# MINUTES OF THE
# SENATE COMMITTEE ON GROWTH AND INFRASTRUCTURE

## Eighty-first Session
## February 15, 2021

The Senate Committee on Growth and Infrastructure was called to order by Chair Dallas Harris at 3:37 p.m. on Monday, February 15, 2021, Online. 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 Dallas Harris, Chair
Senator Chris Brooks, Vice Chair
Senator Pat Spearman
Senator Scott Hammond
Senator Keith F. Pickard

**STAFF MEMBERS PRESENT:**

Susan Scholley, Policy Analyst
Eileen O'Grady, Counsel
Debbie Shope, Committee Secretary

**OTHERS PRESENT:**

Bradley Crowell, Director, State Department of Conservation and Natural Resources
David Bobzien, Director, Office of Energy, Office of the Governor
Kristen Averyt, State Climate Policy Coordinator, Nevada Climate Control Initiative
Greg Lovato, Administrator, Division of Environmental Protection, State Department of Conservation and Natural Resources
Jessica Ferrato, Advanced Energy Economy
Christi Cabrera, Nevada Conservation League
Emily Duff, Ceres

CHAIR HARRIS:
We will begin with a presentation on the State Climate Strategy.

BRADLEY CROWELL (Director, State Department of Conservation and Natural Resources):
We are here to discuss Nevada's climate goals, challenges and opportunities, and to specifically present the highlights from Nevada's State Climate Strategy (Exhibit B). The Climate Strategy we are presenting is designed to serve as a roadmap for the Nevada Legislature as well as local officials and stakeholders. It can be used to develop and implement new Nevada specific policies and programs to reduce all forms of greenhouse gas (GHG) emissions in Nevada in a strategic manner that will achieve two key objectives: one, to meet the ambitious GHG reduction target set by the Legislature in 2019; two, to maximize the economic opportunities for Nevada in the transition to a green technology economy.

Nevada is a clean energy generation leader with its vast renewable energy resources and is one of the first states to establish a Renewable Portfolio Standard (RPS). Nevada has begun its work recently to further mitigate GHG emissions and address the impacts of climate change.

Building on the success of the RPS, Nevada is now required to broaden its focus and actions to address climate pollution across all economic sectors. My colleagues will further discuss the key focus required for Nevada to achieve the goals set by our State and be a leader amongst our peers in other states for climate action.

Fortunately, this critical work will present significant opportunities for Nevada's economic diversification and recovery, creating new good paying jobs through investments in a modern climate resilient infrastructure throughout the State.

Our efforts began to tackle climate change in 2019 under the leadership of Governor Steve Sisolak when Nevada joined the U.S. Climate Alliance shown on Slide 2 of Exhibit B. The Alliance membership includes 25 states with Democratic and Republican governors representing over 50 percent of the U.S. population. As an Alliance member, Nevada is committed to reducing GHG emissions by 26 percent to 28 percent by 2025. In exchange, Nevada receives valuable technical and analytical support from the Alliance to help track its vision and offer input for policy designs that work best for Nevada.

In 2019, as a complement to Nevada's membership in the Climate Alliance, the Nevada Legislature passed two important bills to enhance Nevada's focus on

climate change shown on Slide 3, Exhibit B. First was S.B. No. 358 of the 80th Session, which increased Nevada's RPS to 50 percent clean electricity generation by 2030. Second was S.B. No. 254 of the 80th Session which established in statute the economy-wide GHG reduction milestones for Nevada. The GHG reductions set by S.B. No. 254 of the 80th Session are as follows: 28 percent by 2025, 45 percent by 2030 and net-zero by 2050.

The enhanced RPS under S.B. No. 358 of the 80th Session plays a significant role in meeting these targets. The RPS alone will not be sufficient to achieve our GHG reduction target in 2025 and 2030.

As you can see on Slide 4, Exhibit B is Nevada's most recent GHG emissions projections. We are projected to fall 4 percent short of our 2025 goal and 19 percent short of our 2030 goal. However, by working together to design smart climate policy for Nevada, we can meet these goals if we act now.

Director Bobzien will discuss the actions being taken now to mitigate climate pollution from various sources but more needs to be done.

DAVID BOBZIEN (Director, Office of Energy, Office of the Governor):
In November 2019, the Governor signed Executive Order 2019-22 referred to on Slide 5, Exhibit B. It points out that we have made a lot of progress when it comes to clean energy generation and the RPS. We have other sectors of the economy that we need to focus on for our climate action. The goals of the Executive Order are to move beyond the consideration of clean energy, but it also addresses the Statewide impact with climate change such as wildfires, critical infrastructure, drought and wildlife.

The efforts under the Executive Order for the administration were co-led by the State Department of Conservation and Natural Resources as well as the Governor's Office of Energy (GOE). We met the key milestone which was developing the State Climate Strategy by December 1, 2020.

We have examples of the administration not waiting to act on the Executive Order and the development of the Climate Strategy. There is activity in the climate space. On Slide 6, Exhibit B shows Clean Cars Nevada at the top of the list for permissible actions. It is the development of new regulations to create available low and zero emission passenger vehicles for consumers in Nevada.

There is activity with the funds derived from the Volkswagen settlement. The Nevada Division of Environmental Protection (NDEP) has been replacing diesel school buses, transit buses and other vehicles. There is work with replacing ground support equipment with electric options at both McCarran International Airport and Reno/Tahoe International Airport.

The GHG emissions reduction strategy from the Nevada Department of Transportation (NDOT) is a sample of a lead by example effort to consider the climate in their activities and operations.

I would like to note the Nevada Electric Highway on Slide 7, Exhibit B and the milestones they have achieved. Interstate 15 is now complete and eligible for designation as a federal alternative fuels corridor for electric vehicles. We are still working on Interstate 80, U.S. Route 50, U.S. Route 95 and U.S. Route 93, all scheduled for completion in 2021.

There is activity to enhance energy efficiency standards. You may recall an Assembly bill from last Session that led Nevada to establishing new light bulb efficiency standards. The annual cost saving for an average Nevada household comes out to $81 a year.

You will see examples of how climate change is being handled at the individual agency level. If you review the Public Utilities Commission of Nevada's (PUCN) Strategic Plan, it puts climate change at the forefront.

KRISTEN AVERYT (State Climate Policy Coordinator, Nevada Climate Control Initiative):
As pointed out by Director Bobzien, we are seeing action around climate goals across the entire State. We recognize the need for a home for climate goals to tie all that action together. On Slide 8, Exhibit B is the Governor's Nevada Climate Initiative which began in August 2020. Its mission is to ensure a healthy, vibrant and climate-resilient future for all Nevadans.

With that in mind, when we designed the State's Climate Strategy we wanted to ensure it provided the scaffolding around which the entire Nevada Climate Initiative can be built. The Climate Strategy is about laying the foundation for the broader initiative and create a legacy of climate action for our State.

There are three principal goals for the State Climate Strategy. The first is to provide a framework for reducing Nevada's GHG emissions across all economic sectors. The second is to lay the groundwork for climate adaptation and resilience; that is how we are going to deal with the impacts of climate change that are embedded into our system. The third is to establish a structure to continue ongoing climate action across the State.

In order to build the Climate Strategy and meet the broad scope of the Executive Order, we set up ten different working groups to focus on different aspects of climate change as shown on Slide 10, Exhibit B. These teams include 56 individuals representing 15 state agencies and our 3 research institutions within the Nevada System of Higher Education (NSHE). We were proud that we involved six students in the crafting of the Climate Strategy.

Working with stakeholders is another important component in building the Climate Strategy. Beyond one-on-one meetings, small group briefings and seminar presentations, we held two key stakeholder engagement activities. The first was a scientific survey developed by the University of Nevada, Las Vegas (UNLV), where we asked Nevadans what they care about as it relates to climate change.

The second was a series of listening sessions focused on different climate topics. These listening sessions were convened by various representatives from different State agencies. It was not about us presenting to the public, it was about hearing from Nevadans. In this spirit, at every listening session we held we accommodated every request for public comment. We have these archived should you be interested in viewing them on our website at <http://www.climateaction.nv.gov>.

The Climate Strategy was released to the public on December 1, 2020, on our website as shown on Slide 12, Exhibit B. The Climate Strategy was released in a web format for two primary reasons. The first is we want it to be approachable. Given the scope of the Executive Order, the Nevada Climate Strategy is comprehensive and contains a lot of material. It would be approximately 150 printed pages. It would be overwhelming in a printed version. We structured a landing page to allow people to delve into the issues that interest them the most and what they consider is important.

The second is the web-based format which lends itself to the concept of a living document, intended to be used and not sit on a shelf. We wanted a platform to expand and dig into different components of the Climate Strategy as we moved forward and developed other road maps toward climate action in our State.

I will provide you with an overview of the individual components of the Climate Strategy. The first section of the Climate Strategy on Slide 13, Exhibit B shows what we know and do not know about climate change in Nevada. It was led by our State climatologist at the University of Nevada, Reno (UNR), Doctor Stephanie McAfee. The team was composed of the best climate scientists in our State from UNR, UNLV and the Desert Research Institute.

The first climate assessment is complex and represents what was specifically done for Nevada. There are two items in the section that I will address. The first is a table of Climate Impacts that lays out how the impact of climate change can affect different sectors across the State, including public health, agriculture and tourism and water resources.

The second item is where the team lays out the risks that are posed to Nevada by climate change. This section of the Climate Strategy is the baseline work necessary for us to develop a detailed risk assessment to ensure Nevadans are resilient to the impacts of climate change.

Slide 14, Exhibit B shows what Nevadans think about climate change. It includes the initial results from the scientific survey about climate that was conducted by UNLV. The key takeaway, Nevadans are concerned about climate change. The initial results show that over 75 percent of those who responded to the survey are concerned about the climate and the issue they are concerned about is drought. There are many other insights to be gleamed from the climate survey that I discussed with Professor Emma Bloomfield from UNLV, who led the study. Her indication was they will have additional results to share soon.

I will discuss the centerpiece of the iteration of our mitigation policy analysis. We developed a framework that would help policymakers shape climate solutions that work for Nevada. We applied that framework to specific climate mitigation policies. The first question asked was how we selected the policy that was included in the Climate Strategy and where did it come from?

There is a GHG inventory which includes a catalog of potential policies that could be implemented in our State to help us achieve our emissions reductions target. It was passed in S.B. No. 254 of the 80th Session. All of the mitigation focus policies included in the Climate Strategy were drawn from the policy catalog included in the 2019 iteration of NDEP's GHG inventory.

The relevant text and links to the different parts that address the policies, programs and concepts in the Climate Strategy pointed out in the NDEP policy catalog are on Slide 15, Exhibit B. The policies in the NDEP inventory come from those that are being considered or have been implemented by other states that are part of the U.S. Climate Alliance.

We specifically evaluated 17 different climate mitigation policies which are shown on Slide 16, Exhibit B across 5 different economic sectors. First, we did not develop any new mitigation focus policies in the Climate Strategy. Second, we did not state specific recommendations to implement these policies as written. We did not prioritize one policy over another. The reason is we have to get to zero emissions by 2050. We are at a point where we need to consider all options and nothing is off the table.

The approach we took was to evaluate the 17 different mitigation policies. We then provided a pathway to figure out how to make each of these work for Nevada. We did that through the design of a policy framework.

The framework was comprised of four different matrices shown on Slide 17, Exhibit B. The first matric shows what the potential is to reduce GHG emissions and on what time frame we should implement the policy.

The second is climate justice. We do not know if there will be an impact of the policy on low-income households, communities of color, indigenous populations and other marginalized communities. We are unsure if there is an opportunity for a net benefit for these historically marginalized communities.

The third is budget. What does it cost to implement? What about the cost to administer any related programs attached to the policy?

The fourth matric is implementation feasibility. It is about the legal barriers to decarbonization. We need to determine if we have the authority in statute right

now, or if it is something where we need federal action to move forward with implementing that option.

There were relevant climate working groups for each of the 17 policies and those groups applied that framework. They assessed the state of the knowledge on the topic for each issue. They dug into the research and incorporated the input we received from the listening sessions and through our stakeholder engagement activities.

A color designation was assigned based on what we know and do not know for each matric. I am going to discuss an example for each matric that is connected to a specific policy. It shows how the framework in that part of the Climate Strategy can help us shape our policies so they will work for Nevada.

The first matric on Slide 18, Exhibit B is an example of the policy analysis for the transition from fossil-fueled electricity generation to clean energy sources. In this particular write-up, the team points out there are two-coal fired power plants operating in the State. We have a good idea of what the GHG emissions are associated with both of those plants. However, we do not have a good idea of the exact timing of the retirement of those plants. Consequently, we are unsure whether or not these retirements could help us meet our 2025 or 2030 emissions reduction target.

The working group team assigned a green designation for that particular matric. Despite that it was not assigned a dark green designation does not mean a policy cannot be implemented. We are highlighting an issue that needs attention. With transitioning from coal-fired generation to clean sources to meet our near term goals, there may be guardrails in place that will direct the timing of those retirements.

On Slide 19, Exhibit B shows the climate justice matric consideration. We are looking at the analysis of the transition for residential and commercial use of natural gas. Research shows that indoor gas appliances, specifically gas ovens, can compromise indoor air quality. Children are particularly vulnerable. Children living in homes with gas stoves and gas ovens are 42 percent more likely to have asthma than children who do not have these appliances in their homes.

The transition could have clear positive health outcomes. We heard from Nevadans loud and clear through our stakeholder engagement about their

concerns with the costs associated with replacing natural gas appliances. There are concerns about not having access to electricity and having to rely on natural gas. These are issues that require discussion and balance as we transition from natural gas in order to meet our net-zero 2050 target.

We took a different approach with the economic matric. We looked at the investments that other states are making to support implementation and administration of similar policies. In other words, what kind of appropriations are states making, how many full-time employees (FTE) are necessary and what does it take in terms of state investments to implement these policies?

The example on Slide 20, Exhibit B shows an estimate of the number of FTEs in states that are implementing or have implemented clean car standards. It gives us an idea of what kind of investments might be required to support similar policies should they be adopted in Nevada.

Finally on Slide 21, Exhibit B shows implementation feasibility. The contents of the matric was led by the Office of the Attorney General and by faculty and students from UNLV William S. Boyd School of Law. The idea with the matric was to lay out a possible road map for implementing policy. In the example related to energy audits, the team laid out where the authority to cause it to happen should exist and provided a clear path. In this case, it would require legislation to enact.

In the overview of our policy framework and walking through the four matrices, it illustrates how that section can help all of you, this Committee, and other policymakers shape our State's climate policy.

The next section of the Climate Strategy is the complex challenges for Nevada. We are faced with the need to reduce and completely correct GHG emissions. We need to prepare and plan for more frequent extreme weather and climate events, while also reconciling environmental justice issues. Tackling climate change is complicated. It is not straightforward. If it were easy, it would have been solved.

Finding solutions is not insurmountable; we can do it. Our approach to this section on Slide 22, Exhibit B was to lay all of the issues at play within four key themes that focus on the need for economy-wide GHG emission reductions. The themes are transportation transformation, transmission planning and grid

modernization, urban planning and green buildings, and land use and natural and working lands.

Laying out all the complexities of the Climate Strategy and acknowledging the stakeholder concerns allowed us to identify who is invested in these issues, who is impacted, who has the authority and who influences change. It is what helps us define who should be in the discussions to find solutions. There are times when people may not realize what they are doing can impact climate action and we need to ensure they are there from the beginning.

An important point we try to emphasize in this section is that climate mitigation, which reduces GHGs, is not mutually exclusive to climate adaptation in dealing with climate change impacts. Treating these separately gives a distorted perspective that does not consider the entire portfolio of risk. For example, most of the issues laid out, such as large-scale mitigation action, involve significant financial investments to retool or deploy new infrastructure around mass transit, highways, new development or anything related to energy.

The infrastructure itself may be vulnerable to natural hazards, which are in many cases becoming more frequent, more intense and more unpredictable. We are required to integrate the medium and long-term vulnerabilities to our infrastructure posed by increasingly volatile environmental conditions to manage future risk planning.

Finally, we cannot pretend a single action is going to solve climate change. It will not be a federal or state action alone that will provide the solution. We need to develop a catalog of policies, programs, and plans that will coordinate and harmonize across different levels of government. Only then are we going to be able to optimize our investments and climate actions to ensure we get to zero before 2050.

The next section on Slide 23, Exhibit B focuses on monitoring, modeling and managing GHG emissions. The top line summary of that section is you cannot manage what you cannot count. Of course, we are aware that NDEP has its own GHG inventory and platform for developing its inventory. However, there is a long list of entities across the State who are developing or have already adopted their own GHG inventory process.

The need to harmonize our policies was a point described in the complex challenges section that we need to coordinate in our county. For example, Clark County could implement a policy that is geared towards reducing GHG emissions, it might be captured in their inventory. With the differences in account modeling or data availability at the State level, we might not capture those reductions that are consequences of implementing that specific policy.

It is not a bean-counting issue or about the State wanting to take credit for every action everyone is making. It is important for projecting the impact of a policy on GHG emission. That way we can chart a path across the entire State because it could be the implementation of a policy in Clark County that will help us to best optimize and meet our GHG reduction target.

For that reason, we need a GHG inventory framework that integrates across the State and incorporates up-to-date Nevada specific data and is in sync with existing planning cycles.

Another section of the Climate Strategy shown on Slide 24, Exhibit B focuses on lead by example, which is the term we are adopting with internal strategies across our State agencies to reduce GHG emissions. Director Bobzien alluded to it as we were started building the Climate Strategy and NDOT started their own process. They were developing and implementing their own internal policies to help them reduce their GHG emissions. With NDOT documenting their process, it made a significant contribution to the Climate Strategy. The result is a road map that any agency can pick up and adopt for their use to go with their internal policies. It will help them maximize reduction in their GHG emission.

The next section on Slide 25, Exhibit B is where we address the economics of climate action. We analyzed the individual climate policies and we describe how other states are investing. The bottom line in addressing climate changes is not a revenue neutral proposition. It requires up-front investment, but it will cost more long term if we do not act.

In this section of the Climate Strategy, we conducted an analysis using what is termed the social cost of carbon. It allowed us to estimate the avoided cost of meeting our GHG emissions reduction targets. Using a conservative approach to that calculation, if we meet the net-zero carbon reduction target, we would prevent $4 billion in economic damages by 2050. That is a conservative

estimate. The return on the investments we create in climate action today will pay off in the long run.

The next section is economic recovery and revitalization shown on Slide 26, Exhibit B. The takeaway from this is Nevada can and should ensure that climate action is part of the State's economic recovery, resilience and job growth efforts. It needs to become hard-wired into the State's economic development plan.

The next section was framed around three pillars. First, is a quote from the U.S. Climate Assessment, "Climate change is expected to cause substantial net damage to the U.S. economy". Between 1980 and 2017, climate change cost the U.S. economy over $1.2 trillion. A contributor to these costs is the increasing number of extreme climate disasters that have been occurring across our Nation.

The rain and snowstorms in the west that we are experiencing cost $51 billion over the last 40 years. The 2012 to 2015 drought cost us $55.7 billion. We can better prepare and ensure the resilience of our economy.

One way it can be done is to focus on the second pillar, which is about climate-friendly jobs. We have opportunities in our State to develop job creation through clean energy technology, transportation or water conservation. Nevada can demonstrate how to mobilize a climate-friendly economy across many different sectors.

The final pillar is workforce development, training and education. Our NSHE institutions and the community colleges can support building a workforce skill set for an emerging industry. Our research institutions can contribute further through research and development and innovation that is directly connected with the State's climate action goals.

The last section which is on Slide 27, Exhibit B shows climate governance. It is an important section of the Climate Strategy. If Nevada is going to be in a position to respond to climate change, we need to establish a robust climate governance structure. Based on the positive experiences of other states and incites from scientific research, there are six guiding principles that we should adhere to when developing a climate-focused organizational structure.

The first is intergovernmental and interagency coordination. It is a theme that is stitched throughout the entire Climate Strategy. We need be working together in order to tackle the challenges of climate change.

The second is stakeholder and community engagement. We need to have people at the table from the start. Ensuring that our communities are at the table in the beginning of the discussions is important for reconciling environmental justice issues.

The third is science-based climate assessment. The science of climate change is evolving and we are learning how our risks and vulnerabilities will change. We must provide decision-makers with the best available science, technology and engineering insights. That way the information can be considered in developing public policy.

The fourth is adaptive governance. The multiple challenges posed by climate change and the need to quickly pivot to address emerging issues cannot be bogged down in bureaucracy; it needs to be reactive.

The fifth is executive leadership and staff. The multiple scales of coordination that are necessary across the sectors and to transcend governmental jurisdictions require dedicated leadership in place with a distinct focus on climate change. Climate as a priority could get lost in the shuffle. High-level, climate-focused leadership is needed to ensure that climate action sustains momentum and progresses on time, and is integrated into decision-making.

The sixth is dedicated resources. Upfront investment in climate action can prevent future economic damages. In order to navigate the climate-related challenges and capitalize on opportunities, Nevada needs to design and implement a durable organizational structure with clear processes in place and relevant authority.

The last slide of Exhibit B summarizes the key takeaways from the Climate Strategy. Climate change is happening, Nevadans want action and we can do something about it. The Climate Strategy is sweeping and there is a lot of content. It is going to take a climate-focused governance structure to realize the tactical implementation of everything that was laid out in the Climate Strategy. We need to ensure the scaffolding that we are putting in place cements the legacy of Nevada's climate initiative.

SENATOR PICKARD:
It is wise that we are looking at this. Do we know how much of it will improve the climate in Nevada if we adopt all of the recommendations within the next session or two? Are these things substantial enough to see a noticeable change, or are these part of a global effort?

MR. CROWELL:
The Climate Strategy is not intended to be a set of recommendations for adoption in whole. It is to be used as a road map for adoption of policies at the right time to meet the targets in front of us. We need to focus on our near term challenges for 2025 and 2030. It can be done by electrifying the transportation sector, improving the efficiency of our residential and commercial buildings and lowering industrial emissions from industrial processes. Most of that is the result of ultraviolet and hydrofluorocarbons.

If we focus on those areas, that will allow us to meet our near term goals. We want to be smart as we look at our emissions profile to choose the sectors that need to be addressed first. The energy generation sector's emissions are declining because of the RPS. Simultaneously, the transportation sector, efficiency and industrial emissions are projected to continue to go up under today's policies. Contrast that with agricultural emissions; those are minimal in Nevada. There is not a near term need to focus on those. The Climate Strategy is designed to identify the near term policies that need to be implemented to reach the goals. It is not a whole suite of things that need to be done at the same time.

SENATOR PICKARD:
I cannot imagine we will ever get to zero total emissions. It would drive things such as agriculture out of the State. When we talk about zero emissions, is that a true zero or is it relative to a standard?

MS. AVERYT:
It will depend on how those 17 policies are designed in terms of what kind of emissions reductions would be achieved. We do not have access to all the data needed to be able to catalog what kind of emissions reductions could be achieved.

The question about net-zero; it is net-zero. Our forests and our landscapes are natural and hold carbon. There is an opportunity through land use practices, and

partnerships with agriculture to help maintain that carbon to offset a marginal carbon emission. That said, zero is zero.

What is occurring is we are adding carbon into the atmosphere faster than we can take it out. Until we can get to the point where we are balanced, we will continue to realize the problematic impacts of climate change. Globally, we have to get to zero as soon as we can.

SENATOR PICKARD:
Net-zero is different from true zero. We cannot get to true zero. We would have to kill all life on the planet to get to true zero. Anyone who breaths is expelling carbon dioxide. I want to be clear on those two points.

When we talked about the RPS in the Seventy-ninth Session, we were not talking about hydroelectric, a renewable source, but it will skew the numbers. We have Hoover Dam providing us with most of our energy, and we now meet our standards. I know that was not the intent. With the standards being used to get to net-zero as we discuss the RPS, are we talking about all energy sources and excluding existing geothermal and hydroelectric sources?

MR. BOBZIEN:
That is an important question and brings to light the initial purpose behind the RPS. Nevada was the second state to implement such a policy and it was not around GHG reduction or climate imperatives. It is more the economic opportunity and remains around our domestic renewable energy resources.

The dramatic shift that the Legislature took with S.B. No. 254 of the 80th Session by setting of GHG reduction goals, we are able to create tremendous GHG reductions in the electricity sector because of the aggressive RPS. Once we pass the 50 percent RPS, we can develop a measurement for a true clean grid. Those questions of what will be counted and how, will become important.

There is an active regional conversation with Nevada and several other red and blue western states, and between energy offices and energy advisors at the state level, along with utilities. They acknowledge that there are differences between the states and the different utilities which have their own net-zero targets. We need to ensure we get to a place with those policies where we

have a common understanding of what the standard should be when it comes to electricity generation.

It is going to become an important conversation because there is federal interest in a clean energy standard. Nevada is in a good place when it comes to that.

SENATOR PICKARD:
Will you be counting the existing things such as hydroelectric in the total equation?

MR. BOBZIEN:
Yes, it happens outside of the context of RPS and how the RPS is calculated. We are looking at overall GHG emissions such as hydroelectric and there may be ancillary services that produce GHG. Reduction of GHG is reduction of GHG no matter the type of resource when it comes to electricity generation.

SENATOR PICKARD:
Do you have an idea in the broad perspective what it is going to cost?

CHAIR HARRIS:
Senator Pickard, I am going to ask you to follow up on that question offline.

SENATOR SPEARMAN:
Have you identified any other resources for our renewable energy, such as hydrogen fuel cells and geothermal? Have we looked at how to shift into that space before 2050?

MR. BOBZIEN:
I have two updates on the two energy sources you cited. I know you have an interest in hydrogen. Nevada is part of the Western Green Hydrogen Initiative with different energy offices across the Intermountain West. This group is looking at green hydrogen applications and whether that comes to long-term storage of renewable electricity generation through electrolysis, or if it is the transportation applications. It is a long-term project but it is something we are watching.

We will be hearing more about geothermal next week. There was a decision in front of the California Public Utilities Commission this past week. Their planning portfolios for their resource plan have had a significant bump in both desired

procurement of solar generation in southern Nevada as well as geothermal. There is discussion around the baseload aspects of geothermal, after the shortages which happened in California last year.

We are in an upswing when it comes to interest in Nevada's renewable energy resources.

SENATOR SPEARMAN:
A lot of these technologies have taken off in the last two years. Are we updating the information that was presented to us, and if so, how often? In discussions about hydrogen fuel cells and infrastructure, has there been any thought to using the existing gas infrastructure to incorporate hydrogen fuel cells into our energy mix?

MR. BOBZIEN:
The infrastructure question is in the forefront to the multi-stage coalition. The future of infrastructure in the gas sector, and an application of green hydrogen that can be used as an infrastructure for mobility, is complicated. There are technical issues that need to be worked out before starting to transition with the existing infrastructure. At this point, we have started the conversation but there is a long way to go. There is a long-term focus across the West on how hydrogen can take on a role in our clean energy mix.

GREG LOVATO (Administrator, Division of Environmental Protection, State Department of Conservation and Natural Resources):
With evolving technology and how we can appropriately capture it in the future to ensure our projections of emission reductions reflect advances in technology. Unfortunately, that is one limitation of our inventory where there is static about policies as well as technology. There are models and platforms available for learning and technology improvement capacities that can account for future GHG emission reduction opportunities.

Capability is something that we can expand on not to examine comparative benefits to different policies but with existing policies to realize or recognize technology improvements.

SENATOR SPEARMAN:
The future of hydrogen fuel cells is in the transportation sector.

SENATOR HAMMOND:
I have had conversations with my colleague, Senator Pete Goicoechea, who represents the rural areas in Nevada. The rural areas have their own set of challenges. I grew up in the 1970s and 1980s during the gas shortages and the energy crisis.

We are overdue to move from fossil fuels in our Country. I am someone who tries to figure out how to do that fast enough, but not so fast that you hurt those you are trying to help.

We do not know when we will be decommissioning and slowing down the coal-fired plants that were mentioned by Ms. Averyt. Some areas have since moved to natural gas, trying to wean themselves off of coal fire and we are talking about the elimination of natural gas as we try to get to net-zero. It is an ambitious plan.

Has there been a cost-benefit analysis done with these policy programs you discussed and with natural gas? How do we get away from them while reducing the fossil fuels and creating and generating electricity?

MS. AVERYT:
The cost-benefit analysis approach we took for the Strategy laid out costs or investments other states are making to implement the 17 specific policies as a comparison. We also laid out what the avoided cost will be in the future using the social cost of carbon.

The social cost of the carbon component is not about what is happening in the market, it is about public health, morbidity and mortality within the population. There is real data behind that in terms of the cost-benefit component.

We know the impacts of climate change with what we experienced with wild fires and air quality last summer. That is what we are going to be looking at with a baseline future; it could get worse. We need to be thinking about this in terms of what investments we need now and what happens in the future. We did not factor in the specific cost-benefit analysis.

MR. BOBZIEN:
You are right about the complexity of what is ahead of us when it comes to our energy mix and the reliance on energy that different communities have across

Nevada. It is important to note the economic discussions and analysis that go into energy governance are well established. As the PUCN receives their filings and does the resource planning behind our electricity mix, these cost questions are in the forefront. The two coal power plants that were mentioned, one of them being North Valmy Generating Station, are subject to that whole process.

That is the venue for determining the cost of the asset, the continued operation, and when is the optimal time for its retirement. I suggest spending time on the complex issues section of this Climate Strategy. We have a whole section on the need for a transition from natural gas. The term elimination is not used. We are not talking about ripping up gas lines. We are talking about a long term focus and transition.

There are discussions of what should be considered in terms of how the cost-benefit analysis determines the future of the assets and the future investments that may or may not be taken to get us to that point. We do all this while having sensitivities for ratepayers across the State. I hope that is a clearer response in terms of the energy mix.

SENATOR HAMMOND:
One of the tenets of your plan is about the climate justice portion. Some populations are more adversely affected. It means the cost will be shouldered by someone else, so it is a subset of that. Everyone needs to know what that cost might be. The typical ratepayer or customer is going to have to convert appliances.

For example, my wife and I purchased a gas dryer on Friday. In order to meet the goals in place, in a few years we will have to convert that appliance from natural gas to electricity. Have you considered that? Have you been able to publish information for people about what we are discussing as we transition? I think the goals are admirable. We need to do it, but I think it is too lofty and too quick in trying to mitigate the high cost, and people need to know what that cost will be.

MR. BOBZIEN:
It is important to reiterate, the Climate Strategy was not intended to be a list of bill draft requests that you plug into a Legislative Session and we solve the climate problem. We know it is a long-term discussion. We know it is going to require more information for policymakers in a complex environment. The PUCN

and electricity sector are trying to figure out when they have enough information to direct action on these various fronts. On the gas portion, we have available existing models and analytical frameworks for making these long-term decisions.

If the PUCN and the electricity sector are directed to meet policy goals, they have the analytics, the tools, the understanding of the economics, the customers and rate base as to how and when to time those transition milestones. The questions regarding replacement of appliances and future infrastructure development, I do not think you will get a complete 20-year plan.

Steps need to be taken along the way, PUCN and others will figure out the details. The opportunity is to start the transition and to put in place the guiding policies to get us there. This is complicated. There are also regrets. If you do not start soon enough or if you create additional decisions or investments along the way, you may find yourself in a difficult position to make up the distance that needs to be covered.

MR. CROWELL:
For near-term goals, particularly 2025 and 2030, if we can transition away from adding to our use of natural gas, such as with new construction, we are not taking it or transitioning it away from anyone; those are the options for people. If we can successfully start transitioning in a sensitive way for the gas companies and consumers, we will get to those goals in the near term of the five- and ten-year range. Beyond that, there is a transition for existing consumers that will have to come to play. In the near term, we are talking about moving away from expanding energy and GHG emissions.

SENATOR BROOKS:
It accomplishes so many things with the amount of work and endless hours put into it by NDEP, GOE and Dr. Averyt. My colleagues on this Committee are asking what it is going to cost. That is a logical question; we should all be concerned.

What the climate plan has done is create the steps that need to happen. We as legislators and policymakers decide when to implement the steps to get us there based on the most cost effective ways. If I would have proposed ten years ago a 50 percent RPS, we would have tripled our customer's power bills.

By doubling our RPS in the last Session, we see it is not only doable it is saving us money. We have reduced the cost of electricity in Nevada, while we drastically increased the amount of renewables we have brought on every year for the last five years.

It gives us a menu of items to choose from, so we can collectively work with industry and choose the items we need at the time we need to do them.

For example, if we made a $2 billion investment in transmission in Nevada over 50 years, we should see a minimum $10 billion of economic activity in 5 years. That will help us lower our carbon emissions.

You have given us all these policy options we can choose from for electrification and transportation. You did not mandate we do any of them. Now we can pick and choose from those while we increase the economic diversification of our State without displacing jobs.

To answer Senator Pickard's earlier question, zero-carbon energy of any sort, including hydro, is part of the RPS. We are moving toward a zero-carbon type of energy instead of incentivizing or encouraging a particular type of energy. We get little of our energy in Nevada from Hoover Dam, but all the power we do get from it goes toward the RPS.

CHAIR HARRIS:
We will now move to our work session on Senate Bill (S.B.) 17.

**SENATE BILL 17**: Revises provisions governing motor vehicles. (BDR 43-319)

SUSAN SCHOLLEY (Policy Analyst):
I will read the summary of the bill from the work session document (Exhibit C).

SENATOR HAMMOND MOVED TO DO PASS S.B. 17.

SENATOR PICKARD SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY.

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CHAIR HARRIS:
We will move to the work session on S.B. 29.

**SENATE BILL 29**: Authorizes the appointment of an agent of the Department of Motor Vehicles to issue salvage titles. (BDR 43-348)

MS. SCHOLLEY:
I will read the summary of the bill from the work session document (Exhibit D).

There were no proposed amendments. The bill requires a two-thirds vote to pass on the Senate Floor. There were two fiscal notes received; one from DMV and the other from the Department of Public Safety. Both show zero impact over the biennium.

SENATOR SPEARMAN MOVED TO DO PASS S.B. 29.

SENATOR HAMMOND SECONDED THE MOTION.

SENATOR HAMMOND:
I have a question for counsel. Section 2, subsection 3, paragraph (c), is standard text that exists somewhere else in the statute where we are authorizing someone from the State to conduct audits? If there is an office, I anticipate they would copartner with them.

EILEEN O'GRADY (Counsel):
I need to do some research. I do not know where it was located. I can check.

SENATOR HAMMOND:
I am in support of the bill. I wanted to ensure I understood the language. There is no need to do any research.

SENATOR PICKARD:
We discussed other agents partnering with the DMV to accomplish this task. By statute, do we have to authorize DMV to partner with third parties to process all other transactions, such as renewing licenses, or is there authority within statutes that allows DMV to partner with any third party to do their work?

MS. O'GRADY:
I will check. I think we tend to give specific authority for these functions; I do not think there is general authority.

SENATOR PICKARD:
I am unaware of other bills coming up, but we might consider an amendment to give DMV blanket authority to work with third parties for processing transactions. I am not recommending or proposing that. I am thinking that under the circumstances they need help.

THE MOTION CARRIED UNANIMOUSLY.

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JESSICA FERRATO (Advanced Energy Economy):
Advanced Energy Economy is an industry association comprised of businesses dedicated to making the energy we use secure, clean and affordable. We represent over 100 companies that include technology such as energy efficiency, demand response, solar, wind, storage, electric vehicles, advanced metering infrastructure, transition and distribution equipment, geothermal, hydropower and enabling software, among others.

Used together, these technologies and services create and maintain a higher performing energy and transportation system; one that is reliable, resilient, diverse and cost-effective, while improving the availability and quality of customer-facing services.

Advanced Energy Economy also represents large electricity consumers interested in increasing their purchases of affordable clean energy to power their operations in the State. I want to applaud the Governor, his administration and Senator Brooks for the undertaking of the State Climate Strategy. It identifies many critical policy priorities necessary to achieve Nevada's emissions reduction goals.

Advanced Energy Economy is glad to see an emphasis in the report on building and transportation electrification and regional power sector cooperation. That will help Nevada reduce emissions while maintaining reliability and low-cost electricity.

Advanced Energy Economy members see an economic development potential in the policies that the Climate Strategy lays out. It makes Nevada a top opportunity state to invest their resources, create new jobs, and add to State and local tax revenues. It will help consumers save money through lower-cost electricity generation, energy efficiency and other demand-side programs.

They stand ready to invest and help shape these policies to ensure maximum economic benefits from the clean energy transition. These benefits are not theoretical. We have seen growth in these sectors in the past and expect them to drive economic recovery and diversification over the next few years and decades to come.

The Climate Strategy policies allow Nevada to get ahead of the curve and reap the economic and job benefits sooner than later.

CHRISTI CABRERA (Nevada Conservation League):
Nevada's Climate Strategy clearly states that in order to meet our climate goals, we need to electrify transportation, move away from methane gas and other fossil fuels and invest in green jobs. Nevada can be proud of the work to move toward the clean energy future but cannot slow down.

As home to some of the fastest warming cities in the U.S., Nevada is now feeling the impacts of climate change. The Nevada Conservation League Education Fund released survey results that explore Nevada's view on climate change and response.

The data shows Nevadans understand the threat of a climate crisis and want to see leaders take bold, aggressive action to mitigate its harmful effects on our communities before it is too late.

Of Nevada voters, 82 percent see climate change as a serious problem and 67 percent consider that it is having a serious impact on this part of the Country. Lawmakers have the support of 65 percent of the voters to take action to combat climate change and consider it having positive effects on our families, our climate, weather and the economy.

Nevada has made strides to become a cleaner and greener state, but we are not on track to meet our climate goals. There is plenty of work to be done. We look

forward to continuing to work with the Nevada Climate Initiative Leadership Team and the Legislature to find solutions to the crisis.

EMILY DUFF (Ceres):
Ceres surrounds the Business for Innovative Climate and Energy Policy Network, which is a coalition of nearly 70 major employers, leading consumer brands and Fortune 500 companies, including many with operations in Nevada. Our members recognize that climate change poses significant risks to the long-term economic success of the business community.

Because of these risks, companies in Nevada and Nationwide are making commitments to reduce GHG emissions. In fact, more than 1,000 companies have set comprehensive science-based targets to reduce their emissions and approximately 200 of those have headquarters in the U.S. However, businesses are often constrained on how much they can do to drive down their carbon footprint.

Those businesses have a significant interest in finding ways to systematically improve the emissions performance on the overall economy. There is an increasing need to adopt strong comprehensive public policies that send clear long-term economic signals for addressing the risks that climate change creates.

I am speaking to express our deep appreciation to Governor Sisolak and his administration for their time and effort in developing the State Climate Strategy and to Senator Brooks for his leadership in the passage of S.B. No. 254 of the 80th Session.

The Eighty-first Legislative Session provides an opportunity to put that comprehensive framework into action, and among other priorities, tackle Nevada's largest source of GHG emissions, the transportation sector. Policies that accelerate the transition to low- and zero-emission vehicles present an opportunity to create financial savings for consumers and businesses, cut health costs by reducing smog-forming emissions and support economic development. It is being done during a time of unprecedented health and financial crises.

CHAIR HARRIS:
There being no further business to come before the Committee, the meeting is adjourned at 5:02 p.m.

RESPECTFULLY SUBMITTED:

Debbie Shope,
Committee Secretary

APPROVED BY:

Senator Dallas Harris, Chair

DATE:

| EXHIBIT SUMMARY | | | | |
|---|---|---|---|---|
| **Bill** | **Exhibit Letter** | **Begins on Page** | **Witness / Entity** | **Description** |
| | A | 1 | | Agenda |
| | B | 1 | Bradley Crowell / State Department of Conservation and Natural Resources | Nevada's State Climate Strategy |
| | B | 5 | David Bobzien / Office of Energy, Office of the Governor | Nevada's State Climate Strategy |
| | B | 8 | Kristen Averyt / State Climate Control Initiative | Nevada's State Climate Strategy |
| S.B. 17 | C | 1 | Susan Scholley | Work Session Document |
| S.B. 29 | D | 1 | Susan Scholley | Work Session Document |