINUTES OF THE
SENATE COMMITTEE ON LEGISLATIVE OPERATIONS AND ELECTIONS

Eighty-first Session
May 6, 2021

The Senate Committee on Legislative Operations and Elections was called to order by Chair James Ohrenschall at 3:36 p.m. on Thursday, May 6, 2021, Online and in Room 2149 of the Legislative Building, Carson City, Nevada. Exhibit A is the Agenda. All exhibits are available and on file in the Research Library of the Legislative Counsel Bureau.

COMMITTEE MEMBERS PRESENT:

Senator James Ohrenschall, Chair
Senator Roberta Lange, Vice Chair
Senator Carrie A. Buck

COMMITTEE MEMBERS ABSENT:

Senator Nicole J. Cannizzaro (Excused)
Senator Heidi Seevers Gansert (Excused)

GUEST LEGISLATORS PRESENT:

Senator Pat Spearman, Senatorial District No. 1
Assemblywoman Lesley E. Cohen, Assembly District No. 29

STAFF MEMBERS PRESENT:

Michael Stewart, Policy Analyst
Bryan Fernley, Counsel
Diane Rea, Committee Secretary

OTHERS PRESENT:

Mark Wlaschin, Deputy for Elections, Office of the Secretary of State
Jeanine Mooers
Dora Uchel-Martinez
Sandra Perez
Annette Magnus, Battle Born Progress
Shirley Cruz

Steven Cohen
Christine Saunders, Progressive Leadership Alliance of Nevada
Jasmin Tobon, Planned Parenthood Votes Nevada
Emily Persaud-Zamora, Executive Director, Silver State Voices
Elizabeth Davenport, American Civil Liberties Union of Nevada
Andrew Sierra, Nevada Conservation League
Eric Jeng, Asian Community Development Council
Mikey Kelly, Nevada Democratic Veterans and Military Families Caucus
Maria Nieto-Orta, Nevada State Coordinator, Mi Familia Vota
Kerry Durmick, Director, All Voting is Local Nevada
Steve Polikalas, Western States Hydrogen Alliance
Roxana Bekemohammadi, Executive Director, Western States Hydrogen Alliance
Alfredo Alonso
Bernard Rowe, Managing Director, Ioneer, Ltd. USA
Curt Augustine, Alliance for Automotive Innovation
La Stanja (Stani) Baker, Toyota Motors North America, Inc.
Rose McKinney-James, Non-Executive Director, Ioneer, Ltd. USA
Kenneth Evans, President, Urban Chamber of Commerce
Dwayne McClinton, Southwest Gas
Alexandria Dazlich, Nevada Restaurant Association
Peter Guzman, President, Latin Chamber of Commerce
Alan Mace, Ballard Power Systems
Jake Tibbitts, Eureka County
Christopher Hussey, Vice President of Business Development, Lancer Energy
Arielle Edwards, City of North Las Vegas
Marie Steele, NV Energy
Randy Robison, City of Las Vegas
Nikki Bailey-Lundahl, Nevada Mining Association
Jared Semik, President, Eternium Aerospace
Jorden Kemper, Zero Emission Advisors
Kyle Davis, Nevada Conservation League
Denise Rohrer, Sierra Club Toiyabe Chapter
Patrick Donnelley, Nevada State Director, Center for Biological Diversity
Dylan Sullivan, Natural Resources Defense Council
Chelsey Hand, Great Basin Resource Watch
Jennifer Taylor, Deputy Director, Office of Energy, Office of the Governor

CHAIR OHRENSCHALL:
Today, we have Assemblywoman Leslie Cohen to introduce Assembly Bill 121.

ASSEMBLY BILL 121 (1st Reprint): Revises certain provisions relating to elections. (BDR 24-774)

ASSEMBLYWOMAN LESLEY E. COHEN (Assembly District No. 29):
I would like to read my written introduction (Exhibit B) for A.B. 121.

Primarily, the measure allows a person with a disability to use the Effective Absentee System for Elections (EASE) to register and vote. The program was established to allow uniformed military and overseas Nevadans to register or request a ballot and vote entirely online using a digital or electronic signature.

Assembly Bill 121 requires the Office of the Secretary of State (SOS) to allow EASE to be used by an elector with a disability to register to vote and a registered voter with a disability to apply for and cast an absentee ballot.

MARK WLASCHIN (Deputy for Elections, Office of the Secretary of State):
Nevada Revised Statutes (NRS) 293D identifies the duties of the SOS and county clerks as they relate to the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA). It includes provisions that govern the distribution of ballots and balloting materials to covered voters with a variety of needs through a system of approved electronics transmission established by the SOS. The EASE was first created in 2014 and has been used by members of the military and overseas citizens with much success since then. Covered voters are able to register to vote, request a ballot and receive election documents. It does not allow voters to vote online but enables them to send a verified document back to their county clerk or registrar indicating for whom they wish to cast a ballot. Since its inception, 3,772 Nevadans have used this system successfully with 1,273 using it during the 2020 general election.

In April 2020, the system was modified so eligible Nevada voters with disabilities were able to use it as well. Ninety-three individuals with disabilities used the system successfully during the 2020 general election.

The Office of the Secretary of State is in support of this bill.

I will be providing a short demonstration of EASE. The EASE program is turned on 45 days prior to the start of an election and is shut off once the polls close on Election Day. After reading over the information telling what the system does, the individual will click continue. Through the American Disabilities Act

(ADA) compliant platform, a person is able to continue through the different screens. There is an affirmation on the second page identifying if the individual is qualified and eligible to use the application, along with a declaration that the individual is eligible. After affirming eligibility, the individual is able to enter his or her personal information. There are a number of options the individual can click to identify which covered voter he or she is. After completing the CAPTCHA on the information page, a popup comes up to recognize if a person has created multiple ballots. Individuals are able to make more than one ballot, but the first barcode on the ballot will be the only one sent to be counted. Any other ballots sent will be ignored. On the additional information page, the individual affirms residency in the State, and there is a box to identify if someone is assisting the voter with this process. If the individual is not registered, it will be a new registration.

Pop-up screens are incorporated in the process to identify whether registration deadlines have passed. Some of these will be adjusted to reflect the updated timelines if A.B. 121 is passed. On the next page, the individual enters his or her residential information and provides political party information. There is an option for the individual to receive the sample ballot in larger type.

After confirming the information, the system pulls up the precinct-specific ballot for a voter based on residency. This allows the individual to go through the arrows and identify the candidates for whom he or she is casting a ballot. Voters are offered the opportunity to review their selections. The system identifies if there is a blank, and the ballot allows voters to go back and correct their choices. Once voters confirm their votes, they click "confirm selections" at the bottom.

At this point, everything is grayed out and unable to be clicked until voters identify and recognize they are responsible for returning ballots to their county election offices.

At this point, the voter is offered three options: return the ballot by mail, and the system populates it with the address of the county clerk or registrar, return it by a secured email or return it by fax.

If voters click "return it by email," the system creates a secured PDF digital document, and only the county clerk's offices have the password for retrieving

the ballots. The individuals are then able to email the secured and locked files to their county clerks who will open them.

If they return ballots by mail, the voters are allowed to print out mailing labels. The process and timelines are the same as for any other absentee ballot as to how long after Election Day that ballot can arrive at the clerk's office and still be counted, but ballots must be postmarked by Election Day. This includes a six-page packet to be returned.

If this is done on Election Day, individuals are able to register to vote and cast their ballots at the same time until 7:00 p.m. on election night.

The county clerks will receive the PDF form to print out and transcribe the information to an actual ballot and then cast that ballot.

JEANINE MOOERS:
I am totally blind and have been voting independently since 2004 using the audio ballot capability included in the electronic voting machines at my voting precinct and have done so with great pride and joy. This past year, access to Nevada Effective Absentee System for Elections (NVEASE) for residents with disabilities, due to the pandemic, has allowed me to vote in two consequential elections from home using my i-Phone and my refreshable brail display, two pieces of technology I use daily without having to worry about transportation to a reduced number of polling places with possible exposure to Covid-19. I was able to successfully fill out and submit my ballot without any assistance and with relatively few technical issues and was again proud and excited. Having had such a positive experience using NVEASE to vote, it is vital that Nevadans with disabilities be given permanent access to this important voting option by law so all Nevadans with disabilities can vote independently, securely and conveniently as I have been able to do. This past year, I voted along with members of the military and other Americans overseas, without having to find assistance, worry about transportation to the polls or apply for a paper absentee ballot, the last of which often requires the assistance of others and is not private for a person with a visual impairment or other disabilities.

Assembly Bill 121 will make access to the NVEASE online-voting system for Nevada residents with disabilities a permanent voting option.

DORA UCHEL-MARTINEZ:
I am totally blind. Last year I helped my husband, Juan Martinez, vote. He wanted to experience voting at the polls. We had to find accessible transportation because both of us are visually impaired and cannot legally drive. We took a bus to the nearest polling place, which was a library near McQueen High School. It was difficult to find the door, which my service dog located. We went in, and there was not a place to register. It was his first time to vote, so somebody helped us. When we got to the social security numbers, they read it out loud, so it was an infringement on his privacy. With NVEASE that problem would be eliminated for people with any type of disability. They will not have to deal with transportation accommodations or personal care attendants to help them go to a polling place and vote.

SANDRA PEREZ:
I am the Chair of the Nevada Governor's Council on Developmental Disabilities, but today am speaking on my behalf. I cannot use my hands to use a computer. I use Morse code with two switches under my chin. This is an effective way for me to communicate and to get many things done independently. During the pandemic, I realized how useful doing many things electronically can be. Paying bills to go Christmas shopping was so much easier online. I am a patriotic citizen of Nevada, and I love to vote. Having an electronic system would allow me vote without having to rely on someone to take me to a polling place, help me cast my ballot and then take me home again. This new system will assist me to have a private voting experience using tools convenient to me. When I do not have my computer, I tap with my nose to vote on the voting machine. It is not very sanitary, but this is how I vote.

At the last hearing, a man testified that people are able to go to the voting places, implying that we are lazy or want an easy way out. This made me angry. I am not lazy, nor do I want the easy way out. I just want to vote the way that is the best way for me to vote. I can also see how this new system will assist people in congregated settings be able to vote without dealing with transportation concerns. They will also be able to take their time to cast their votes.

SENATOR LANGE:
Do you have an estimate of how many people in Nevada are disabled and would qualify under the guidelines for this program?

ASSEMBLYWOMAN COHEN:
*Nevada Revised Statute*s 426.068 guidelines define disability, and 26.8 percent of adults in Nevada have some type of disability.

SENATOR LANGE:
Do you know how many people are using this program in Nevada?

MR. WLASCHIN:
There are 1,200 to 2,000 individuals who have used EASE to develop a ballot, with slightly less than that returning the ballot per election cycle.

SENATOR LANGE:
There is a gap between people eligible and those who have used the program. What can Nevada do to close that gap?

MR. WLASCHIN:
It would be a joint effort to contact the registrars and the different advocacy groups that helped build the program and ensure it is ADA compliant. Those groups would be most effective and cost-efficient to get the word out about this program and opportunity.

ASSEMBLYWOMAN COHEN:
Nevada EASE is a new program for allowing people who are disabled in Nevada to vote.

MS. UCHEL-MARTINEZ:
Before, it was accessible to go to the polls and use the machines, but with the pandemic, voting with NVEASE is convenient. You can vote at your home in comfort. It is accessible, and the Nevada Governor's Council on Developmental Disabilities has a NVEASE tutorial on YouTube. Once this passes, we will reach out to people to get the skills to use this important civil right.

CHAIR OHRENSCHALL:
Do you think county clerks have the ability to implement this?

MR. WLASCHIN:
In discussing this with clerks and registrars, this is something they are aware of. They have been involved in the discussions and have the capacity to address even an increased number of individuals using the EASE program.

Approximately 1,200 to 2,000 total people have used EASE, which includes military personnel and overseas citizens along with their dependents. Only 93 individuals with disabilities used it during the last election cycle.

ASSEMBLYWOMAN COHEN:
We had testimony at the last hearing from the Clark County Clerk's Office, Registrar of Voters Joe Gloria, who stated that EASE had worked well and the Office had success with EASE.

SENATOR LANGE:
How many other states use a similar program?

MR. WLASCHIN:
I will get that information to you. I do know that systems similar to EASE are relatively and increasingly common across the Country. They are not all the same. There are some commercial variants.

ANNETTE MAGNUS (Battle Born Progress):
We strongly support A.B. 121. I will read my statement (Exhibit C). Every Nevadan should share the same joy that I feel when I get to vote safely and conveniently in privacy.

SHIRLEY CRUZ:
I want to talk in support of this incredible bill. As a 14-year-old, I am excited to be able to vote within four years. The thought of the disabled people who have not been able to vote due to their disability, and no accessibility due to transportation, is disappointing. My parents' disabilities make it frustrating for me because they are able to do so much, but limits are placed on them due to their disabilities.

STEVEN COHEN:
Ditto.

CHRISTINE SAUNDERS (Progressive Leadership Alliance of Nevada):
I would like to read my statement (Exhibit D) in support of A.B. 121.

JASMIN TOBON (Planned Parenthood Votes Nevada):
I would like to read my statement (Exhibit E) in support of A.B. 121.

EMILY PERSAUD-ZAMORA (Executive Director, Silver State Voices):
I would like to read my statement (Exhibit F) in support of A.B. 121.

ELIZABETH DAVENPORT (American Civil Liberties Union of Nevada):
The NVEASE process has already proven to be easy to implement and allowed those in the armed forces and people with disabilities access to vote. For many people with disabilities, the process of physically filling out a ballot and appearing at a polling place is extremely difficult. Many times this requires transportation with specialized equipment to get to the polling place and then difficulty navigating the polling place. Assembly Bill 121 will provide voters with disabilities the ability to use the existing absentee NVEASE system and will alleviate the significant difficulties voters with disabilities experience. Voters with disabilities should have the same easy access to voting as all other voters. Democracy is a better place with greater access to voting for all Nevadans.

ANDREW SIERRA (Nevada Conservation League):
The Nevada Conservation League envisions a future where all Nevadans can thrive because they have access to a healthy climate, clean air, clean water and outdoor spaces as well as safe, healthy and sustainable communities. This vision is not possible without a fair and inclusive democracy in which all voters can participate. Passing strong laws to protect our environment depends upon open and fair elections because we believe the long-term health of our planet is directly linked with the health of our democracy. For voters with disabilities, absentee voting has been the safest and most successful way to cast a ballot. This bill will make voting more accessible to all Nevadans by allowing voters with disabilities to choose NVEASE and extending the UOCAVA deadline to Election Day. Improving voting rights and access is fundamental to making our elections more responsive to Nevadans living with disabilities.

ERIC JENG (Asian Community Development Council):
Assembly Bill 121 removes existing barriers and serves a lot of limited-English proficiency voters. We would like to be in solidarity with the people in disability communities to make sure we are removing barriers, making voting more accessible and equitable using an existing platform like UOCAVA. We are in full support of this bill.

MIKEY KELLY (Nevada Democratic Veterans and Military Families Caucus):
We support A.B. 121. In this time where we are seeing the right of our fellow Americans to vote being disenfranchised in a way that we have not seen in at

least 50 years, any program that ensures our fellow Americans the right to access the vote, the most powerful right we have, is important to us. As a council and caucus, we stand in support of A.B. 121.

MARIA NIETO-ORTA (Nevada State Coordinator, Mi Familia Vota):
I would like to read my statement (Exhibit G) in support of A.B. 121.

KERRY DURMICK (Director, All Voting is Local Nevada):
I would like to read my statement (Exhibit H) in support of A.B. 121.

ASSEMBLYWOMAN COHEN:
One of the callers made the point about someone who is paraplegic and how this would help. There is definitely an accessibility issue.

MS. UCHEL-MARTINEZ:
This is an important bill to all of us. We do urge your support in this matter. Upon passing, we will be involved in spreading this message throughout Nevada.

MS. PEREZ:
I am the chair of the Nevada Governor's Council on Developmental Disabilities, and this information will be going out everywhere.

CHAIR OHRENSCHALL:
I will close the hearing on A.B. 121 and open the hearing on Senate Concurrent Resolution (S.C.R.) 10.

SENATE CONCURRENT RESOLUTION 10: Directs the Legislative Committee on Energy to conduct an interim study concerning the development of hydrogen and lithium as energy resources in this State. (BDR R-523)

SENATOR PAT SPEARMAN (Senatorial District No. 1):
I would like to read my written introduction (Exhibit I) of S.C.R. 10. I had the opportunity to speak with members of the environmental protection community and made sure their concerns and thoughts are a part of the amendment (Exhibit J) that Eureka County proposed for this bill. We need to understand and know all the opportunities and possibilities for renewable energy that exist in our State.

The cost-benefit analysis will include healthcare benefits. As we are exploring and implementing new technologies, we should make sure we do it in a way that protects the environment and those who are the most vulnerable in our communities.

Senate Bill No. 254 of the 80th Session requires reports to be submitted as to whether our energy policies are appropriate for our 2050 goal of zero carbon emissions. We also passed S.B. No. 358 of the 80th Session in 2019 requiring our Renewable Portfolio Standards must be at 50 percent by 2030. We have passed several pieces of energy legislation since 1997 but have not passed a comprehensive package that delineates how we will get there. This is a study, and if done correctly, it can facilitate the development of a plan to achieve the 2030 goals and lay the foundation for a zero carbon emissions by 2050.

We are now in the 2021 Legislative Session. We have three Sessions left–they are 2023, 2025 and 2027. When the legislature meets in 2029, we must be about the business of finalizing legislation to meet the 2030 standards. If we do not start looking at all of the renewable energy options now, we will not be ready. We want to make sure we are exploring all the options and opportunities to develop our renewable energy policies, strategies and resources in this State. If we do not decide how that happens, it will be decided for us.

STEVE POLIKALAS (Western States Hydrogen Alliance):
Hydrogen is going to play a role the in State Climate Strategy signed by Governor Steve Sisolak. Hydrogen is the simplest and most abundant element in the universe. Seventy-five percent of the sun is hydrogen. We have an unlimited access to energy through the sun. The question is: how do we use that energy and employ it here on earth for storing and shifting hydrogen in large amounts of renewable energy? Hydrogen represents the cleanest and most flexible solution to that issue. The redundancy, resiliency and security of our energy mix is viable to industries in Nevada, including airports, gaming properties, hospitals, police and fire stations. The importance of this is to our national and State security cannot be overstated.

ROXANA BEKEMOHAMMADI (Executive Director, Western States Hydrogen Alliance):
I would like to read my statement (Exhibit K) in support of S.C.R. 10. Hydrogen is the next frontier to providing a sustainable future for the next generation while simultaneously building upon the State's renewable energy green job creation, economic diversification, emissions reduction, grid resiliency and

national security. Western States Hydrogen Alliance is comprised of world leaders in clean energy technology. It is interested in investing in this State and creating a new hub of research and economic development in zero-emission energy and transportation applications.

The federal government, including the U.S. Department of Energy as well as other agencies like the U.S. Department of Transportation, are seeing hydrogen as a key way to enable a decarbonized economy. We see this focus due to the ability for hydrogen to serve as the means to achieving energy security, economic prosperity and resilience.

We have heavy production in California, Louisiana and Texas. A lot of that hydrogen production is for the refinement of crude oil. It is to remove sulfur from the crude oil which helps eliminate solid oxide electrolysis cell emission. That is a key way hydrogen has been playing in cleaning our air. Hydrogen is also utilized in the production of fertilizers, treating metals and processing fruits, and is a key component of industrial processing.

Hydrogen was recently identified as a way to decarbonize our transportation energy sectors due to two attributes of the fuel. It can be produced by renewable feedstocks, and hydrogen consumed in fuel cells provides electricity and heat without combustion, avoiding tailpipe emission. Over 500 megawatts of stationary fuel cells are powering our Country, and numerous fuel cell vehicles and equipment such as cars, buses, trucks and forklifts are in operation today.

With a great state at the intersection of the west, it is the ideal time to become a major player in these large markets with so much untapped economic potential.

Wind turbines and solar produce a long-term energy source. Hydrogen can produce storage for seasons compared to batteries with only about four hours of storage capacity. Hydrogen production has a number of benefits for the electric grid, storing curtailed renewable power, load chafing and frequency regulation which further reduces carbon dioxide.

Extreme weather is expected at this point, and according to climate scientists, we need to focus on the importance of integrating group resiliency solutions.

Hydrogen is a superior energy storage and a way to provide distributor generation and back-up power to critical facilities.

During Hurricane Sandy, fuel cell power systems were the most reliable power generators. Over 800 backup fuel cell systems have been deployed in almost half the Nation.

Examples of what is happening with fuel cells in transportation include a hydrogen fuel cell bus powered by Ballard Power System; the Regional Transportation Commission of Southern Nevada has two buses; Washoe County has an interest in advancing hydrogen fuel cell transportation; Hyundai has a fuel cell electric truck; fuel cell electric forklifts are found in Las Vegas distribution centers; a fuel cell-powered ferry built by Golden Gate Zero Emission Marine, now known as Zero Mission Industries; and fuel cell watercrafts slated for Lake Tahoe and Lake Mead. Hydrogen fuel cell electric mining and other heavy equipment are being introduced globally as well as military tanks and other equipment for national security.

Diversifying zero emission fuels is beneficial by providing additional economic opportunities, resilience in transportation and reducing greenhouse gases.

McKensey reports that by 2050, the U.S. hydrogen industry could generate an estimated $750 billion per year in revenue and support 3.4 million jobs. Hydrogen can meet 14 percent of energy demands in the Country.

Senate Concurrent Resolution 10 would facilitate research for federal grants, training opportunities, academic research and workforce development.

ALFREDO ALONSO:
I fully support S.C.R. 10.

BERNARD ROWE (Managing Director, Ioneer, Ltd. USA):
I am the president of Ioneer, which is developing the Rhyolite Outreach Program in Esmeralda County. We have the opportunity to create thousands of jobs in the coming years as part of Nevada's and the Nation's transition to electrification and the development of a lithium ion battery manufacturing supply chain. I would like to give my presentation (Exhibit L) in support of S.C.R. 10.

CURT AUGUSTINE (Alliance for Automotive Innovation):
The Alliance represents 99 percent of the manufacturers of vehicles sold in the United States as well as many of the technology providers for zero-emission vehicles belonging to our association. Zero-emission vehicles (ZEV) for the auto industry are the future. We have 53 models of electric vehicles for sale in the United States, and there will be over 100 by 2023. Part of our commitment to this industry is spending $250 billion by 2023 on ZEVs, and that includes both battery electric and hydrogen fuel cell electric vehicles.

We are on the cusp of having an all ZEV future. Many manufacturers have announced by 2030 or 2035 their entire product lines will be ZEV. Nevada is in the process of adopting the ZEV mandates based on California standards. Today, the California Air Resources Board announced goals for the next decade on ZEVs. The Board is saying by 2026; the mandate will be 25 percent of all vehicles sold in California will be ZEVs, 33 percent by 2027, 50 percent by 2029 and 75 percent by 2031. This cannot be done without the fuels to support these vehicles. The sourcing of hydrogen and lithium is critical to any future success we have in the zero-vehicle market.

Particularly important about the sourcing, with President Joe Biden's plans for a Buy American future, without more U.S.-sourced materials, we are not going to be able to meet these standards of both hydrogen and lithium for batteries that power electric and hydrogen vehicles.

LA STANJA (STANI) BAKER (Toyota Motors North America, Inc.):
I am a member of the Alliance for Automotive Innovation. We are here today in support of S.C.R. 10. Toyota has been developing hydrogen fuel cell electric vehicles for 25 years and believes a combination of hybrid electric vehicles, battery electric vehicles and hydrogen fuel cell vehicles are crucial for the decarbonization of the transportation fleet. We introduced our first generation Toyota Mirai in 2015, which is our fuel cell electric vehicle with vehicle incentives that made it possible for us to launch that vehicle. As a result, there are about 10,000 fuel cell electric vehicles on the roads in California today. Roughly 7,000 are the Toyota Mirai. We just introduced our 2021 model with a range of 400 miles and a time to refuel of three to five minutes. With fuel cell electric vehicles, one of the opportunities is the ability to address the needs in the environmental justice community. People living in multiunit dwellings without plug-in charging units will be able to fuel in just three to five minutes at a central fueling location.

In California, our hydrogen fuel cell electric fueling stations are generally collocated at existing gas stations. Customers would have the same experience they have with their current internal combustion vehicle. We have a longer range, so people who live in remote areas and commute to work can do so with a quick refuel and no concerns about traveling the distance needed. Some cities are not able to have electric charging in community locations. A fueling station in a central location provides a better opportunity to quickly fuel and move on.

Hyundai and Toyota are researching and developing fuel cell stacks, which are being used to scale up to heavy-duty trucks and buses.

CHAIR OHRENSCHALL:
How much emission does it produce, and how far can it go before it needs to be recharged? Do these vehicles lack power?

MS. BAKER:
It is about three to five minutes to refuel, can travel 400 miles and the only emission from these vehicles is water vapor.

It actually has more power because it is an electric engine. An electric drive vehicle does not have a combustion engine, and there is a lot of low-end torque.

SENATOR SPEARMAN:
Have you covered the recharge ability?

MS. BAKER:
When you apply the brakes in a hybrid vehicle, it captures the heat energy and recharges the batteries. This can be done with the accessories on the electric vehicles. The fuel cell electric vehicle does not have as much drainage on the battery because you are generating the electricity with fuel as you go along.

Some of these vehicles have a connection on them that, if there were a natural disaster, you could use your vehicle as a generator because there is no emission. You could plug your vehicle into your house and generate power for your home for up to two weeks on the fuel in the tank, as necessary, during an emergency. Vehicles in other parts of the world already have that component.

SENATOR LANGE:
I think California is ahead of Nevada on some of these things. Is this vehicle, and the 2015 model, predominately available in California, or is it available in all states?

MS. BAKER:
It is available solely in California because that is where the fueling infrastructure exists today. A number of organizations are working to extend the hydrogen highway. Where there is fueling infrastructure, we want to be able to offer these vehicles to customers.

We see opportunities in the Pacific Northwest to be able to bring these vehicles there next. We are also doing some work in the northeast, but California has the entire fleet of fuel cell electric vehicles.

SENATOR LANGE:
If Nevada developed fueling stations, what is the time frame? How long would it take to build the stations first, and then get the vehicles?

MS. BAKER:
Stations take six months to a year to complete in California.

MR. AUGUSTINE:
Part of the challenge in California is local permitting issues. The cities have authority, and they are concerned. It is new and different. Unlike charging stations for electric vehicles, hydrogen stations must be permitted. Local gas station owners are interested in hydrogen stations because the recharging time is three to five minutes to fill up a vehicle. There are potential commercial sites to put stations in, which eliminates some of the permitting issues. California has made progress in getting locals to accept the progress, but it is a challenge. We have been working with some Legislators in Nevada on these issues as we are preparing for Nevada to be a mandated state. There are a lot of incentives for property and potential station owners to put stations in, and hopefully we will have some solutions either in this Session or in two years to make this successful.

MS. BEKEMOHAMMADI:
There are two other important factors to consider with hydrogen fueling infrastructure. There are stationary fuel cells that can provide power to the

chargers for battery electric vehicles, especially the bigger vehicles. The stations are comparable, and there is no paradigm shift. It is really going to the gas station just like with your normal vehicle.

We are lucky in Nevada to have the production plant. The volume is going to be really important for the light-duty as well as heavy-duty applications, even stationary power. Hydrogen plays a lot of roles, and there is going to be a need for distribution infrastructure as we update the natural gas pipelines. Hydrogen-compatible material needs to be considered. There is an ecosystem that can be developed in Nevada that will enable gasoline and diesel parity with a zero-emission solution.

CHAIR OHRENSCHALL:
You mentioned the lithium mine at Silver Peak. Is lithium only available in Nevada and the People's Republic of China?

MR. AUGUSTINE:
Lithium is found in other places in the world. Australia, South America, Africa, Nevada and the Salton Sea in Southern California have lithium, but often the element is in politically unstable parts of the world. This is why U.S.-based alternatives are being considered. For stability, nobody wants to be back in the 1970s oil shock days where we were held captive to foreign agendas. This resolution helps to domesticate our needs for these battery components.

ROSE MCKINNEY-JAMES (Non-Executive Director, Ioneer, Ltd. USA):
I am the managing principal of Energy Works, LLC, and McKinney-James and Associates. Nevada has been a leader in clean energy development for more than three decades. That support has been demonstrated by the commitments of multiple Legislators. As a State, and over many years as policy makers, you have approved an impressive suite of key policies that have promoted significant investment in our renewable energy resources. That success has given us an important place in the world.

As a young lobbyist, I approached you to request the support of an amendment to a major energy bill that would have provided the opportunity for us to establish our first renewable portfolio standard. I think you have heard today that small effort resulted in Nevada's turning point toward environmental stewardship, economic diversification and now climate resiliency. The presentations heard today clearly demonstrate that both hydrogen and lithium

are going to play an important role in the next generation of energy development. Global automakers are making billion dollar investments. The Biden-Harris administration has pledged to electrify the federal fleet. The time for electrification is here. As we move forward, we need to make sure these complex issues have thoughtful consideration.

A study has been conducted to show there is a potential for us to add $700 million a year to the State's economy. We could create 5,000 additional jobs per year. We could prevent 120 premature deaths and 4,000 asthma attacks per year.

KENNETH EVANS (President, Urban Chamber of Commerce):
I am here in support on behalf of the Urban Chamber of Commerce for two primary reasons.

This represents a chance to move into the renewable energy space and expand and diversify the Nevada economy. Given recent events, we have gone through some unsustainable economic cycles, and I am sure we would like to have a more resilient economy moving forward. This will create an effort to expand and diversify the economy by going into an emerging renewable energy market.

The Chamber tells our businesses that we represent small diverse businesses. Whether you are starting or expanding a business, we want them to consider markets, industries and sectors where the economy is going, not where it has been. As we move forward, a lot of opportunities to get in on the ground floor will be in these new and emerging sectors. We want to suggest, encourage and support our businesses to get into the renewable energy sector.

Doing a study like this is important because it will have an economic development component. Having charging stations in the 89106 zip code would create employment, small business opportunities and introduce the technology to a segment of the community that has been underrepresented in initiatives like this.

We also support this because there is an opportunity for diversity and inclusion in this new market, whether in suppliers, vendors, professional service providers and/or technicians with scientific backgrounds, which could be of benefit.

DWAYNE MCCLINTON (Southwest Gas):
We would like to express our support for S.C.R. 10, which would create an interim study concerning the development of hydrogen and lithium as energy resources for the State of Nevada. Additional studies and discussions of hydrogen technologies have the capability of leading to affordable hydrogen production, storage and distribution to support Nevada's clean energy future.

ALEXANDRIA DAZLICH (Nevada Restaurant Association):
We are in support of S.C.R. 10 and are committed to taking steps to combat the effects of climate change and believe this bill addresses our environmental commitment. Studying the implementation of hydrogen and lithium as an alternative energy resource is a good step toward developing a more climate-friendly alternative energy option.

PETER GUZMAN (President, Latin Chamber of Commerce):
Senate Concurrent Resolution 10 provides an opportunity for the State to study the development of hydrogen resources in Nevada. A low-carbon fuel that can be blended in the natural gas infrastructure to help lower greenhouse gas emissions alone is exciting. When you include that, we can actually be the leader, create jobs and create opportunities in this clean energy realm which is exciting and the reason we support this study. It is a critical step toward a decarbonized future and opportunity for Nevadans.

ALAN MACE (Ballard Power Systems):
Senate Concurrent Resolution 10 seems like a rational approach contributing to decarbonization, emission reduction and energy independence. Ballard Power, along with other experts in the U.S. and globally, know and are demonstrating hydrogen and fuel cells as an ideal solution for zero-emission heavy-duty applications including truck, bus, rail and maritime. Fuel cells are a zero-emission solution. Oxygen and hydrogen are combined in the fuel cell to produce electricity, heat and water vapor. They meet the requirements of heavy-duty applications. They refuel quickly, carry heavy payloads and have a long range between refueling, which enables high utilization. The vehicles are quiet, resulting in a pleasant experience for operators and neighbors. Fuel cell vehicles are already commercially available. Transit buses and cars are available from multiple manufacturers, and heavy-duty trucks will be commercially available before 2025. The first trains and vessels are in planning now.

Hydrogen provides multiple pathways for production. Some are zero-emission and result in zero-carbon. Possibly, Nevada can produce green hydrogen from domestic winds and solar resources.

JAKE TIBBITTS (Eureka County):
Eureka County supports S.C.R. 10 and the study on the supply chain factors of the renewable energy equations in Nevada. We have submitted an amendment Exhibit J for committee and sponsor consideration. This amendment would add vanadium as part of the interim study.

Upon learning the bill was introduced just one week ago, we have tried to work within the time and Covid-19 constraints to connect with the sponsor and others with the concept of including vanadium into the mix. We are hoping our amendment is friendly.

Vanadium must be a key consideration in the renewable energy equations in Nevada. Many benefits noted about lithium also apply to vanadium. The first primary vanadium mine project in the entire United States has been identified and is currently being permitted within Nevada. Nevada's vanadium production would be capable of meeting at least 50 percent of the United States demands for this critical mineral.

In the United States Geological Survey (USGS) Professional Paper 1802-U, the USGS recognizes vanadium as becoming more widely used in green technology applications, especially in battery technology, and vanadium redox flow batteries (VRB) are a major potential future use for the emerging need for large-scale electricity storage. Because of their large-scale storage capacity, development of VRB could prompt increases in the use of wind, solar and other renewable intermittent power sources.

Lithium vanadium phosphate batteries produce high voltages and high energy-to-weight ratios, which make them ideal for use in electric cars.

CHAIR OHRENSCHALL:
Is vanadium found in Eureka County?

CHRISTOPHER HUSSEY (Vice President of Business Development, Lancer Energy):
I would like to read my statement (Exhibit M) in support of S.C.R. 10.

ARIELLE EDWARDS (City of North Las Vegas):
The City of North Las Vegas is in support of S.C.R. 10. We believe studying hydrogen and lithium as energy resources in Nevada will be a great opportunity to provide Nevadans with greater energy choices, create good-paying jobs and utilize our State's natural resources.

MARIE STEELE (NV Energy):
NV Energy shares the sponsor's and presenter's enthusiasm and commitment to clean energy development and zero-emission transportation.

We look forward to the opportunity to study and discuss over the Interim how hydrogen and lithium can further benefit the people of Nevada and our economy while advancing our economic goals.

RANDY ROBISON (City of Las Vegas):
The City of Las Vegas is in full support of S.C.R. 10.

NIKKI BAILEY-LUNDAHL (Nevada Mining Association):
We believe this will further position Nevada as a global leader in the emerging green economy. As S.C.R. 10 identifies, Nevada has the largest lithium prospects in the United States. Nevada's mining industry is positioned to supply not just this State with critical minerals necessary to achieving energy independence but also the United States as we achieve our global commitment to reduce greenhouse gas emissions.

Supporting the development of both of these critical minerals will facilitate economic diversification, create much needed workforce development opportunities across the State, promote Science, Technology, Engineering and Math fields in our State schools and universities, and make Nevada the epicenter of emergent green economy of the United States.

JARED SEMIK (President, Eternium Aerospace):
I would like to submit my statement (Exhibit N) in support of S.C.R. 10. The use of hydrogen as a fuel and energy storage medium and its effect on the economy represents a step in the direction of eliminating carbon emissions and the creation of jobs and as a national and State strategic importance.

Companies like Eternium Aerospace, Zero Abbie Motorcycles and Nikola Motor Company are developing hydrogen fuel aircraft and heavy-transport vehicles

whose technology has great potential value for military and our national economy by way of its infrastructure. According to research and development efforts, hydrogen can be produced in unlimited qualities, using only the ambient energy of the sun, wind, geothermal and hydraulic energy which in one form or another are available across the entire planet.

Carbon fuel is harvested in limited trust reserves requiring access or control over reserves, lending to a host of geopolitical and economic difficulties. The capacity of our energy to be harvested from any water source and local source of ambient energy creates the potential for true energy independence not only for strategic military but for economic importance. This potential is not only relevant at the national level but at the State level as well.

Nevada is home to vast resources of solar, wind and geothermal energy, which coupled with our developing electronics and technology industry, could represent a net increase in production of transportation energy to augment the decline in production of hydrocarbon fuels Statewide.

Hydrogen does not require separate resources for harvesting and refining as does petroleum, reducing the complexity of the infrastructure by orders of magnitude and allowing for on-demand and on-location production, further reducing costs and difficulties associated with transporting fuel.

JORDEN KEMPER (Zero Emission Advisors):
I would like to read my statement (Exhibit O) in support of S.C.R. 10. The legislation is enabling an effective planning process so private and public funds are not misappropriated and the commercialization of these technologies can be done in a thoughtful and impactful manner. This legislation is technology agnostic and is putting both electric and hydrogen-based battery technologies up for examination.

KYLE DAVIS (Nevada Conservation League):
The Nevada Conservation League is neutral on S.C.R. 10. We do not have an opinion as to whether the subject matter is appropriate for the Legislative Committee on Energy to study. Lithium and hydrogen are important components for our State's clean energy future as we reduce our carbon emissions to meet our State's climate goals. It is important to understand that hydrogen presents an opportunity to decarbonize hard sectors such as aviation, marine shipping, steel making and long distance trucking. It does not make sense to use green

hydrogen in places where direct use of renewable energy is available. It makes more sense economically and environmentally to electrify a home's space, heating and cooking with renewable energy than to replace methane gas with hydrogen. We would encourage the Committee to consider the impacts from mining operations. Just like all industrial installations, we need to be smart from the start.

DENISE ROHRER (Sierra Club Toiyabe Chapter):
I would like to read my neutral statement (Exhibit P) on S.C.R. 10.

PATRICK DONNELLEY (Nevada State Director, Center for Biological Diversity):
I would like to read my neutral statement (Exhibit Q) on S.C.R. 10. Environmental impacts must be chief in mind as we move toward our renewable energy transition. Lithium production, if not sited and executed properly, can cause significant and irreversible impacts to biodiversity. It could cause extinction.

Mr. Rowe, who presented the bill, provides a good lesson for this discussion. The Rhyolite Ridge Mine is an example of an inappropriate sited lithium mine, which could send a wildflower, Kings Buckwheat, to extinction.

It is time to be sensitive to the renewable energy transition. If the goal is to rapidly develop lithium resources, then choosing to site mines in the same places as endangered species or ancestral lands of local Indigenous populations, like Thacker Pass, is a bad way to produce lithium quickly.

The State environmental regulators, communities and scientists should all have input on where lithium production occurs, not the mining companies. It is essential that any study on the future of lithium production in Nevada include a component focusing on avoiding and minimizing the environmental impacts of such production.

DYLAN SULLIVAN (Natural Resources Defense Council):
There is broad consensus that green hydrogen produced from renewable electricity and water will be needed to avoid more dangerous climate change by helping us achieve a net-zero emissions global economy by midcentury. That is because green hydrogen can potentially fill gaps in the economy where using renewable electricity directly is not a great option, such as aviation, marine shipping, steel making, long-distance trucking, and the hydrogen made from

natural gas refineries and chemical plants. We need to ensure that efforts are focused on places where the case for business and climate for hydrogen are strongest.

Green hydrogen appears to be a bad option to clean up greenhouse gas emissions from our use of the fossil fuel natural gas in buildings. It takes about five times more wind or solar electricity to heat a home with green hydrogen than to heat the same home with an efficient electric heat pump.

There are a lot of varieties of hydrogen. Almost all of the hydrogen produced in the U.S. is made from natural gas—fossil fuel. Producing the hydrogen releases greenhouse gas emissions at the point where it is made, just like burning that gas.

Any policy effort needs to be really clear as to what type of hydrogen we are talking about.

CHELSEY HAND (Great Basin Resource Watch):
Great Basin Resource Watch understands the intent of this resolution is to develop a plan to achieve the goals of S.B. No. 358 of the 80th Session. This is not stated in the text of the resolution. The resolution reads to support specific technologies that could potentially assist in achieving the unspoken intent. The parameters outlined in the resolution for the Legislative study are too narrow in focus.

The following should be specified: environmental and economic justice analysis of various approaches to achieving the NRS goals, including the effects on communities and environment from lithium and other mining; an investigation of how the State can facilitate independent assessments of lithium and other mining for host communities, otherwise mining sites will remain portentous, increasing uncertainty; and an analysis of how Nevada can reduce energy and resource demands, including increasing mass transit and reducing single car occupancy.

The largest reductions of life cycle emissions could be achieved by changing patterns of vehicle use. Critical to this analysis is how Nevada can work with industries to design batteries for recycling and shift our economy to one that is circular. The materials are reused in recycling to minimize and eliminate waste, environmental destruction and destruction to hosting communities of mining,

and to maximize resources use of fees and employment. The transition needs to be more than technological. Mining inherently disproportionately affects certain communities and their environment. The transition process needs to be sensitive to this reality.

JENNIFER TAYLOR (Deputy Director, Office of Energy, Office of the Governor):
I am here to provide neutral testimony for S.C.R. 10 and provide information on the Governor's Office of Energy's (GOE) current engagement with green hydrogen and lithium, both of which play a role in Nevada's carbon reduction and clean energy goal. In a green hydrogen state, GOE's director, David Bobzien, represents Nevada as the cochair for the Western Green Hydrogen Initiative, a public-private partnership to advance and accelerate deployment of green hydrogen infrastructure in the western region for both economic and environmental benefits and to support State road maps for green hydrogen as part of energy and economic planning. Uses for green hydrogen include long-duration storage, heavy industry and transportation. Green hydrogen fuel diversification for heavy-duty transport also aligns with Nevada's climate strategy.

The climate strategy identified areas in which green hydrogen could play a role to lower emissions, including assessing a clean truck program, exploring transit options and looking to designate additional alternatives to corridors for hydrogen to complement the electric vehicle alternative through a corridor designation being developed by GOE and the Nevada Department of Transportation and GOE's Nevada Electric Highway program.

Nevada's potential for lithium development, the key resource for lithium batteries energy storage systems, can support Nevada's solar resources. The critical resource for transportation electrification and increasing the relative proportion of ZEV vehicles also will reduce Nevada's tailpipe greenhouse gas emission.

The Governor's Office of Energy would be happy to provide input for S.C.R. 10.

CHAIR OHRENSCHALL:
I have heard the term green hydrogen. What is that as opposed to other hydrogen, or is it just a term?

MS. BEKEMOHAMMADI:
In Europe, there has been this beautiful color spectrum they have come up with, but I would not say we should adopt that kind of terminology in the States. There has been misuse of the term. Renewable hydrogen means that it would be coming from renewable feedstocks.

There were some comments made earlier that I feel are important to address. I want to warn all the policy makers to value redundancy. Redundancy is important with extreme climate events and energy security threats like North Korea getting into our electric grid.

We do want some redundancy with the natural gas system, with renewable natural gas and renewable hydrogen, which is why we are doing the study. We need to make sure that we do not put all our eggs into just the grid, because when the grid goes down, what are we going to rely on? This is an issue that we need to study, and it is important to evaluate Nevada's resources and think about what kind of renewable hydrogen makes the most sense. You can use biogas to produce renewable hydrogen.

Carbon dioxide is recycled, and in the carbon cycle it can be sequestered. As long as we have humans on earth, we will be producing biogas everywhere. The Greenlining Institute has recognized that certain nationalities like to use gas for their cooking. Using an electric stove takes that away from them.

Renewable hydrogen is produced in a lot of different ways. I think this study will do a good job of figuring out what types of hydrogen would be best suited for the State.

SENATOR SPEARMAN:
The comments in neutral punctuate the need for a study. Several areas were mentioned that may not be in the study. I think the Legislative Counsel Bureau (LCB) was able to put together a draft that will make it clear that we are not just talking about these two types of energy, we are talking about everything.

Things are happening to us with respect to renewable energy that testifies to the urgency of this study. I have worked closely with all the environmental groups that testified today when we were advocating for more solar and unclaimed energy.

This is not saying this is something we are going to do, but I think it is important that we study it. We have 2023, 2025 and 2027, and when we come back in 2029, that will be 10 months before 2030 when 50 percent is supposed to be reached. What we have not done is to step back and say, what do we have here in Nevada, what can we use, how can we use it, how long can we use it, what is the cost-benefit analysis? If we do not study these things in 2027 and 2029, things will be happening to us. Legislators only have 120 days every other year. By the time we get to 2030, 80 percent of the people who are here right now will be termed out–including me. The learning curve will start over again if we do not do this study. Because we were so pressured to get all the other bills out, LCB did not have the opportunity to get this bill out until the last two weeks. The LCB staff has been busy doing amendments and getting bills out to include those proposals that are still coming from other committee meetings.

The amendment we expect will be explicit to this study. No one and nothing is excluded from this study. If anyone has any concerns, I would invite you to come aboard the study team. New York has done its study on its renewable energy vision. New York looked at what it has and how it wants to use it. I think it is important for us to do that here in Nevada.

This study includes the phrase "up to and without limitation," that means the study can go wherever the research leads them. Nothing is off the table, but we have to know the direction we are going. Are the policies leading us to where we want to be in 2050?

We do not have time to do an elaborate draft. Whatever your argument was, please participate. As we move toward a cleaner and green world, few people in the Black, Indigenous and People of Color communities have participated in earnest with studies in terms of how we grow this. What does this look like?

CHAIR OHRENSCHALL:
With no further discussion I will close the hearing on S.C.R. 10.

CHAIR OHRENSCHALL:
Hearing nothing further, I will adjourn the meeting at 6:47 p.m.

RESPECTFULLY SUBMITTED:

_____
Diane Rea,
Committee Secretary

APPROVED BY:

_____
Senator James Ohrenschall, Chair

DATE: _____

EXHIBIT SUMMARY				
Bill	**Exhibit Letter**	**Begins on Page**	**Witness / Entity**	**Description**
	A	1		Agenda
A.B. 121	B	1	Assemblywoman Lesley E. Cohen	Written Introduction
A.B. 121	C	1	Annette Magnus / Battle Born Progress	Support Statement
A.B. 121	D	1	Christine Saunders / Progressive Leadership Alliance of Nevada	Support Statement
A.B. 121	E	1	Jasmin Tobon / Planned Parenthood Votes Nevada	Support Statement
A.B. 121	F	1	Emily Persaud-Zamora / Silver State Voices	Support Statement
A.B. 121	G	1	Maria Nieto-Orta / Mi Familia Vota	Support Statement
A.B. 121	H	1	Kerry Durmick / All Voting is Local Nevada	Support Statement
S.C.R. 10	I	1	Senator Pat Spearman	Written Introduction
S.C.R. 10	J	1	Senator Pat Spearman	Potential Amendment from Eureka County
S.C.R. 10	J	1	Jake Tibbetts	Potential Amendment from Eureka County
S.C.R. 10	K	1	Roxana Bekemohammadi / Western States Hydrogen Alliance	Support Statement

S.C.R. 10	L	1	Bernard Rowe / Ioneer, Ltd. USA	Presentation Slides
S.C.R. 10	M	1	Christopher Hussey / Lancer Energy	Support Statement
S.C.R. 10	N	1	Jared Semik / Eternium Aerospace	Support Statement
S.C.R. 10	O	1	Jorden Kemper / Zero Emission Advisors	Support Statement
S.C.R. 10	P	1	Denise Rohrer / Sierra Club Toiyabe Chapter	Neutral Statement
S.C.R. 10	Q	1	Patrick Donnelley / Center for Biological Diversity	Neutral Statement