MINUTES OF THE MEETING
OF THE
ASSEMBLY COMMITTEE ON COMMERCE AND LABOR

Seventy-Ninth Session
May 8, 2017

The Committee on Commerce and Labor was called to order by Chair Irene Bustamante Adams at 1:38 p.m. on Monday, May 8, 2017, in Room 4100 of the Legislative Building, 401 South Carson Street, Carson City, Nevada. The meeting was videoconferenced to Room 4401 of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. Copies of the minutes, including the Agenda (Exhibit A), the Attendance Roster (Exhibit B), and other substantive exhibits, are available and on file in the Research Library of the Legislative Counsel Bureau and on the Nevada Legislature's website at www.leg.state.nv.us/App/NELIS/REL/79th2017.

COMMITTEE MEMBERS PRESENT:

Assemblywoman Irene Bustamante Adams, Chair
Assemblywoman Maggie Carlton, Vice Chair
Assemblyman Nelson Araujo
Assemblyman Chris Brooks
Assemblyman Skip Daly
Assemblyman Ira Hansen
Assemblywoman Sandra Jauregui
Assemblyman Al Kramer
Assemblyman Jim Marchant
Assemblywoman Dina Neal
Assemblyman James Ohrenschall
Assemblywoman Jill Tolles

COMMITTEE MEMBERS ABSENT:

Assemblyman Paul Anderson (excused)
Assemblyman Jason Frierson (excused)

GUEST LEGISLATORS PRESENT:

Senator Pat Spearman, Senate District No. 1
Senator James A. Settelmeyer, Senate District No. 17

STAFF MEMBERS PRESENT:

Kelly Richard, Committee Policy Analyst
Wil Keane, Committee Counsel
Pamela Carter, Committee Secretary
Olivia Lloyd, Committee Assistant

OTHERS PRESENT:

Judy Stokey, Vice President, Government and Community Strategy, NV Energy
Patrick S. Egan, Senior Vice President, Renewable Energy and Smart Infrastructure, NV Energy
Kyle J. Davis, representing Nevada Conservation League; and Interwest Energy Alliance
Tom Polikalas, Nevada Representative, Southwest Energy Efficiency Project; and Private Citizen, Reno, Nevada
Kelly Crompton, Government Affairs Officer, Office of Administrative Services, City of Las Vegas
Rebecca Wagner, President, Energy Policy/Regulatory Affairs, Wagner Strategies, Reno, Nevada
Dylan Sullivan, Staff Scientist, Energy Program, Natural Resources Defense Council
Robert Johnston, Senior Staff Attorney, Western Resource Advocates
Leonard B. Jackson, Director, Faith Organizing Alliance, North Las Vegas, Nevada
Verna Mandez, Private Citizen, Las Vegas, Nevada
Howard Watts, Private Citizen, Las Vegas, Nevada
Jarrett Clark, Program Director, Clean Energy Project; and representing Advanced Energy Economy
Hernando Amaya, Communications Coordinator, Chispa Nevada
Jared Fisher, Private Citizen, Blue Diamond, Nevada
Ray Bacon, Executive Director, Nevada Manufacturers Association
Sarah Van Cleve, Policy Advisor, Tesla Energy, Tesla, Inc.
Daniel Witt, Manager, Business Development and Policy, Tesla, Inc.
Rose McKinney-James, representing Valley Electric Association, Inc.
Tyson K. Falk, representing Southern Nevada Home Builders Association
Jesse Wadhams, representing Recurrent Energy
Jessica Ferrato, representing Solar Energy Industries Association
Anne Macquarie, Executive Committee Member, Toiyabe Chapter, Sierra Club
Austin Osborne, Administrative Officer and Planning Director, Storey County
Angela Dykema, Director, Office of Energy, Office of the Governor

Chair Bustamante Adams:
[Roll was called. Committee rules and protocol were explained.] We have six bills regarding energy today. We will be taking them out of order. Senator Spearman will make some opening remarks, and then we will open the hearing on our first bill.

Senator Pat Spearman, Senate District No. 1:
It is my pleasure to present to the Committee three bills today, Senate Bill 145 (1st Reprint), Senate Bill 146 (2nd Reprint), and Senate Bill 150 (1st Reprint). Energy is an extremely hot topic. The reasons for this range from environmental to political to financial. Despite differing reasons, the solution involves transitioning from traditional energy sources to renewable energy sources, thereby helping the environment and ending our dependence on foreign oil.

Worldwide, there is a shift toward a low-carbon energy industry. According to an analysis by Bloomberg New Energy Finance in New York, a milestone occurred in 2013, when the world added 143 gigawatts of renewable electricity capacity compared with 141 gigawatts of new plants that burned fossil fuels. By 2030, new capacity added from renewables will be more than four times that of fossil fuels.

Despite the additional capacity from renewables passing fossil-based energy, changing the energy system is not simple. Nevada needs to continue to deploy technology that can compete with the benefits offered by fossil fuels, which is generally regarded as steady, reliable, and affordable.

I have heard repeatedly from my constituents that our energy market is not performing as it should. As you are aware, there are ongoing discussions of redesigning the electricity market in Nevada. This issue will be before the voters in 2018. In response to my constituents and citizens of Nevada, we need to look forward as we refine the state's energy policy and not backward. We are in a competitive economic environment. If we want energy investments in our state to result in growth and jobs, we need to indicate through our actions the direction in which we are going.

I believe the key energy principles remain the same: less expensive, cleaner, and sustainable energy sources for our communities and our customers. This includes equitable rates, equal opportunity for energy savings, lower fuel costs, and scale and clean energy resources at the lowest cost to the ratepayers through optimal use of grants and financing.

The three energy bills before you today continue to examine the energy needs in Nevada, and identify opportunities to reduce rates for ratepayers while balancing the needs of the utilities, ensuring reliable power availability, and mitigating public and environmental impacts on Nevada's energy use.

Madam Chair, with that, I am going to turn the microphone over to some people who are more than capable of handling Senate Bill 145 (1st Reprint). I will be back up to discuss Senate Bill 146 (2nd Reprint), and then Assembly Bill 150 (1st Reprint). With your indulgence, I would like to do that now.

Chair Bustamante Adams:
I will open the hearing for Senate Bill 145 (1st Reprint).

Senate Bill 145 (1st Reprint): Revises provisions relating to energy. (BDR 58-54)

Judy Stokey, Vice President, Government and Community Strategy, NV Energy:
I am here today for Senate Bill 145 (1st Reprint). We are definitely supportive, and we worked with the sponsor on putting this bill together.

The basic points of this bill are that there are currently two buckets of money in statute for incentives or rebates for renewable projects: $255 million for solar; and $40 million for wind and hydro. We have not seen as much hydro and wind projects go through over the years, so this bill proposes to combine the two buckets to be a total of $295 million to be used for solar, wind, and hydro. We are also including incentives for storage and electric vehicle infrastructure. That is the main part of this bill.

Chair Bustamante Adams:
Are there any questions from the Committee?

Assemblyman Brooks:
Of that $255 million for solar, how much of that has been collected and is in the bank, and how much of that is yet to be collected from ratepayers?

Judy Stokey:
The incentives are collected monthly on ratepayer bills and are not in a pot of money in a bank waiting to be used. Every year, we go to the Public Utilities Commission of Nevada (PUCN) and it is trued up. On ratepayer bills, it is a line item called REPR [Renewable Energy Program Rate]. That is how the money is collected. I think we have around $40 million left, but I have brought an expert with me today.

Patrick S. Egan, Senior Vice President, Renewable Energy and Smart Infrastructure, NV Energy:
We project that would be about what would be available to be expended on these programs. Ms. Stokey is correct, the money is not necessarily collected in advance of being expended, so we regularly report to the PUCN as to how much we would anticipate putting out in incentives today for solar, wind, and hydro programs. We would follow the same patterns with what has been suggested in Senate Bill 145 (1st Reprint). Essentially, we would pay as we go or collect as we go. That is the anticipated amount we would be able to put toward these other programs, and believe it to be about $40 million remaining.

Assemblyman Daly:
I have a question on the Electric Vehicle Infrastructure Demonstration Program. Does that program receive similar types of incentives or credits? Can you explain that? Obviously, the more cars put on the road that do not use fuel have other impacts. How are we looking at that?

Judy Stokey:
I will let Mr. Egan answer that question, but it is my understanding that when NV Energy files its report with the PUCN, we will recommend what we think that incentive should be. I think you were asking about the amount of the incentive.

Assemblyman Daly:
How do you envision the incentives working? I can read the words in the bill, but there will be things adopted by regulation. What are you contemplating as far as that goes, and how does it affect the other ratepayers? It is a similar question that we ask all the other programs.

Patrick Egan:
Ultimately, the idea here is authorization in statute. We would present a program hopefully employing some best practices and things we have seen in other parts of the country to be able to bring to the PUCN. Then, as the bill lays out, everything from customer outreach and education, and potentially an incentive to help support the purchase. I think it would go along the lines of how we conduct the solar generations program; the intent being to be able to put out just enough of an incentive to support market transition, but not necessarily to fully support a purchase. The discussion we have had to date has really been to potentially support the "charging infrastructure" as opposed to anything directly related to the vehicle itself.

Assemblyman Daly:
I assumed we were not talking about incentives for the vehicles; it was always about the infrastructure to be able to charge the vehicles to drive between Reno and Las Vegas and not run out the charge halfway in between.

Patrick Egan:
That would be one of the objectives.

Assemblyman Daly:
Is there any analysis that will go into this regarding the impacts to the fuel tax, the highway funds, and how the road actually gets built in relation to that?

Patrick Egan:
That has not been a discussion to my knowledge as far as this piece of legislation goes. Today, there are literally a couple of thousand electric vehicles. It is fairly de minimis. I think that would be a broader topic, but there was nothing that was done as part of this discussion that I am aware of.

Assemblyman Daly:
As it grows, it is going to be a bigger question and will obviously have to be one we need to address in some fashion.

Senator Spearman:
We have a couple of other pieces of legislation that address electric vehicles and hydrogen fuel cell vehicles that are not contained in this piece of legislation. In our meetings, we allowed for all of the other additions that are in Senate Bill 146 (2nd Reprint) and Senate Bill 150 (1st Reprint), as well as Senate Bill 407. You will be hearing more about that a little later on.

Assemblywoman Tolles:
For the benefit of the public and for this Committee, could you expand on section 1.3, subsection 1, paragraph (b), subparagraphs (1), (2), and (3). It talks about the benefits of reducing peak demand for electricity, avoiding or deferring investment by the utility in assets for distributed generation, and improving the reliability. Could you speak to what you think the anticipated benefits are of this storage and how it will impact those areas?

Patrick Egan:
What we have attempted to do in the legislation is to delineate where we believe storage would essentially benefit the system, whether it is in the management of energy on a given day or a period of time, or for the potential for improving reliability. On the latter, one of the potential benefits we have already studied and seen in other locations is if there is storage at a particular location and peak demand can be managed at that particular location, we may be able to avoid an upgrade or a replacement of existing capacity or equipment in the substation. That is one example.

The other would be on a larger scale, and the ability to utilize storage to manage peak demand at a particular point in time. I would offer that might be a little premature at this point. We do see that as a potential future benefit. Really, what we see more now with storage is the benefit of being able to manage load or energy use at a particular location at a particular point in time. I hope that answers your question.

Assemblywoman Tolles:
It does, and I think you alluded to it a little bit. I see the storage part of the conversation has been the same link in regard to where we are going and the ability to more accurately predict what kind of infrastructure we need and to have better accuracy in the rates when those peak hours are managed. Would you agree with that?

Patrick Egan:
I think we would agree. I think that is why, in part, this legislation the Senator has brought forward is very appropriate to try out, work directly with customers, and see what those benefits actually look like. We have seen other utilities conduct similar types of programs. With the intermittency and the peak loads that are unique to Nevada and the opportunity we have with solar, we think it is a very appropriate time for us to be moving in that direction.

Assemblywoman Carlton:
I would like to discuss section 1.5, subsection 3, and the benefit to low-income customers. Could you give me an idea of what we are looking at?

Judy Stokey:
I have not gone over that piece yet, but that is creating a low-income program where the PUCN would allow us to spend no more than $1 million annually to benefit the low-income areas.

Patrick Egan:
The intent was to essentially leverage some similar programs NV Energy has implemented up to this point. For example, with the Lower Income Solar Energy Pilot Project, we have been able to partner with nonprofits and schools to install equipment to their benefit specifically. We think this would be patterned directly off what we have already done.

Assemblyman Ohrenschall:
Throughout the bill, there is language about the energy storage system having a lower limit and upper limit. The upper limit is at 1,000 kilowatts of energy storage. Why even have an upper limit? Where does that upper limit come from? What is the driving force behind the upper limit?

Patrick Egan:
This was a product of a fair amount of discussion with a number of partners. We had a slightly different number and received some input from some professionals representing the industry directly. With the limited amount of funds, I think the idea was we would like to be able to do more than one project, or at least a few projects. If we have a target zone and bookends of 100 to 1,000 kilowatts of energy storage, we would hopefully be able to do multiple projects. I think it would be ideal if we could actually do different projects in the different parts of the state with different operating conditions and temperatures. I think the idea was to essentially have a limit in order to do multiple projects.

Chair Bustamante Adams:
I have a question concerning section 1.2, subsection 5. It mentions "residential or small commercial customer of a utility." I do not know if you have defined "residential or small commercial customer" somewhere else in the bill.

Judy Stokey:
I am not sure if the definition is in this bill. The "residential or small commercial customer" is putting a limit on the size of the units. For small commercial and medium commercial, the incentive is up to 1 megawatt. We are able to build the 1-megawatt incentives up to 500 kilowatts.

Chair Bustamante Adams:
If it is up to 1 megawatt, then the incentive is 500 kilowatts. Is that correct?

Judy Stokey:
Yes. It is half of that.

Chair Bustamante Adams:
It is not defined in this bill, but do you think it is defined somewhere else?

Judy Stokey:
I believe it is defined in statute or regulation. I will verify that.

Chair Bustamante Adams:
In section 1.4, subsection 1, it states, "The Legislature hereby finds and declares that it is the policy of this State to expand and accelerate the deployment of electric vehicles and supporting infrastructure throughout this State." Section 1.4, subsection 2 creates the Electric Vehicle Infrastructure Demonstration Program. Can you give me the layman terms without reading all the legalese in the bill?

Judy Stokey:
This language is similar to what we had for solar, hydro, and wind at the beginning. The reason why we started the program was to try to accelerate and get people to enter into these contracts for these incentives to build these projects. That is my understanding. This is new, so we are trying to accelerate and get people to enter into the contracts.

Chair Bustamante Adams:
The focus is to get people to buy or use electric vehicles. Is that correct?

Patrick Egan:
I will expand on the last question. I think Assemblyman Daly had it right. The idea is the original program for renewable generations included solar, hydro, and wind programs. If we were to expand the utilization of those funds in that program to electric vehicles and storage, we want to make sure it is very clear for anyone looking at it that there is a specific fund with a specific set of purposes that would utilize those funds. It would ultimately go to the PUCN for a program design to make sure whatever NV Energy would do to support the implementation is very clear. NV Energy has to file a plan and get approval. Yes, part of the intent is to help support the growth of electric vehicles in Nevada, whether that is working directly with individual residential customers, commercial customers, or helping to build infrastructure and advise our customers in the best way to do that.

Chair Bustamante Adams:
I want to make sure I understand the math, even though this is not a money committee. Out of the $295 million, is there only $40 million left?

Patrick Egan:
The authorization is in statute for up to $295 million, all told. Every year, we file the amount that has been collected and expended. We do not collect all $295 million and bank it. We gradually utilize the statutory authorization. The intent of S.B. 145 (R1) is to allow NV Energy to get up to that upper limit—no more than the original statute allowed for. We have looked at the horizon and in wind and hydro, there has not been an application since 2013. There is still a fair amount of money left in that program, and still a fair amount

anticipated to be left in the solar fund. That balance of what we think would be eligible to be spent in these other areas would be up to $40 million. I know there are many caveats in that explanation, but I believe to date we have authorization to collect approximately $255 million of the $295 million.

Chair Bustamante Adams:
Will this cause an increase in a ratepayer's bill on the REPR line item?

Judy Stokey:
The REPR is collected monthly. Those incentive dollars are collected from all of our customers. Depending on how many programs we have and how many incentives are paid out, one year the amount may be a little more. The next year, it might come down a little. All customers do pay for these programs. Currently, the REPR is set at a certain rate and it will be adjusted next year, depending on how many incentive programs are paid out.

Chair Bustamante Adams:
It may come down, but it may also go up. Is that correct?

Judy Stokey:
Correct.

Chair Bustamante Adams:
How long have we had these incentives?

Patrick Egan:
I think the original incentive program was established in the late 1990s. The statute that authorized up to $295 million was in the 2003 Session if I am not mistaken.

Chair Bustamante Adams:
Is there a sunset for these incentives to be given out?

Patrick Egan:
There is not. The $295 million was a statutory limit that was previously set. This bill does not change that statutory limit, so there is no date associated with it.

Assemblywoman Neal:
My question is in regard to section 1.2, subsection 1, paragraph (b), subparagraphs (1), (2), and (3). This is criteria set up for an energy storage system. What companies already have the system that meets this criteria?

Patrick Egan:
We believe there are a handful of companies that have the ability to meet this criteria. The beginning of section 1.2 says, "The Commission shall adopt regulations . . . ." We would anticipate that we will come forward with the criteria and hopefully the support. You are hearing legislation later today on distributed energy resources that I think will support the program design. We do believe there are a variety of companies out there, some native to Nevada as well, that have the ability to do this. The criteria and the regulation around what is met and what is not met through an incentive would come later through the PUCN.

Assemblywoman Neal:
I understand that, but it seems these criteria are baselines and are what companies need to do if they are even going to be eligible. What is interesting to me is paragraph (b), subparagraph (2), which is "Avoiding or deferring investment by the utility . . . ." The company must be able to, without limitation, avoid or defer investment by the utility in assets for the generation, transmission, or distribution of electricity. How does Company X do that? How is it structured? How can a company avoid or defer the investment by a utility in assets for generation if the company has an energy storage system?

Patrick Egan:
The classic example is a substation that has X capacity, and the amount of energy being fed out of that substation is increasing over time. If there are only two or three days in a summer where the energy needed will be over the equipment limit, by having storage in place, the company might be able to avoid additional investment in the form of a transformer for that substation. Those can be very expensive, and 360 days out of the year, the equipment might just sit there. If the company installs storage, that helps support the case that storage also has other benefits, such as being able to draw from other days of the year or other periods of the year. That would be a more classic case.

Part of this is also given for individual customers. They may be able to avoid their own investments if they are able to manage their load and avoid the peak and exceeding equipment limits by having storage.

Assemblywoman Neal:
How long can energy actually be stored for this to make a difference?

Patrick Egan:
I know you will be hearing from Tesla, Inc. later today, and I will defer to them in terms of some of the equipment specifications. Energy can stand in a battery for an extended period of time. It can be charged and discharged on any given day or within any given hour. This particular provision is getting at being able to avoid exceeding equipment specifications or the ability for equipment to pass through the amount of energy in a particular point in time

because there is storage to be able to absorb excess energy or disperse energy when it is needed. It depends on the size of the battery and the capability of the battery. Some batteries can disperse energy over an extended period of time. Some batteries are designed to disperse energy for short periods of times.

Assemblyman Brooks:
Basically, this is the original generations program and the budget associated with that program that has been collected on power bills since 2005, or maybe 2003, called the REPR. This bill is repurposing the technologies and the incentives being offered, but under the same budget, using the same mechanisms for collection. When the budget is up, the budget is up, and there will be no more. We are taking something that was highly successful for solar but did not work for hydro and wind, and putting it toward new technologies that we want to encourage. Is that correct?

Patrick Egan:
I will agree with your statement. That is correct.

Assemblywoman Carlton:
Is this for new storage? We will not be looking backwards at existing storage. We will not be incentivizing something that has already been done. We are only going to do this for folks moving into the future. Is that correct?

Patrick Egan:
That is absolutely correct.

Chair Bustamante Adams:
Seeing no further questions from the Committee, is there anyone wishing to testify in support of S.B. 145 (R1)?

Kyle J. Davis, representing Nevada Conservation League:
We are in support of this legislation. We appreciate the opportunity we had to work with Senator Spearman, along with a number of other stakeholders, to figure out the best way to incentivize some of these new technologies to make sure we are making good use of the remaining REPR dollars in this program.

Tom Polikalas, Nevada Representative, Southwest Energy Efficiency Project:
Oftentimes, we get the question of what is in the best interest of folks who do not have electric vehicles in seeing a greater adoption of electric vehicles. The Southwest Energy Efficiency Project (SWEEP) undertook a study of various fuels that are available to Nevadans and found electricity is by far the cleanest fuel available in our state. To that extent, specifically for Clark and Washoe Counties, we found there was a 90 percent reduction in emissions, and that improved the health and well-being of Nevadans, whether or not they own an electric vehicle.

In terms of the economics of electric vehicles, they are more efficient in terms of energy use. For those who choose to go with an electric vehicle, they are likely to save somewhere between $500 to $1,000 on fuel costs. The economic impact is that savings on fuel costs is available to be spent in the local economy. There is a secondary effect on the local economy by those dollars, most likely being spent in Clark and Washoe Counties.

Electric vehicles and NV Energy have an outstanding program in their time-of-use rates. Residential charging stations can power electric vehicle batteries at night, so there is an opportunity of leveraging the existing electric system and providing other benefits to electric ratepayers.

When we look at what the difference will be on average for those choosing electric vehicles, it will add about 2,500 kilowatt hours per year to their electric bill. There is a local government fee attached to the electric bill, so there is some money that goes to local governments when ratepayers increase the number of kilowatt hours being used for this purpose.

In terms of jobs and economic development, in addition to the fuel savings being spent locally, batteries and electric vehicles are part of the emerging new energy economy in Nevada. It is not only Tesla. In Reno, there is also Dragonfly Energy. At a presentation by the American Jobs Project in the Senate Committee on Commerce, Labor and Energy Subcommittee on Energy [March 31, 2017], Jaclyn Kimble, Ph.D., Senior Advisor for American Jobs Project, said there is a benefit in terms of economic development when there are clusters. We have Tesla and Dragonfly, and there are a number of businesses looking at being part of those supply chains. Dr. Kimble's testimony was that in emerging technologies, including batteries, there is the potential to create an additional 28,000 jobs in Nevada in the high technology sectors.

Kelly Crompton, Government Affairs Officer, Office of Administrative Services, City of Las Vegas:
Our Office of Sustainability is always looking for new and inventive ways to save energy. We engage in many of these activities and, therefore, we offer our support.

Chair Bustamante Adams:
Is there anyone else wishing to testify in support of S.B. 145 (R1)? [There was no one.] Is there anyone wishing to testify in opposition to the bill? [There was no one.] Is there anyone wishing to testify in the neutral position? [There was no one.] I will close the hearing for S.B. 145 (R1). I will open the hearing for Senate Bill 146 (2nd Reprint).

Senate Bill 146 (2nd Reprint): Revises provisions governing the filing of an integrated resources plan with the Public Utilities Commission of Nevada. (BDR 58-15)

Senator Pat Spearman, Senate District No. 1:
I hope at the conclusion of these three bills, you and the Committee will see how much we have all worked to try to come to a consensus as we move Nevada forward.

Senate Bill 146 (2nd Reprint) revises provisions governing the filing of an integrated resource plan with the Public Utilities Commission of Nevada (PUCN). The rapid deployment of distributed generation and the anticipated proliferation of additional distributed energy resources, such as distributed generation systems, energy efficiency, energy storage, electric vehicles, and demand-response technologies, are transforming the power system.

This measure requires, among other provisions, a utility to begin proactively planning for a distributed power system in its integrated resource plan. For the most part, consideration of distributed energy resources are absent in grid-planning processes. A new approach is important to identify opportunities within distributed grids to cost effectively meet system needs. It will result in a smarter, cleaner, and more resilient grid. This measure also revises provisions governing the filing of an integrated resource plan with the PUCN.

Madam Chair, I have Ms. Wagner and Ms. Stokey here to walk you through the rest of the bill.

Rebecca Wagner, President, Energy Policy/Regulatory Affairs, Wagner Strategies, Reno, Nevada:

I am the owner of Wagner Strategies, and I am an independent consultant working with clients on energy policy and regulatory strategies. I will walk through the components of the bill, why it matters, and then I will turn the presentation over to Ms. Stokey.

I will briefly lay the context of what integrated resource planning is, what distributed resource planning is, and the elements of S.B. 146 (R2). Integrated resource planning for electric utilities is a comprehensive planning process for meeting customer demands [page 3, (Exhibit C)], which is the most simple, direct way to state it because it is not a simple process. An integrated resource plan is composed of many elements, including an energy supply plan, a load forecast, a supply plan—which is different from an energy supply plan—and a demand-side management plan, which is the energy efficiency programs you have been hearing about and about which you will hear more today.

An integrated resource plan analysis has multiple scenarios and sensitivities, such as low carbon, high growth rates in the state, low growth rates in the state, and many other different horizons to get a sense of the best combination of resources to meet customer load.

NV Energy files an integrated resource plan every three years [page 4, (Exhibit C)]: one for Sierra Pacific Power Company and one for Nevada Power Company. It is a three-year action plan. We look to a longer forecast of 20 to 30 years to get a sense of where we are headed, and then we zero in on three years for specific projects. The PUCN can accept, reject, or modify the integrated resource plan based on testimony in an evidentiary hearing. In the hearings at the PUCN, at least in my experience as a commissioner, there would be 13 to 14 interveners in one case for an integrated resource plan. That is pretty significant. It is a tremendous amount of work and a lot of information provided to the PUCN. The actions and investments accepted by the PUCN are considered prudent investments.

If the PUCN approved a power purchase agreement for a renewable energy project or to build a new substation, the PUCN gives its blessing and then NV Energy comes back to indicate they invested and acted prudently and, therefore, should receive cost recovery from ratepayers.

What is distributed resource planning and why should you care [page 5, (Exhibit C)]? The traditional electric grid is changing. Generation sources are changing. We are seeing a proliferation of rooftop solar. In the old days, we used to have a little bit of wind and hydro distributed resources. However, for the most part, it is solar, and obviously, Nevada is a great state in which to encourage that. Consumption patterns and behaviors have also changed, such as electric vehicles and the low profile for customers who are charging. People want to dial in on what resources they use and how they use them. We need to look at how we integrate these resources into the system to the benefit of the system and other ratepayers.

To optimize the benefits of these resources on the distribution system—which is the part from the grid transmission lines to the delivery component that gets electricity to homes and businesses—utilities should engage in a transparent planning process to evaluate and unlock cost-effective options for meeting consumer demands. We do not have a lot of transparency or visibility traditionally. The utilities would take care of those issues, and the integrated resource plan process would be left to bigger components, such as new power plants and transmission lines. As this component of the entire electric system becomes more viable in terms of future options and benefits, we need a transparent planning process.

Distributed resources are defined in section 1, subsection 6, paragraph (b) [page 6, (Exhibit C)]. The distributed generation systems, such as rooftop solar, target energy efficiency, so the demand-side management programs can be targeted to specific areas. You have heard a little about energy storage, electric vehicles, and demand-response technologies. Demand-response is essentially shifting the peak demand of the utility system to a different time of the day. If we want to avoid expensive generation in the evening peak, we have programs in place to shift that load to other times.

I will quickly go through the elements of the bill [page 7, (Exhibit C)]. Section 1, subsection 5 amends *Nevada Revised Statutes* (NRS) 704.741, which requires the utility to include a distributed resource plan within its integrated resource plan. I am touching now on the original bill, and then I will layer in what was changed in the Senate.

Section 1, subsection 5, paragraphs (a) through (e) describe what the utility needs to evaluate, propose, and identify in its distributed resource plan. That is where we get into the issues of evaluating the locational benefits and cost of distributed resources. That is also where we can zero in on the distribution system to find opportunities where solar or storage could be a benefit to the system, and we would want to incentivize or focus on that area; whereas adding solar in another area would be problematic for the system, and that would need to be avoided. These provisions are trying to zero in on how the distribution system operates and how these resources fit in.

Other components direct the utility to propose or identify tariffs, contracts, or other mechanisms that would be some sort of rate mechanism to encourage or address how the resources should be placed on the system and the compensation. Other cost-effective methods of incorporating the existing solar generations program or other programs that will likely be passed this session will be incorporated, and we will have many more tools in the toolbox.

Finally, section 2, subsection 4, paragraph (b) lays out the conditions under which the PUCN may accept the plan. Those are the rules of the road for the PUCN in its evaluations.

As we worked through the bill in the Senate, it came to my attention immediately, as well as to folks at the PUCN, adding another layer of the planning process into integrated resource planning would require the PUCN and interveners at least 30 more days [page 8, (Exhibit C)]. I would argue that these are the most complicated cases if they are to be done right. It gives every party a better chance to participate meaningfully.

We also changed the process so we could start layering in the distributed energy resource planning process into the integrated resource plan process, as well as looking at combining integrated resource plans for Nevada Power Company and Sierra Pacific Power Company. Because they operate together now and their systems are dispatched jointly, it makes more sense to look at the holistic approach of resource planning as one state and one utility, and then dial it in to the distributed energy resource component.

I will turn it over to Ms. Stokey to explain the timeline.

Judy Stokey, Vice President, Government and Community Strategy, NV Energy:
The issue I am going to discuss is the timeline for regulatory proceedings (Exhibit D). These are large cases, and the company and the PUCN have not gone through with the distributed energy resource plan yet. They take a long time. We know California has been working on this for 20 months. We need to give more time to complete this in the right way. What we need to do is try to have one large case from the utilities before the PUCN per year. There are many other cases that go on, but we are trying to give the PUCN, the utility, and the interveners the opportunity not to do that work all in one year.

The timing has changed. By the time we can have a distributed energy resources plan completed, we would already have been required to file a resource plan for one of the companies. In S.B. 146 (R2), we are recommending that we combine the integrated resource plans. Currently, we have to do one at Nevada Power Company every three years and one at Sierra Pacific Power Company every three years. We also have to do a general rate case for Nevada Power Company and Sierra Pacific Power Company every three years by statute. We want to combine the integrated resource plans so they will both be done by June 1, 2018. We will combine the Sierra Pacific Power Company and the Nevada Power Company resource plans into one.

For the first time, we will also do the distributed energy resource plan at the beginning of 2019. The next time we file the integrated resource plan would be in 2021. We will combine the integrated resource plan and the distributed energy resource plan into one. I know this is confusing, and I apologize. If we are going to be doing the generation and the transmission, we may as well do distribution as well, especially with all the new technologies, and have it all in one plan. We think that would be more efficient.

Chair Bustamante Adams:
NV Energy, at least as I know it, focuses more in the south. By having an integrated resource plan, will NV Energy still be able to detect the demands from your consumers in different parts of the region?

Judy Stokey:
Typically, when we file an integrated resource plan for one of the companies, we are putting an amendment together for the other company. We work as one company, and we are connected transmission-wise. We definitely look at the load separately, but it would be more efficient to combine the plans because when we are looking for a resource, part of it might be used for southern Nevada customers and part of it may be used for northern Nevada customers. Instead of having to file two plans and ask for permission in both of them, it is better to combine both of them.

Chair Bustamante Adams:
From a company perspective, do you feel NV Energy will be able to use its resources—and I am not talking about energy, but human capital—more effectively because you are not having to do the same thing for one region and then doing it again for the other?

Judy Stokey:
This is definitely going to work better for our employees and our workload, as well as help the PUCN not have as much in one year. I know distributed energy resources is a new area, so I think the PUCN will need some resources for that. It is going to help not having a general rate case going on at the same time as a planning process.

Assemblyman Brooks:
I think this it is a very smart way to do things; combining them and also have a resource plan for distributed generation. Did you say in the timeline that, based upon the way you see it, the first distributed resource planning process would take place in 2021?

Judy Stokey:
No. We will do one in 2019, but it will not be integrated with the integrated resource plan the first time because we have to file a resource plan next year. They will be combined in 2021.

Assemblyman Brooks:
You would do something in 2019, and then the resource plan takes into consideration the objectives of the Nevada Legislature from a policy standpoint. It would then take those needs in the 2019 distributed resource plan and make those recommendations to the full resource plan in 2021. Is that correct?

Rebecca Wagner:
The process would flow like this: we would have an initial distributed energy resource plan filed in 2019. The results of that would potentially flow into an integrated resource plan amendment if there were an area where the company and the PUCN agreed needed some work. Then, 2021 is when the entire plan is filed together. Between 2019 and 2021, you will probably see a series of integrated resource plan amendments filed to start doing the uptake of the results of the first integrated resource plan planning process.

Assemblyman Brooks:
By late 2020, could we start seeing some recommendations and programs or alterations to the integrated resource plan that would cause things to actually happen?

Rebecca Wagner:
I would say the process in 2019 would conclude by the end of 2019, so in 2020, there could potentially be recommendations for identifying new tariffs, specialized rates, or encouraging certain behavior like targeted demand-side management plans. I would say 2020 would be the first we would see opportunities that result from the distributed resource plan.

Assemblyman Brooks:
In an integrated resource plan four years from now, NV Energy would be taking up issues around distributed generation and what the actual resource plan looks like and all of those things moving forward. In other conversations, I know there has been a reluctance to do anything based upon uncertainty surrounding potential votes and future legislation. I want to make sure this is a modification of the way we currently do business looking forward about four or five years starting immediately.

Rebecca Wagner:
I think I understand what you are getting at with your question. It does not matter what the future holds in terms of what kind of regulatory structure we operate under. We still have to plan for the distribution system regardless of what happens. For the utility's ratepayers and your constituents, we want to be optimizing what is going on in the distribution system. I think there is an expectance from the Committee to do that. It is also best for the system. What we really want to do is optimize the system by laying this groundwork. It is durable, regardless, and may need modifications, but it is durable.

Assemblyman Brooks:
This intelligent way of planning is meant to overlay nicely with any other recommendations. For instance, if there was some sort of a deregulation on the retail side or if there was a higher adoption of distributed generation or a higher adoption of renewable energy, this is a plan on how we adopt all of that. Is that correct?

Rebecca Wagner:
In looking forward, yes. This is a planning process. This is integral to whatever comes in the future.

Judy Stokey:
We do not know what is going to be in the distributed energy resource plan at this point until we go through all the regulations, put our plan together, and get the PUCN's approval. I know you were mentioning the vote for next year on the Energy Choice Initiative. I am sure that will go into our thinking of what we put together, but we still have to plan for the distribution.

Assemblyman Daly:
I think you may have just shed some light on what my question was going to be, which involves section 1, subsection 5, paragraphs (a) and (d). Basically, it says you are going to try to identify cost savings or cost to the customers. I know that was the one argument we recently had with the PUCN. Some people say there are incentives, and other people say there are not. Are we going to be able to outline all of those factors and put them on the scale in order to find a balanced approach? Paragraph (d) recognizes there may be an incentive and there may be a cost to the customer. We need to identify those and communicate them so we do not end up with the same situation we had before. As you said, you are going to be working through things and do not know what it is going to look like just yet. Hopefully, all of that is taken into consideration. Could you explain to me the tariff and how it works exactly? Is that defined somewhere in statute? Who pays the tariff and who takes charge of it?

Rebecca Wagner:
To your first point about cost and benefits, this is actually more of an engineering-type approach to look at the distribution system and where it would make sense to add storage and rooftop solar to avoid a utility cost investment. What you were referring to is the compensation mechanism. These costs and benefits, I hate to say, would be more based on engineering and system attributes. Of course, whenever costs and benefits are weighed, there is a difference of opinion. That should be worked out. The language in the bill sets the framework. The PUCN will need to adopt regulations to drill down on what this means in greater detail. Think of it as more engineering and less cost and benefit analysis on an economic assessment.

To answer your second question, a tariff is a term we use which is a rule, not a tax in utility regulation. I do not want to use any specific examples because I am going to use ones you will probably hear later. It is a mechanism for either compensation or to incentivize. The tariff is a rule or a framework for a compensation structure rather than a tax. I hope that answers your question.

Assemblyman Daly:
I think it did. Thank you for the engineering part of how you are looking at it. You are really not looking at the benefit to the customer versus the cost of building a new power plant or encouraging or investing in some other distributed energy or distributive process. The tariff is a term that would be used to do a certain type of energy facility. It would cost more because a tariff would be charged trying to encourage a different use or a different investment. It is a tool used to discourage or encourage a certain type of behavior. How does that work? Or, am I misunderstanding what you said?

Rebecca Wagner:
I can feel the folks from the PUCN wanting to jump in to try to save me as I wander through this. A tariff is more the rules of the road. For example, there is a net metering tariff. These are the conditions under which the utility will offer a mechanism or compensation. It will describe what the system limitations are. It is more of a guideline for what the system is, what it can and cannot do, and how it will be compensated. However, it is not the compensation mechanism. Think of it more as a rule rather than putting a tariff on Canadian lumber, for example.

Assemblyman Daly:
My earlier question about why the electric vehicle provisions are in this bill is because you are talking about the infrastructure. That makes a little more sense to me.

Assemblywoman Neal:
I have a two-part question. I am thinking about the combined distributed resource plan between Sierra Pacific Power Company and Nevada Power Company. If you look at section 1, subsection 5, paragraph (a), it says, "Evaluate the locational benefits . . . avoided or increased investments in distribution infrastructure . . . ." I am trying to understand how that would work in the combined plan and what the analysis would look like. The second part of the question is from section 1, subsection 5, paragraph (d). Since it is two different locations and areas, how will you go about identifying any additional spending that is necessary to integrate a cost-effective distributed resource into the planning? I do not understand that. I need a real-life example.

Rebecca Wagner:
I will answer the second part of your question. Section 1, subsection 5, paragraph (d) is probably a little misleading. I am not going to be able to give you an exact example. However, if a utility had to upgrade some component of its distribution system in order to encourage more distributed resources, that would ultimately be a benefit. If the utility invests $100,000 in a certain segment of their distribution system, that unlocks a million dollars worth of benefits. That is the concept. However, the utility would have to identify that and justify that to the PUCN because it may or may not exist.

Assemblywoman Neal:
That is what I was thinking, and you have given me the baseline. How would that work if what Sierra Pacific Power Company needs is distinctly different from Nevada Power Company? How does that look because now you are going to combine it? If we read the document that will now be one shot of everything, how is it explained? How is it integrated?

Rebecca Wagner:
We need to take a step back. The combining being done is merely in the plan. NV Energy will look at the distribution needs of Sierra Pacific Power Company's system and the specific components of that system, which are more than just Carson City, Lake Tahoe, and the rural areas, and will look at Nevada Power Company for Las Vegas and that area.

Assemblywoman Neal:
The first question will probably make sense now that we are going backwards. In section 1, subsection 5, paragraph (a) where it says, "Evaluate the . . . avoided or increased investments in distribution infrastructure . . . ." For Sierra Pacific Power Company, what would that look like under the distributed resource plan? Based on the conversations I have been hearing, this is the new part that is happening. Is that right?

Rebecca Wagner:
Correct.

Assemblywoman Neal:
How do you evaluate if you have avoided or increased your investment in two different parts of the state? Help me simplify that.

Rebecca Wagner:
You need to think about it as NV Energy's group of engineers at Sierra Pacific Power Company looking at their system, and another group of engineers in Las Vegas working on that system. It is the exact same exercise, but two different systems. Then the costs and benefits are evaluated. This is the baseline and what the system looks like now. This is what we would need in the future to improve the system. How can we avoid making those investments and use other investments that are better for public policy purposes or less expensive for customers?

Chair Bustamante Adams:
We have not had the opportunity to hear all this information together as a group. We have heard it on the subcommittee level. We have one more question.

Assemblywoman Tolles:
Section 1, subsection 5, paragraph (e) states, "Identify barriers to the deployment of distributed resources, including, without limitation, safety standards . . . ." That struck me as putting safety standards as a barrier to be identified. Could you expand on that a little more?

Rebecca Wagner:
As we are incorporating new technology onto the system, safety standards have to evolve as well. Are there certain safety standards in place now that need to be modified that create a barrier to adopting new technology? It identifies them to see what needs to be updated or fixed and incorporate or modify them, whatever we need to do.

Assemblywoman Tolles:
I would interpret that as modernizing the safety standards so they align with the new technologies as they are advancing.

Rebecca Wagner:
That is an excellent translation.

Chair Bustamante Adams:
I will open the hearing for those wishing to testify in support of S.B. 146 (R2). [There was no one.] Is there anyone in opposition to the bill? [There was no one.] Is there anyone wishing to testify in the neutral position? [There was no one.] I will close the hearing on S.B. 146 (R2). I will open the hearing for Senate Bill 150 (1st Reprint).

Senate Bill 150 (1st Reprint): Revises provisions related to energy efficiency programs. (BDR 58-568)

Senator Pat Spearman, Senate District No. 1:
Senate Bill 150 (1st Reprint) revises provisions related to energy efficiency programs. Opponents of energy efficiency often make the claim that the only people who benefit from utility energy efficiency programs are program participants. Any energy efficiency improvements those participants are making, they argue, are simply being subsidized by nonparticipants. However, this is simply not true.

All utility system customers benefit from energy efficiency investment. Utilities avoid the cost of producing energy and building power plants and save money by not building new powerlines, substations, and transformers. Implementing energy efficiency programs produces positive net benefits, reducing costs for all ratepayers. For instance, if a distribution company reduces demand by implementing efficiency programs, it should lower market energy and capacity prices for all ratepayers in the system.

The benefits of energy efficiency are numerous. According to the Alliance to Save Energy, the top five reasons that people, companies, and governments choose to use energy more efficiently are because it saves money; improves the economy; is good for the environment; improves national security; and enhances quality of life.

Senate Bill 150 (1st Reprint) requires the Public Utilities Commission of Nevada (PUCN) to establish, each calendar year, annual energy savings goals for electric utilities resulting in the implementation of energy efficiency programs. Each electric utility must implement an energy efficiency plan that is cost-effective and designed to meet the goals for energy savings established by the PUCN.

At least 5 percent of the expenditures related to energy efficiency programs must be directed toward low-income customers of the utility. Mr. Polikalas from the Southwest Energy Efficiency Project is here today along with Judy Stokey from NV Energy. I do want to say that we have talked a lot about distributed resource planning and transmission. I believe this particular bill about energy efficiency, and I am backed up by research, is the most cost-effective way to reduce energy costs. I do not know if many Americans realize the more dependent we are on resources from the Middle East, the more money we pay. Some of that money is diverted to some of the bad guys who are trying to kill us. Reducing energy consumption and expanding renewable and clean energy helps our national security, and it even protects the men and women who are on the battlefield in foreign lands trying to protect this country. They are doing it mostly because of oil. The people who we least want to see succeed are able to siphon a portion of the profits that go back to the Middle East. I am backed up in that statement by the Center for Naval Analyses. You can go to their website to see just how important it is for us to look honestly and comprehensively at energy efficiency programs.

We spend a lot of time talking through this, and I think many of you heard me say that the conversations we need to have would be robust and difficult. They have been robust and difficult. However, we have been able to come to a consensus on what is going to be best for Nevada as we move forward and take our rightful reign as the energy leader of the world.

Judy Stokey, Vice President, Government and Community Strategy, NV Energy:
Mr. Sullivan is here from the National Resources Defense Council (NRDC), and he has some comments to make, and then I would like to add to them.

Dylan Sullivan, Staff Scientist, Energy Program, Natural Resources Defense Council:
The NRDC is an environmental group, and we have 18,000 members and activists in Nevada. I first want to thank Senator Spearman, Judy Stokey from NV Energy, and Tom Polikalas from the Southwest Energy Efficiency Project (SWEEP) for working together on this bill.

Building on what Senator Spearman said just a moment ago, I think there are four important policy justifications for S.B. 150 (R1). As Senator Spearman mentioned, first, saving energy in our homes and businesses is the cheapest and cleanest way to serve our energy needs. As cheap as solar is in Nevada right now, and it is really cheap, energy efficiency is even cheaper. Electric utilities around the country, including NV Energy, run energy efficiency programs that make it easy and less expensive for customers to make the efficiency choice. A recent Lawrence Berkeley National Laboratory review of the cost of energy efficiency programs found that the cost to energy efficiency program administrators of saving a kilowatt hour of electricity averaged 2.8 cents per killowatt hour between 2009 and 2013. By way of comparison, electricity from a new natural gas plant would probably be about double. That is the first reason for S.B. 150 (R1)—energy efficiency is cheap.

The second point is we believe Nevada can do more. Once a natural leader, Nevada's energy efficiency programs are currently smaller than they have been in recent years. Meaning we think the state is using cost-effective opportunities to save energy. In 2014, Arizona and Utah spent around $20 per person on electric utility energy efficiency programs, whereas Nevada spent around half that amount.

The third reason is that Nevada can especially do better for its low-income citizens. Nationally, 6 percent of electric utility energy efficiency program investment is directed at low-income customers. The number in Nevada is much less than that.

The fourth reason for S.B. 150 (R1) is jobs. The NRDC has affiliate environmental entrepreneurs who have looked at energy efficiency jobs in the energy efficiency industry around the country. They have found 15,000 jobs in the energy efficiency sector in Nevada. We believe that number could grow with more savings. Earlier today, I distributed a letter from the Clean Energy Project, Inc. and E2 Consulting Engineers from a group of energy efficiency businesses in the Las Vegas area expressing support for stronger energy efficiency policy.

That is the policy justification. What does S.B. 150 (R1) actually do? The most important thing, and I think the difference between this bill and Assembly Bill 223, which this Committee has already looked at extensively, is section 10 of S.B. 150 (R1) requires the Public Utilities Commission of Nevada (PUCN) to set energy efficiency goals in a rulemaking. These goals for energy savings would then be reflected in an energy efficiency plan that is included in NV Energy's every-three-year integrated resource plans. That is the most important thing—having the PUCN set targets.

Section 3 of the bill provides some direction to the PUCN on how to look at cost effectiveness of energy efficiency plans and programs. Cost effectiveness is key to the analysis of energy efficiency programs. We want to make sure the energy efficiency plan taken as a whole saves customers money. This bill, like A.B. 223, would not specify the cost effectiveness test that the PUCN would use, but would require the PUCN to take account of nonenergy benefits in the analysis.

A nonenergy benefit sounds like a really wonky term, but it means something very specific to energy efficiency advocates and people in the profession. Basically, in some programs, especially programs targeted at low-income citizens, common cost effectiveness tests leave out some of the most important benefits, including improved occupant health and comfort, reduced uncollectible expenses from the utility, and reduced electricity shut-offs.

Section 10, subsection 6 requires the PUCN to look at programs together for cost effectiveness so the expense of a low-income program can be balanced by some of the more cost-effective programs. Like A.B. 223, section 10, subsection 7 of S.B. 150 (R1) requires that not less than 5 percent of energy efficiency program spending be directed to low-income programs.

Finally, section 9 includes declarations and findings that help provide the PUCN with some guidance as it does all this stuff, including stating it is in the interest of this state and its residents that energy efficiency plans and programs should seek to maximize the implementation of cost-effective, achievable energy efficiency opportunities.

I should mention that section 12 authorizes the PUCN to implement decoupling, which is a policy that can remove some of the financial barriers for utilities to offer robust energy efficiency programs. It only authorizes the PUCN to do that; it does not require them to do that. NV Energy would still have to propose such a mechanism.

As amended, S.B. 150 (R1) would likely lead to increased energy efficiency offerings and savings, reducing costs for electricity customers. It provides guidance to the PUCN, and it would ensure a minimum amount of program investment goes to low-income customers.

Judy Stokey:
I also want to thank Senator Spearman, Mr. Sullivan from NRDC, and Tom Polikalas from SWEEP in working on this bill. There were many changes because we want to make sure we got it right and everyone could agree. We did not want it to conflict with A.B. 223. We wanted to make sure they were the same.

I would like to add a couple of things to what Mr. Sullivan said. We used to spend a lot more on energy efficiency in years past, as Mr. Sullivan mentioned. When the economy tanked and we had our problems, our budgets went down accordingly. Since then, they have come up dramatically, and we really hope that trend will continue.

I also want to mention, because of that economic reason, the PUCN will be setting goals for energy efficiency. However, in section 10, subsection 2, paragraph (b), there is language that if something unfortunate were to happen with the economy, those goals could be adjusted downward accordingly, as we had done in the past.

I also want to mention for the record that we have done energy efficiency analyses and studies in the past. We have not done one for quite some time, so we have a committee that will do a study. The cost was about $500,000 last time we did one, but we are committed to doing that and providing some results by the end of next year that we could be using for our planning purposes.

Chair Bustamante Adams:
Are there any questions from the members?

Assemblywoman Neal:
In section 12, I am trying to figure out when a circumstance would exist where the PUCN would determine it is in the public interest to remove a financial disincentive.

Judy Stokey:
I am going to let someone else answer that question because we did not request that language in the bill.

Dylan Sullivan:
Energy efficiency advocates usually talk about energy efficiency making sense for customers, but recognize we are also asking the utility to implement energy efficiency programs that, once they reach a certain size, can reduce the utility's ability to cover their fixed costs at providing service. Many states, I think it is up to the mid-20s on the electricity side, allow a utility to implement a rate adjustment mechanism that if the utility's recovery of its fixed costs goes below the amount that regulators authorized in a rate case, the utility can adjust rates to make up that difference.

I spent a lot of my early career working on these rate adjustment mechanisms. We call them decoupling in the business. They are useful when a utility starts saving a lot of energy and it starts impacting their bottom line. The way the formulation works here is, it is up to NV Energy to ask for that. They have not seen a need to do that. I cannot tell you exactly what the right point is at which NV Energy would ask for it. It is my understanding they do not have intentions to do so. However, this authorizes the PUCN to implement that.

Assemblyman Daly:
In section 5, subsection 2, it talks about moving from one rate period to another rate period. What are we trying to do there if we are talking about efficiency? It seems to me it is like daylight savings.

Judy Stokey:
The way I understand this is it is the definition of energy efficiency programs, and we are not using time of use as an energy efficiency program.

Assemblyman Daly:
You are not doing that now?

Judy Stokey:
This term does not include that.

Assemblyman Daly:
You cannot put someone from a higher rate time into a lower billing time and say that is a savings. Is that correct?

Judy Stokey:
Correct. This is saying that is not an energy efficiency program.

Assemblyman Daly:
I have questions on section 12, subsection 1, paragraph (b) as well. I wonder how that will work.

Judy Stokey:
I would like to add a little to that. I think the proponents of the bill who originally put it together were trying to do something they thought would benefit the company as well as the customers and incentivize the company to spend more money on energy efficiency. We spend the money on energy efficiency that we think is appropriate, and we want to make sure our customers are getting the benefit of those programs. However, we are not asking for an additional incentive. That language stayed in the bill, and I do think some people think that is just an incentive for us to do more. We are fine with that being in or out, but we do not plan to use that at this point.

Assemblyman Daly:
The only other thing I have is more of a comment than a question. Section 9, subsection 2 talks about energy being an essential quality to the environment. I am not disputing that, but the thought that came into my head is that if the Energy Choice Initiative passes, all of this stuff is going to be a negative and maybe we should add that the state opposes it. If we end up with deregulation, everything we are talking about here today, in my opinion, is going to be a moot point.

Chair Bustamante Adams:
Are there any other questions from the members? [There were none.] Is there anyone here wishing to testify in support of S.B. 150 (R1)?

Kyle J. Davis, representing Nevada Conservation League:
We are in support of S.B. 150 (R1). This is actually one of the priority bills for the Nevada Conservation League network, which is a coalition of conservation groups across the state. They come together on legislative policy before the session. I especially what to thank Senator Spearman for bringing the bill forward and all of the work done in the Senate with my colleagues, Mr. Polikalas and Mr. Sullivan, and working with NV Energy and Ms. Stokey. Through a lot of work and a lot of negotiation, they have come up with a pretty good product that I think is going to move us forward in terms of taking advantage of all the cost-effective/energy efficiency opportunities that are available to us.

The nice thing about energy efficiency, as you have heard, is it is often the cheapest way of meeting our energy needs, and it provides real, tangible benefits in terms of bill savings for our customers. We urge your support, and I would be happy to answer any questions.

Robert Johnston, Senior Staff Attorney, Western Resource Advocates:
I, too, would like to go on record as expressing Western Resource Advocates' support for S.B. 150 (R1). We would like to thank Senator Spearman for bringing this bill forward, and Mr. Polikalas, Mr. Sullivan, Ms. Stokey, and other representatives from NV Energy for all coming to the table and doing hard negotiations to get where we are at here.

I do want to add one comment with respect to section 12. The reason revenue decoupling is in the bill, and we supported its inclusion initially, is to expressly authorize the PUCN, if it deems it to be in the public interest, to do for NV Energy on the electric side what has been in place for Southwest Gas Corporation and has worked very effectively for the last several years. Basically, it removes what is referred to as the through-point incentive, so if as a result of energy efficiency measures being implemented, the utility's revenue per customer goes down from what was assumed in the rate case, there will be relatively minor adjustments every year to true that up. That is really the reasoning, and the purpose of this section is to give the PUCN express authority to go that route with electric companies, as they have with the natural gas companies. The reason it is in there is because there was a debate in front of the PUCN as to whether the PUCN had authorization to do that with respect to electric utilities.

Kelly Crompton, Government Affairs Officer, Office of Administrative Services, City of Las Vegas:
The City of Las Vegas has partnered in the past with NV Energy to be energy efficient and utilize programs, such as the ones we believe are in this bill, to continue to be energy efficient.

Leonard B. Jackson, Director, Faith Organizing Alliance, North Las Vegas, Nevada:
I am also the associate minister with the First African Methodist Episcopal Church. It is indeed a pleasure to stand before you today in full support of S.B. 150 (R1). I must first of all salute Senator Spearman for the excellent presentation and for bringing forward the energy efficiency program. Her due diligence and statements earlier, as far as protecting our economy, protecting our country, and the uplifting of those who are downtrodden who pay outrageous utility bills in all, needs to be saluted, and we appreciate her due diligence. There are also others in this room, and I would like to ask them to please stand to show their support for S.B. 150 (R1). We thank you and urge your full support. May God continue to bless you and the country of America.

Chair Bustamante Adams:
Could we get a wide camera view of those people standing in Las Vegas who are in support of S.B. 150 (R1)? Thank you.

Verna Mandez, Private Citizen, Las Vegas, Nevada:
Senate Bill 150 (1st Reprint) is crucial to the progress that is necessary in order for us to have cleaner and healthier communities. Energy efficiency is important because it allows us to produce less pollution in our communities and burn less fossil fuel, at the same time saving money and natural resources. Latinos overwhelmingly support energy efficiency options. Energy efficiency makes our communities healthier, and it also saves Mother Earth.

We would love to one day talk about community solar because we believe it is our duty to conserve energy. When I was growing up, my family was low-income, and we would have loved the chance to save money and energy. We did not have that back then, so I am glad we are hearing this now. This is important for all future generations. As the famous saying goes, "We do not inherit the earth from our ancestors, we borrow it from our children."

I want to say thank you to Senator Spearman for sponsoring S.B. 150 (R1). I really hope it passes this session. This is great for businesses, families, Mother Earth, and communities of color as well.

Howard Watts, Private Citizen, Las Vegas, Nevada:
I want to thank the Chair and the Committee for your leadership on energy issues during this session. I would like to briefly echo my support for S.B. 150 (R1) for all the reasons given. I have done energy efficiency upgrades on my home. Not only has it saved us money, it has also made the home more comfortable. I think that is another thing to remember: it actually benefits people's comfort and their health when they are able to keep the cold air or hot air in the winter inside the house. For that reason, and all the others already given, I am in full support of S.B. 150 (R1) and look forward to your support.

Jarrett Clark, Program Director, Clean Energy Project; and representing Advanced Energy Economy:
I am testifying today on behalf of my organization and Advanced Energy Economy in support of S.B. 150 (R1). We are a nonprofit, nonpartisan organization that works to educate civic, community, and business leaders on forward-looking energy policies that strengthen our state's economy and protects the environment. We also represent the business voice of Nevada's clean energy economy with nearly 500 Nevada businesses supporting comprehensive clean energy policies.

Simply put, S.B. 150 (R1) will result in NV Energy implementing more comprehensive and more effective energy efficiency programs for its customers. The U.S. Department of Energy estimates that small businesses spend $60 billion dollars per year on energy costs, which are often a significant portion of their operating costs. In fact, operational costs like this are typically second only to personnel when running a small business. Expending these programs means hundreds of millions of dollars in additional utility bill savings for households and businesses in Nevada over the next decade. By offsetting these energy costs and saving money, small businesses are able to reinvest in their companies, hire more staff, and often boost their local economies.

As Mr. Sullivan mentioned, energy efficiency represents roughly 15,000 jobs in the state. Passage of this bill could stand to push that number even higher. Our state used to lead in energy efficiency, but now we rank thirty-seventh. It is time for Nevada to reclaim that leadership, and I appreciate the opportunity to speak here today.

Hernando Amaya, Communications Coordinator, Chispa Nevada:
We support S.B. 150 (R1) because it would be a huge, positive impact in our communities, especially for the low-income families. This is a very good bill. I would like to thank Senator Spearman for supporting us.

Tom Polikalas, Nevada Representative, Southwest Energy Efficiency Project:
Senator Spearman asked me to make short closing remarks, but I will take the opportunity to make comments on remarks that have been made. First, thanks to Mr. Sullivan for explaining many of the details. With regard to decoupling, the central element of section 12 of the bill was to give the PUCN an additional tool for their toolbox upon their discretion to choose whether or not decoupling made sense and was in the best interest of Nevada's consumers. There have been some dockets that have described that could possibly be the case, so we want to empower them with clear legislative intent to be able to use something that may be in the best interest of the consumers.

Thanks also to the many folks who participated in the Governor's New Energy Industry Taskforce, specifically and primarily, Kyle Davis of Nevada Conservation League. He chaired the clean energy subcommittee that many of us served on. That process began in March 2016 by taking a look at policies that could essentially stimulate Nevada's economy using the lowest cost resource available to us on an energy resource basis; that being energy efficiency.

In addition to saving consumers a lot of energy and money, this is building upon the success that NV Energy has already accomplished. There have been successful programs, as has been described, but hopefully this will lead to bringing back the incentives provided by the utility for energy efficient new home construction. We would like to see the opportunity for home energy retrofits for folks who have older homes. Specifically, with regard to low-income residents, we hope to see new programs coming from multifamily housing and apartments where people are renting and paying exorbitant energy bills. That was a key target of the efforts, in addition to low-income energy efficiency measures in general.

The bottom line is, a study we have undertaken highlighted that there are cost-effective opportunities to save consumers hundreds of millions of dollars, benefiting Nevada's economy and creating thousands of jobs. In addition to the environmental organizations and clean energy stakeholders, the business community has been enthusiastically in support of S.B. 150 (R1), including local manufacturers that range from Patagonia, Inc., which manufactures in northern Nevada, and Electrotherm Solar LTD. There are also three manufacturers in the Fernley area: energy efficient insulation with Johns Manville and Rmax, Inc., and a new window manufacturer that manufactures energy efficient windows.

This bill helps rebuild Nevada's image as a high-tech energy leader and, I believe, will encourage further economic development.

Lastly, we would like to thank the Committee for your indulgence in studying a number of these issues in depth. We know public utility regulation can be a challenging field, and kudos to all of you who have plunged into this. It can be challenging at times, but I believe this is a great bill that will fundamentally change the lives of thousands of Nevadans and be a bright part of Nevada's future.

Jared Fisher, Private Citizen, Blue Diamond, Nevada:
I want to make a few comments. I have been traveling among the towns of Nevada this week. I have gotten to talk to many people in the mining towns. You would think mining would be on their mind, but what these people do care about is energy savings. They care about green energy. They care about solar. These were not things I expected to hear, but I have heard them in the rural areas in Nevada.

I come from the Las Vegas area. I will give you a quick example of what savings can do. I built a ground-up building, which had an estimated cost of about $4 million. In the end, the building cost $2.3 million. We did an energy audit and found that just by cutting costs anywhere from lighting to switching from different heating and air conditioning systems, and simple things like that, we went from 100 kilowatts of needed solar power to power our building down to 53 kilowatts. I was able to build the building for less. I will say that for four years and five months, we have not had an energy bill from NV Energy. We are one of 12 buildings in the United States that is a net-zero energy building. That is coming from a small business owner who does not really have the resources like bigger corporations.

I can tell you, the people of Nevada really do care about this issue. Everyone out there wants to save money. We can trim the fat. I am highly in support of this bill. It starts right now. Nevada can, should, and will, with your support, come back to be the leader in the United States and in the world in energy efficiency and renewable energy. We can do that, but it is going to start right here, right now. Not tomorrow, not yesterday, but right now by making good informative decisions about clean energy.

Chair Bustamante Adams:
Is there anyone else wishing to testify in support of S.B. 150 (R1)? [There was no one.] Is there anyone wishing to testify in opposition to the bill? [There was no one.] Is there anyone wishing to testify in the neutral position?

Ray Bacon, Executive Director, Nevada Manufacturers Association:
I think Mr. Fisher just made the key point on this bill. He had to do the research on his own. The PUCN has very little connection with the construction trades, with the regulations, and things like that as far as building codes. That is where the changes have to take place. The actual energy savings is going to take place at the user level. In some cases, our building codes still make it exceedingly difficult to do energy-efficient operations. There are not good resources as far as collecting data and finding places to get the most efficient equipment.

I can see Assemblyman Brooks understands that. I do not know how we get to the point where we expand this. It is not just providing the incentives; we also have to provide the data and make sure the rules allow those things to take place.

[Submitted but not discussed is (Exhibit E).]

Chair Bustamante Adams:
I will close the hearing on Senate Bill 150 (1st Reprint). I will open the hearing on Senate Bill 204 (1st Reprint). Senator Atkinson will not be here to present S.B. 204 (R1), but there are people here who are going to present the bill on his behalf.

Senate Bill 204 (1st Reprint): Requires the Public Utilities Commission of Nevada to investigate and establish biennial targets for certain electric utilities to procure energy storage systems under certain circumstances. (BDR 58-642)

Sarah Van Cleve, Policy Advisor, Tesla Energy, Tesla, Inc.:
Mr. Witt and I would like to run you through S.B. 204 (R1). We did bring a few pictures of storage (Exhibit F), and hopefully we can answer a few of the questions that were asked earlier. Before we dig into that, I would like to give you a high-level overview.

What S.B. 204 (R1) would do is set biennial storage procurement targets for the utilities. Every other year, the utilities would have an amount of storage they would try to buy. They would only buy it if it were cost-effective; in other words, if buying storage was actually going to save ratepayers money instead of other traditional upgrades. That is the goal of this bill.

I would like to start off with Energy Storage 101 [page 2, (Exhibit F)] that could get to some of the earlier questions. Why do we need storage on the grid? The way the grid works right now, there needs to be exactly as much generation—the right number of solar, wind, and fossil fuel generation—to meet the exact demand. Every time you turn on your air conditioner, that means NV Energy has to turn up a power plant. Storage changes that paradigm. The generation does not have to exactly meet the demand on the grid. It gives the utilities a lot more flexibility to do different things. There are two primary benefits, but many others that are articulated in the bill as well.

First, it increases infrastructure utilization. Billions of dollars have already been spent on this infrastructure in order to build it out to meet the hottest day of the year—the day with the highest demand. That is inefficient because there is only that highest demand once a year and a few days a year with high demand. The infrastructure is sitting there not being used. Instead of building out power plants that are only turned on a few days a year or building out new wires that are only used occasionally, energy storage can be used to hold on to energy during times when there is lower demand, like at night when fewer people are using air conditioners, and then push the power back out to the grid when it is actually needed. That is part of the reason why storage also helps with renewable integration.

Obviously, the wind only blows when it is windy and the sun is only up during the day, but sometimes more energy is needed at night. The energy is held in the storage device until it is really needed. Those are the basics about how energy storage is going to help our grid.

I would like to go through the major sections of the bill, starting in section 1, which highlights these benefits and others, including reducing fossil fuel use, reducing emissions by offsetting the old, dirty power plants that we do not want to run anyway and diversifying the fuel mix. In southern California, folks recently found diversifying the fuel mix was pretty important when an outage in the gas system led to some serious electric liability issues because they were so dependent on natural gas to meet their peak.

What this policy would do is have the PUCN, if it is in the public interest, install storage. The PUCN would look to see if the benefits of installing storage—again, all of the things we talked about, reducing the need to build power plants, integrate renewables, all those things—would exceed the costs of the system. In setting targets to find those resources, we are learning by doing. This is a very new type of technology on the grid. We do not have all the rules about how they are interconnected to the grid, how the utility buys this different type of resource, or what type of rate options are appropriate for this resource. Actually putting this on the grid will drive a lot of the learning that still needs to happen.

Sections 3 through 6 are definitions. The one of note is section 5, which is the definition of "energy storage system." That includes many different technologies. The next slide [page 4, (Exhibit F)] helps answer Assemblywoman Neal's question about what type of storage is out there and how long can it push out stored energy. Starting on the left of the slide, the y-axis shows the discharge time of these different types of storage. The x-axis on the bottom shows the capacity, or size of the resources. On the discharge time, some resources only put out energy for a few seconds to help with the frequency of the grid. Other types of storage will push out energy for hours or days to help with those longer-term energy needs. On the capacity side, there are some small resources from 10 kilowatt hours, which would be in a home, for example, up to a gigawatt, which is for huge, utility-scale projects. There are many different types of energy storage and different technologies that fill those needs. The big, blue bubble on the slide signifies batteries, which is what Tesla, Inc. provides with the lithium-ion batteries. However, there are many different chemistries of batteries. Beyond batteries, there are things like pumped hydro storage, compressed air storage where air is compressed in a tank and used for generating electricity later, or flywheels, which are devices that spin up and later release mechanical energy to generate electricity. There is a lot of storage out there, and this bill will include all of it. It is not biased toward one technology. Utilities would look at the different sets of technologies.

Section 7 is the piece of the bill that states by October 2018, the PUCN will determine if it is appropriate to set those targets for the utilities and in doing so, they would look at all different points of the grid where storage can be helpful. On this slide [page 3, (Exhibit F)], you can see that storage can be put on just about any part of the grid, whether that is up at the generation level near wind farms or at fossil fuel sites to help those power plants run more efficiently, or at the transmission and distribution systems to offset the need to build some of

the wires, or even in residential homes and commercial or industrial buildings. Your constituents will deploy this to help control their energy bills, but also help the grid. If customers can offset the peak load at their homes from their air conditioners, that also helps offset the need for the utility to build new power plants to serve that load. Really, storage can be put anywhere. It is a very diverse technology.

Section 7, subsection 2 is the important piece I point to that makes sure this storage will benefit ratepayers, and the money spent on storage is going to offset even higher costs that would have had to have been spent on different types of infrastructure. There is really only an upside given that provision. The utilities simply will not buy storage if there is not cost-effective storage to buy. We are very confident there will be storage that is cost-effective, but we want to make everyone very comfortable with the fact that this is not going to increase ratepayer cost and, in fact, should have the opposite effect of decreasing ratepayer cost.

Section 8 is the detail about if the PUCN determines it is in the public interest to set targets. There are different pieces that will be established in regulation. The details of those biennial storage targets include what points on the grid storage should be interconnected. Hopefully, it is some combination of these parts of the grid [page 3, (Exhibit F)], from residential to commercial to utility-scale, because they each have their own benefits. Section 8, subsection 6 clearly states there will be a process that if the utility does not find cost-effective storage, it can either defer or waive its target so it does not have to buy storage.

There is some very similar language that has been deployed in a few states, including Oregon, California, and Massachusetts. Those states are still at the start of implementing storage. This is not unprecedented. We have seen it work very well in other territories, so we are hoping with how invested Nevada is in energy storage, it will similarly be a leader on this type of bill.

Daniel Witt, Manager, Business Development and Policy, Tesla, Inc.:
One of the key provisions that differs from what some of the other states have conducted is the cost-effective provision in section 8, subsection 6. In years prior, this technology had been in a much earlier stage of development, and it was not necessarily as cost-effective as traditional resources. As the technology has matured, as we have developed methods of cutting out costs, we believe there are, in fact, places on the grid today where storage is viable, cost-competitive, and a better deal overall. Those opportunities become even greater as the utility, the PUCN, businesses, and consumer customers are all able to realize the various benefits associated with this technology.

One of the things I want to point out specific to Tesla's technology is the diversity of the applications that we have done. Going all the way from the residential level to the commercial level, the utility-scale, as well as microgrid, there was installation of solar and storage on the island of Ta'u in American Samoa. It is worth noting that all the batteries you

see in these photographs [page 5, (Exhibit F)] were produced here in Nevada. As you can see, we are very excited about the potential for this technology given the variety of applications, particularly when paired with an increased amount of renewables.

While we are here presenting the bill—and we think very highly of the policy—we are certainly not the only company that is involved in this space. You can see the variety of companies that are involved in every aspect of the process [page 6, (Exhibit F)]. When this bill was in the Senate, a number of companies that originally formed as a result of some of these earlier policy initiatives in other states testified in support of the bill. They suggested they are now at the point that if such a policy were to come into Nevada, they too would be able to expand into the state and provide economic growth to the region as well as this technology.

One of the groups that testified, the Energy Storage Association, could not be here today, but wanted me to pass along its support for this legislation as well.

Chair Bustamante Adams:
Are there any questions from the members?

Assemblyman Ohrenschall:
I was comparing this bill with the bill we had previously [Senate Bill 145 (1st Reprint)] that had a cap of a 1,000 kilowatt energy storage device. I do not see a cap in this bill. Does this bill envision as much as science and engineering can provide for energy storage? How does this work with S.B. 145 (R1)?

Sarah Van Cleve:
Senate Bill 145 (1st Reprint) is a repurposing of those incentive funds for customer-located energy storage. Those are storage devices that are at commercial buildings or at homes that are helping customers control their energy charges. Senate Bill 204 (1st Reprint) is a storage procurement bill and is much broader. It would include some customer-located storage, but it also includes utility-located storage. Some of these projects would be much bigger than 1 megawatt, most likely. I think the size, which is largely up to the PUCN to determine the appropriate targets, will be a function of how much cost-effective storage can be put on the grid. Where are the needs on the grid and to what extent can storage reduce those better than other types of grid investments?

Assemblyman Ohrenschall:
If customers were off-grid and wanted to lower their own usage, would that work with this bill? Are customers able to store energy if they generate more than they need if they are off-grid? Would this bill work for that situation?

Sarah Van Cleve:
This particular bill is to promote storage that will support the grid. Even though it can be located at a customer's site and support a customer's needs, it is also supporting the grid in turn. For example, if the peak usage of a commercial building can be reduced, then the peak stress is also reduced on the grid. This would not apply to completely off-grid systems. Some customers may be partially off-grid where they are somewhat self-reliant on solar plus storage, but if they are completely off-grid, they would not be supporting the system or the ratepayers. This bill is focused on the vast majority of customers who will still be connected to the grid.

Daniel Witt:
There was testimony provided earlier regarding a customer who is net-zero but technically still grid-tied. Those customers would be able to participate. If they are truly off-grid, the technology still has plenty of merit and could enable customers to do so. However, I would think that is a small subsection of the potential users for the technology.

Assemblyman Kramer:
It seems there is one factor that goes into establishing a rate for electricity that we have not talked much about. That is the time-of-day element. It seems if power were charged to a person based on the time of day—the scarcity at some points in the day, and the overabundance at other times of the day—and thus priced accordingly, having a battery or storage system, whether it is industrial or residential, would become very easy payback. Is this going to be a component of power planning in the future?

Daniel Witt:
We certainly believe time-of-use rates and time-varying rates do overprice signals to the consumer that can enable these sorts of technologies to have a much shorter payback period. I will submit that is not necessarily possible for all customers at this point, but we think a gradual transition to those sorts of policies makes a great deal of sense. We do see electric vehicles that are able to pull electricity off a regulator charging at certain times as well as these batteries coming online.

Chair Bustamante Adams:
Are there any further questions from the members? [There were none.] Is there anyone wishing to testify in support of S.B. 204 (R1)?

Judy Stokey, Vice President, Government and Community Strategy, NV Energy:
We would like to go on the record in support of this bill.

Rose McKinney-James, representing Valley Electric Association, Inc.:
It seems you are looking for brevity. Storage is good.

Tyson K. Falk, representing Southern Nevada Home Builders Association:
As builders, we design the final portion of the grid. We definitely appreciate and need the flexibility to be innovative in finding ways to serve our customers who are participating and their neighbors who might not be. We would like to go on the record in support.

Jesse Wadhams, representing Recurrent Energy:
I will echo the previous testimony from those in support.

Kelly Crompton, Government Affairs Officer, Office of Administrative Services, City of Las Vegas:
We are also in support of the bill.

Jarrett Clark, Program Director, Clean Energy Project; and representing Advanced Energy Economy:
I am testifying in support of S.B. 204 (R1) on behalf of my organization and Advanced Energy Economy. We support this bill and its continued analysis of the benefits of energy storage systems. We believe this is an important foundational step to removing barriers to the larger scale use of storage in energy planning. This bill codifies a deliberative process by which the PUCN is enabled to determine what is appropriate for our state with input from utilities, customers, and other stakeholders. I appreciate the opportunity to speak in favor of this bill.

Kyle J. Davis, representing Nevada Conservation League:
I think all the arguments have been laid out pretty well. We are in support of the bill.

Jessica Ferrato, representing Solar Energy Industries Association:
We are here in support of the bill.

Tom Polikalas, Private Citizen, Reno, Nevada:
The aspect of the bill I am very supportive of is the opportunity to diversify energy resources, but primarily to enhance grid security. There has been testimony to another legislative body in terms of the grid being at risk, and we are literally under attack by some folks trying to take down the grid to the extent that storage at critical facilities is something that enhances grid security. It is good for our national security, and it is good for the security of our communities.

Anne Macquarie, Executive Committee Member, Toiyabe Chapter, Sierra Club:
We are in support of S.B. 204 (R1). Nationally, the Sierra Club has a goal of 100 percent carbon-free electricity sector by 2040. We know this is a very ambitious goal, and energy storage is a critical part of the clean energy electrical system. We must have robust energy storage in order for renewable energy to be fully integrated into the electric grid. This bill will help us move in that direction in Nevada. In the interest of brevity, I did not testify on the previous bills [Senate Bill 145 (1st Reprint), Senate Bill 146 (2nd Reprint), and Senate Bill 150 (1st Reprint)], but we support those as well.

Chair Bustamante Adams:
Is there anyone else wishing to testify in support of S.B. 204 (R1)? [There was no one.] Is there anyone wishing to testify in opposition to the bill? [There was no one.] Is there anyone wishing to testify in the neutral position? [There was no one.] Mr. Witt, could you come back to the table; we have one question from Assemblywoman Carlton.

Assemblywoman Carlton:
In looking through the bill, the one thing that stood out to me is what will the cost actually end up being? We are asking the PUCN to set this and figure it out, which means we are going to end up paying for storage. What is the cost of the batteries?

Daniel Witt:
The cost of the battery depends on where it is used on the grid because we are trying to assess where it will be of the most value. A home unit is going to be a different end-cost from a commercial unit, which will be a different end-cost from an industrial unit. We invariably look at this as a replacement cost; in other words, cost-effective versus a separate resource that would essentially fulfill the same need. To provide one example, if the PUCN, in conjunction with the utility, made an assessment that due to rising demand there was a potential need for a new peaker plant, that peaker plant has an associated cost over a 20- or 30-year period. This would be one application where storage could potentially be used where it could be more cost-effective, but it would still have a cost. Does that answer your question?

Assemblywoman Carlton:
Somewhat. I am concerned. Whenever there is a demand for something and the supply is not as great as the demand, and we set the demand, the cost of the supply will go up because there is a demand. Telling the PUCN they will set a goal is setting a price on this. I guess I need to understand it a little better. I always have problems when we try to take things into the equation that I am not sure can actually be measured.

Years ago, the debate was not to build another plant because it is cheaper to go out on the open market. Then the Enron Corporation scandal happened. It was no longer cheaper to go out on the open market. I am always wary when we do not have our own resources and we tell people something is cheaper, but it is not necessarily as reliable for the people who want to turn their lights on when the sun goes down. I want to make sure we balance it. We do not want to be too reliant on one form rather than another because strange things happen in the market. No one would have ever guessed that with Enron except for Senator Neal, who called it. I am always apprehensive when we do not have our own resources in the state to deal with these issues. I want to make sure we are not setting ourselves up to have a high price tag added to ratepayer bills to cover the cost of storage.

Sarah Van Cleve:
Absolutely. I think that is an important concern, which is why we put in some strong protections in the bill, particularly in section 8. There is a process by which the utilities can waive or defer any procurement of storage if they do not find the benefits of the storage exceed the costs. In theory, it is possible this bill could result in no storage if somehow there is no way to save ratepayers money with storage. Of course, we do not expect that to be the case. We do think that, after studying NV Energy's system, they are going to find areas of their grid where they can put storage in places where they would otherwise have to put a distribution line or a new power plant. NV Energy will save ratepayers money that way. There are many protections in the bill to make sure there are no increases to Nevada energy bills.

[Submitted but not discussed is (Exhibit G).]

Chair Bustamante Adams:
I will close the hearing on Senate Bill 204 (1st Reprint). I will open the hearing for Senate Bill 314 (1st Reprint) and invite Senator Settelmeyer to come forth.

Senate Bill 314 (1st Reprint): Revises provisions related to the installation of certain systems for obtaining wind energy. (BDR 22-482)

Senator James A. Settelmeyer, Senate District No. 17:
Senate Bill 314 (1st Reprint) comes about, as much legislation does, by different stories we have all had as we go through the legislative process. We continually state that we want more renewable energy. However, a cry that I often hear from individuals is they want more renewable energy, but not in their backyards. If you look at the laws of most counties, they limit the height of a windmill regardless of the size of the property. That has always bothered me. If someone has a 1-acre parcel and puts a 20-foot windmill right next to the property line, if the wind blows it could fall on the neighbor. By the same respect, if someone has a 1,000-acre ranch and puts up a 60-foot windmill, who cares? If it blows over, it cannot possibly injure anyone else because it is all on private property. Yet, many counties have laws dictating the height limits on the property.

The bill concept is to preclude the governing body from denying an application for the issuance of a permit unless it represents a danger to the health, safety, and welfare of the public. However, in the Senate Committee on Government Affairs, Clark County had some concerns with the preclusion and added the phrase, "Is not compatible with the character of the area in which the system is located," in section 1, subsection 2, paragraph (b), subparagraph (2). That amendment was accepted, and it made Clark County happy. That is where we are at today. I will gladly entertain any questions at this time.

Chair Bustamante Adams:
Are there any questions from the members?

Assemblyman Ohrenschall:
I had a bill somewhat like this a few sessions ago that came out of a project a resident of Henderson was working on with some University of Nevada, Las Vegas engineering students for a windmill. An ordinance was passed after the resident was trying to put it up, which prohibited the windmill for wind energy. My question for you is do you know if there have been many windmill projects that have been prevented because of local ordinances or zoning restrictions? It seems like we have a lot of wind in this state, whether urban or in one of the more pioneer counties. There is a lot of potential there for energy.

Senator Settelmeyer:
In the north, we traditionally have a little more wind capacity, whereas the south usually tends to be in the solar capacity. I have known individuals who have looked into it, and when it came to the preclusions, they just walked away. They would have the ability to try to apply for a special use permit, but special use permits cost anywhere from $5,000 to $20,000 to apply for because there needs to be an engineering study, and it needs to go through the county's process of that special use permit, which usually precludes it. Again, most of the renewable energies are marginal at best in order to get a return on investment, let alone an additional cost being added, such as an industrial-grade grid protector or a special use permit of $20,000. I have known a few people who have put forth inquiries, but as soon as they run into this roadblock, they stopped.

As another example within Douglas County, which I represent, some people were going to come forward and do a solar project. The county came in and said from now on there is no solar allowed on agriculturally-zoned land. This is the problem we keep running into. We try to promote renewable energy, but not in our own backyards. To me, there needs to be a point where we, as state legislators, say yes. Unless it endangers health and safety, it should be allowed in our own backyards.

Assemblyman Brooks:
Section 1, subsection 2, paragraph (b), subparagraph (2) states, "Is not compatible with the character of the area in which the system is located." Would that give planning boards and permitting agencies the ability to take a look at other uses in that area or neighborhood? I am taking it down to a neighborhood level. Does it give the planning board discretion to take into consideration what some of the neighbors may think?

Senator Settelmeyer:
That provision was added by Clark County at their insistence. Therefore, they may be better able to speak to it. I was not necessarily in favor of that provision. However, in order to get the bill out, as you know, compromises must be done. I believe this allows both the county and city or any ordinance to look to their opinion as to whether or not it is compatible with the character of the area in which the system is located. I guess it is more a question of putting in a law, in my opinion, of this nature. We will see what they do with it. If they abuse it, it might be time to come back and delete that provision. Maybe we need to give it time to find out.

Chair Bustamante Adams:
Is there anyone here from Clark County?

Senator Settelmeyer:
I am not sure if the individual who proposed the amendment is available at this time to confer upon it, but again, it was an amendment that was placed by the Senate Committee on Government Affairs on this particular issue. It was a compromise in order to make sure the bill could move. I believe there are four out of five members on the Senate Committee on Government Affairs from Clark County. They had a lot of opinions that we should agree with Clark County's amendment.

Chair Bustamante Adams:
Is there anyone wishing to testify in support of the S.B. 314 (R1)?

Jared Fisher, Private Citizen, Blue Diamond, Nevada:
I have actually erected three wind turbines—one commercial and two residential. I will take you through the process. I had to go through a community meeting where the "not in my backyard" issue came up. This turbine was erected three miles from anyone. I think the perception is people do not want to see a wind turbine. However, my argument is do we want to look at air pollution or do we want to look at a wind turbine? Ultimately, we are going to have to make that choice. We cannot continue to power twenty-first century gadgets with nineteenth century technology; in other words, coal. We are going to have to move to renewable energy. We are going to need to make it easier for people to use renewable energy.

The second wind turbine I erected was commercial. Not only is it solar, but it is also wind. I had to go through quite a lot of steps through the Summerlin community because it is based in Summerlin in Clark County. It had to go through the county commission. It is a hard process, and it is very discouraging for anyone who wants to try to do the right thing to have these roadblocks in the way. Many times, what kills deals is time. When we spend so much time with the bureaucracy of it, the people who want to do the right thing eventually do not want to do it anymore because there is too much time, too much hassle, and too much headache.

My suggestion is we should make it easier for people to put up renewables. Ultimately, we are all going to want clean water and clean air, and we are not going to want to look at pollution in the skies in the future. Our children are not going to want to do that either. I did not even know about this bill until right now, but I thought I would testify since I have erected three wind turbines.

Tom Polikalas, Private Citizen, Reno, Nevada:
Wind turbines are a great technology. My primary point is that they can be compatible even with a downtown area. There is a vertical access wind turbine on the Discovery Museum in Midtown Reno that serves as a tremendous educational opportunity for kids who are interested in technology. I think the logic of having wind renewables in rural Nevada in

particular just makes complete sense. It is something that can help support our agricultural community. There are some opportunities with larger-scale wind developments that help offset some of the challenges the agricultural communities can experience. Thank you for supporting this bill.

Judy Stokey, Vice President, Government and Community Strategy, NV Energy:
We would like to go on the record in support of this bill.

Chair Bustamante Adams:
Is there anyone else wishing to testify in support of the bill? [There was no one.] Is there anyone wishing to testify in opposition to the bill? [There was no one.] Is there anyone wishing to testify in the neutral position?

Austin Osborne, Administrative Officer and Planning Director, Storey County:
I am speaking on behalf of Storey County. With permission of the Virginia City Tourism Commission's chairman, I am also speaking on behalf of the Virginia City Tourism Commission. Storey County and the Tourism Commission are neutral on this bill as it is written now with the Clark County addition. Storey County is a huge supporter of renewable energy, both wind and solar. Storey County has a tremendous amount of wind and solar energy across the county, and our 2016 master plan supports both commercial and noncommercial renewable energies, including solar and wind.

As the bill is written is why we are in the neutral position. We were in opposition at the beginning. We appreciate your listening to our comments.

Chair Bustamante Adams:
Is noise a problem for Storey County with these wind turbines?

Austin Osborne:
The wind energy we have in Storey County right now is residential or noncommercial. Noise has not necessarily been a problem. These machines are in rural areas on 1-, 10-, and 40-acre parcels. Sound has not been an issue. Our team has done a tremendous amount of research looking at the sound implications of both commercial and noncommercial. There do appear to be some machines that are problematic in the sound realm and some that are not in commercial and noncommercial.

Kyle J. Davis, representing Nevada Conservation League:
I am testifying as neutral on this bill today. I testified in support of the bill in the Senate and was happy to be in support of the bill and in support of Senator Settelmeyer's intention with the bill to allow for there not to be unreasonable barriers put in place for installing one of these systems. The reason I appear before you in the neutral position is because of the amendment added in the Senate dealing with the character of the area in which the system is located. I do think this is overly broad, and I think it gives a lot of ability for the local government to continue to come up with reasons why such a system should not be allowed.

Section 1, subsection 2, paragraph (a), subparagraph (2), regarding the ability to set standards as it relates to location, noise, safety, or setbacks is already in statute. Many of these protections already exist and this, of course, is just dealing with the height. I was not sure where to testify on this bill today, as I do support the Senator's intent with the bill and would hope the bill could better reflect that.

Assemblyman Ohrenschall:
Those last two lines of the bill dealing with the character of the area in which the system is located seems subjective to me. I do not know if the Nevada Conservation League works with folks who want to put up wind turbines and generate renewable energy that way. If you know, what are the reasons wind turbines are turned down? Is it noise or safety? I understand the intent of the language of the bill is to try to expand wind energy, but I wonder if a local zoning authority could now say they do not think it matches with the design or the theme of the neighborhood. What kind of denials are you familiar with? What are you worried about if this bill passes?

Kyle Davis:
To be honest, it has been a while since I have really looked into it all that closely. In fact, the last time was probably when you and I were working on your bill a few sessions ago. There have not been that many small wind installations in the state over recent years, but there have been a few. I certainly do not want to comment too much on something which I am not aware of many of the details. My understanding is when it comes to community ordinances, there are a variety of them in our state. Some communities have ordinances that are far more restrictive than others that are generally trying to encourage these types of technologies. There is a lot in the existing statute that gives a lot of authority to the local government for that. I would agree, the language that appears in the bill in section 1, subsection 2, paragraph (b), subparagraph (2) does seem very vague and subjective. That is my concern.

Austin Osborne:
If you do not mind, I would like to weigh in on that question. Storey County's concern is mostly with the Comstock Historic District, the site of Virginia City. Ours is really not necessarily that we would deny a project, but we recognize that commercial machines could be located in and around the historic district. We would like to be able to have some local review of an application for such a thing so we could help work with the applicant in placement and design of the facility in order to best fit with the historic district and the town.

Assemblyman Ohrenschall:
With the law as it is now, have there been issues with people trying to put up wind turbines near the Comstock Historic District? It seems the current statute would be adequate in terms of location, noise, and safety to turn down a project if it would clash with the historic treasure we have there and other areas like that in the state. I am wondering if there have already been issues.

Austin Osborne:
It is my understanding not in our county, but there is one residential wind machine in the Comstock Historic District. The Comstock Historic District did a review of that machine for its location and placement. That is all I know on that particular machine. So far, there have not been any applications for anything else in the Comstock Historic District, at least as far as I understand, in Storey County.

Assemblyman Ohrenschall:
There was one wind turbine that was approved in the Comstock Historic District. Is that correct?

Austin Osborne:
That is correct.

Chair Bustamante Adams:
Senator Settelmeyer, do you have any closing comments?

Senator Settelmeyer:
Thank you for the thorough review of S.B. 314 (R1). I appreciate the questions and concerns people brought forward. This is about the concept of wind because wind turbines generally have to be about 60 feet high in order to get what is called "sweet wind." Below 60 feet, the wind does not blow enough to generate the power. This bill concerns the concept of height. I appreciate the questions on zoning. If people want to sell power, they would have to go to the county and ask for industrial zoning because, again, it would be an industry making power for sale. This bill is about one thing. The ability to do net metering and reduce individual power bills.

I always raised the question to the county representatives as to exactly what they were objecting to. What type of business have they allowed in their communities that have this type of power requirement that the county could actually shave off. For agricultural, I can see that. During the summer months, I pay over $3,000 a month to NV Energy. I have to write them a check larger than I can write to myself, which always makes it fun. However, in that respect, again, what type of community are you allowing some type of operation within an area that has a requirement for power so high that you would not want them generating their own power. Again, this is not about selling power because then industrial zoning would be needed. I greatly appreciate your time and effort on S.B. 314 (R1).

Chair Bustamante Adams:
I will close the hearing on Senate Bill 314 (1st Reprint). I will open the hearing on our last bill, Senate Bill 65 (1st Reprint), and invite the Director of the Office of Energy, Office of the Governor, to come forward.

Senate Bill 65 (1st Reprint): Revises provisions related to the filing by certain electric utilities of an integrated resource plan. (BDR 58-167)

Angela Dykema, Director, Office of Energy, Office of the Governor:
I would like to thank you for this opportunity to present Senate Bill 65 (1st Reprint), which has to do with revising provisions to the integrated resource planning process at the Public Utilities Commission of Nevada (PUCN).

To start with the background, last year Governor Sandoval issued an executive order to convene the New Energy Industry Task Force with the primary directive of making recommendations on the best energy policies for Nevada's future. The task force was asked to address policies that encourage the development of clean energy sources and integrate renewable energy technologies into Nevada's energy sector to foster the creation of a modern, resilient, and cost-effective energy grid, and to support distributed generation and storage with a specific focus on rooftop solar and net metering.

Senate Bill 65 (1st Reprint) was drafted out of the recommendation by this task force, and it was one of the recommendations selected by Governor Sandoval to be introduced by the Office of Energy, Office of the Governor. In addition to being one of the task force's recommendations selected by the Governor, this legislation also reflects established state energy policy and aligns to our agency's strategic planning goals. Specifically, the legislation aligns to the Strategic Planning Framework that Governor Sandoval issued last year, which is the result of many months of hard work by the administration to identify the values that are most important to our state, including a number of goals and objectives we have undertaken to realize those values.

Cabinet members worked very hard and consulted with agency staff to develop goals and guidelines that ultimately ended up in the document. The specific goal that this legislation helps to reach is listed in section 7.2 of the Strategic Planning Framework under Resource Management to become the nation's leading producer and consumer of clean and renewable energy.

I was going to give some background in the integrated resource plan process and what an integrated resource plan actually is, but this Committee has heard that from previous presentations in a lot more detail than I can provide, so I will get to the point. Our current laws on resource planning in Nevada are set forth in *Nevada Revised Statutes* (NRS) 704.736 to 704.754. Right now, NV Energy is required to submit an integrated resource plan to the PUCN by July 1 of every third year. The existing law requires the PUCN to conduct a public hearing on the adequacy of the plan after the utility has filed its plan. Existing law also authorizes the PUCN, when determining the adequacy of the utility's plan, to give preference to the measures and sources of supply that meet certain criteria, such as economic and environmental benefits, and that provide for the creation of new jobs in the state.

There are two components to this bill. Section 1 adds a new section to NRS Chapter 704 to provide for a broader integrated resource plan prefiling process, which would allow greater public participation. In *Nevada Administrative Code* (NAC), it is currently required that at least four months prior to the anticipated filing date, which is July 1 every third year, the utility shall meet with the operations staff of the PUCN and the Bureau of Consumer Protection, Office of the Attorney General, to provide an overview of the anticipated filing. During the task force discussions, it was unanimously agreed upon that in order to allow for a more open and transparent planning process, the prefiling process should be expanded to include greater participation by all interested persons. This legislation integrates that existing language from NAC 704.952 into statute and adds a provision that the utility shall meet with not only the PUCN and Bureau of Consumer Protection staff, but also all interested persons.

The second component of the bill is set forth in section 6. As I mentioned, NRS 704.746 currently allows the PUCN to give preference to measures and sources of supply which provide the greatest economic and environmental benefits to the state, are consistent with the other provisions of the section, provide levels of service that are adequate and reliable, and provide the greatest opportunity for the creation of new jobs in the state.

During the task force discussions, it was found that without clear legislative direction, the focus tended to be on the least-cost resources rather than taking into consideration all of the costs and benefits. This focus on least-cost tends to undervalue the economic and environmental benefits of clean energy and does not adequately assess the fuel and carbon price risk of overreliance on natural gas-fired generation, which currently comprises over 70 percent of our energy portfolio.

Section 5, subsection 5 simply replaces the word "may" with "shall" and effectively ensures that during the integrated resource planning process, preference will be given to resources which provide the greatest economic and environmental benefits, the greatest opportunity for the creation of new jobs in the state, diversify energy portfolios, reduce fuel and carbon price risk, and help to position Nevada to lead the nation as a producer and consumer of clean and renewable energy consistent with our state energy policy.

There was an amendment adopted in the Senate in section 6, subsection 5, paragraph (e) that states, "In considering the measures and sources of supply set forth in paragraph (c) of subsection 4 and determining the preference given to such measure and sources of supply, the Commission shall consider the cost of those measures and sources of supply to the customers of the electric utility." This is something the PUCN already takes into consideration, so this added language just reiterates that cost is indeed a factor to be weighed, in addition to the benefits.

The second part of the amendment, which shows up in section 6.5, subsection 3 of the reprint before you today, was added as a follow-up to preserve the intent of the bill after the addition of the first amendment. However, we were not actually provided the opportunity to review this language prior to it being added into the legislation. Unfortunately, it refers to the wrong section and creates more confusion than clarity. After further analysis and discussions with

parties affected by this legislation, we have proposed an amendment (Exhibit H) that removes the second part of the Senate amendment in section 6.5, subsection 3. We have had discussions with all the parties affected by this legislation, and all are onboard with removing the second part to the amendment in the Senate. I would be happy to answer any questions. [Also submitted (Exhibit I).]

Chair Bustamante Adams:
Could you help me understand the section you were referencing?

Angela Dykema:
The second part of the Senate amendment that we are proposing to remove is in section 6.5, subsection 3 on page 6, lines 28 through 34.

Chair Bustamante Adams:
You are proposing to remove that because it references the wrong section. Is that correct?

Angela Dykema:
Yes. It ended up creating more questions and confusion than clarity, so we thought it would be in the best interest to simply remove the whole part.

Assemblywoman Carlton:
What section was it supposed to apply to?

Angela Dykema:
It was supposed to reference the preferences that were to be given in section 6, subsection 5, paragraphs (a) through (e). It instead refers to the measures and sources in subsection 4. It adds more confusion than necessary.

Assemblywoman Carlton:
You told me what it was supposed to apply to, but what was it actually supposed to do?

Angela Dykema:
The intent was just another follow-up to preserve the initial intent of the bill as originally introduced that if the PUCN did accept or modify a plan based on cost alone and not considering the measures set forth in subsection 5, they provide a justification for doing so.

Assemblywoman Carlton:
This is probably just a little too clever by half for me. What I am trying to figure out, and I might need to ask someone from the PUCN this question, is when you put in the shell and then add the other language but delete the language in the back, does the final effect still allow the language that is on page 5, lines 10 through 12, ". . . the Commision shall consider the cost of those measures . . . ." Is that still in effect in this bill to make sure that cost is still a factor?

Angela Dykema:
Yes, it is. The only language we are proposing to delete is the second part, which was an amendment, that was not initially included in the original bill.

Assemblywoman Carlton:
I guess I am just a little curious as to why folks thought it was important to include it the first time around but now are taking it back out. I have had too many years in this building hearing that. There is usually something else going on. We will have to figure out how all these pieces interplay.

Assemblyman Araujo:
In section 1 there is language that states, ". . . not less than 4 months before filing a plan . . . or within a reasonable period before filing an amendment . . . ." I am trying to better understand the reasoning behind the language being "reasonable period." Could we get on the record what you would feel a "reasonable period" would be?

Angela Dykema:
The intent here was not so much on the timing. It currently states in statute ". . . no less than 4 months prior to." I guess within a "reasonable period" would be later than four months. The intent was really to open it up to be a broader public process so people from the public who had an interest in the filing of the plan could see the plan prior to it being filed.

Assemblyman Araujo:
The way I am reading it, it could go both ways because of the "or." I am trying to get on the record whether it would be less than four months that we would allow an amendment to be proposed. The flexibility for an amendment to be filed would be five or six months, but not necessarily two months being defined as the reasonable time period.

Angela Dykema:
I will say for the record, probably the former. If it were five or six months prior, that would be acceptable, but not two days before it is scheduled to be filed.

Assemblywoman Carlton:
Section 6.5, subsection 3 that is proposed to be eliminated in the amendment (Exhibit H), the correct citation would have been section 6, subsection 5. If I understand this correctly, when I go back to the language on page 5, lines 5 through 12, it states, "In considering the measures and sources . . . ." That is the PUCN taking that into consideration. When I get into the language being proposed to be deleted on page 6, lines 28 through 34, it means that would actually be included in the order, so the written order and the considerations that were taken out would actually be in the order. If this language were not included, then they would not be in the order. That is my understanding, but I would be happy to have Mr. Keane make sure I understand correctly. I am more comfortable in the PUCN not just considering it, but to actually include it in the order so everyone knows the document everyone is working on. I think I am correct on that, but I want to make sure I understand.

Wil Keane, Committee Counsel:
That is correct. It is exactly as you stated.

Chair Bustamante Adams:
The amendment (Exhibit H) would be to correct the verbiage to make sure it says section 6, subsection 5.

Wil Keane, Committee Counsel:
Yes. The reference in section 6.5, subsection 3, instead of being to paragraph (c), subsection 4 of NRS 704.746, should be to subsection 5 of NRS 704.746. After that, it is a policy decision about whether to keep the language.

Chair Bustamante Adams:
Are there any further questions from the Committee? [There were none.] Is there anyone wishing to testify in support of S.B. 65 (R1)?

Judy Stokey, Vice President, Government and Community Strategy, NV Energy:
I would like to thank Ms. Dykema in working with us on this bill. We did have some concerns. We wanted to make sure the economics would be considered in the evaluation. That is why some of that language was put in the bill.

Kyle J. Davis, representing Nevada Conservation League; and Interwest Energy Alliance:
We are in support of S.B. 65 (R1). I did have the opportunity to serve on the Governor's New Energy Industry Task Force over the last interim. This was one of the recommendations that did come out of that process. We think it obviously makes sense for us to put the preference on resources that are going to have the most bang for our buck here in state. I think this bill accomplishes that.

Robert Johnston, Senior Staff Attorney, Western Resource Advocates:
I also served on a technical advisory committee to the task force from whence this recommendation came. We are in support of S.B. 65 (R1). We think it is necessary policy guidance to correctly align the integrated resource planning process with the Governor's Strategic Planning Framework, and Nevada's goal of becoming a leading producer and consumer of clean and renewable energy. We think this bill provides that necessary policy guidance. We would like to thank the Governor's Office of Energy and Ms. Dykema for bringing this forward.

Tom Polikalas, Nevada Representative, Southwest Energy Efficiency Project:
We would like to go on the record as supporting S.B. 65 (R1).

Jarrett Clark, Program Director, Clean Energy Project; and representing Advanced Energy Economy:
I am here today to testify in support of S.B. 65 (R1). It should also be noted Jennifer Taylor, our organization's executive director, served on the technical advisory committee of the Governor's New Energy Industry Task Force that recommended this bill.

As the law stands, the PUCN is allowed to give preference for measures that provide the greatest economic and environmental benefits, also known as renewables and energy efficiency, but it is not required to give this preference. As Ms. Dykema stated, this focus undervalues the environmental benefits of renewable energy resources. It does not address our state's overreliance on natural gas, and it does not diversify our state's energy portfolio.

This bill would require that preference for renewables in energy efficiency rather than simply allow it. By adopting a clean energy first policy, our state will tap into the very renewable resources with which it is abundant. In doing so, it will reduce our state's dependence on out-of-state fossil fuels and drive in-state investment. It will not only lead to the diversification of our energy portfolio, but diversification of Nevada's economy as a whole, a central piece to Governor Sandoval's economic development plan for the New Nevada.

Also, as the law stands, the planning process for Nevada's energy needs is only open to two governing bodies: the PUCN and the Bureau of Consumer Protection. As such, this does not allow for an open and transparent planning process, which accommodates participation by all interested stakeholders. As quoted in Pacificorp's Public Input Process description, which is also a Berkshire Hathaway, Inc., utility, "Since resource decisions can have significant economic and environmental consequences, conducting this planning with transparency and full participation from the regulatory agencies and other interested and affected parties is essential."

In closing, the Clean Energy Project and Advanced Energy Economy strongly supports the passage of S.B. 65 (R1). By putting clean energy first, we are putting Nevada first. Thank you for your time today.

[Submitted but not discussed was (Exhibit J).]

Chair Bustamante Adams:
Is there anyone else wishing to testify in support of the bill? [There was no one.] Is there anyone wishing to testify in opposition to the bill? [There was no one.] Is there anyone wishing to testify in the neutral position? [There was no one.] Are there any closing comments?

Angela Dykema:
I want to thank you for considering this bill. I do want to state for the record that the second part of the amendment (Exhibit H) was included by the Office of Energy. Even if it does reference the corrected subsection, which was subsection 5, the bill is better off without this language because it creates unnecessary confusion. To address Assemblywoman Carlton's question about whether or not the reasoning for choosing any of the measures would be in the order, such as cost, environmental benefits, or economic benefits, they would be in the final order regardless.

Chair Bustamante Adams:
I will close the hearing on S.B. 65 (R1). Hopefully, this is all the energy bills from the Senate. Is here anyone here for public comment? [There was no one.] Having no further business, this meeting is adjourned [at 4:34 p.m.].

RESPECTFULLY SUBMITTED:

Pamela Carter
Recording Secretary

Lori McCleary
Transcribing Secretary

APPROVED BY:

Assemblywoman Irene Bustamante Adams, Chair

DATE: _____

EXHIBITS

Exhibit A is the Agenda.

Exhibit B is the Attendance Roster.

Exhibit C is a copy of a PowerPoint presentation titled "S.B. 146 Distributed Resource Planning," dated May 8, 2017, presented by Rebecca Wagner, President, Energy Policy/Regulatory Affairs, Wagner Strategies.

Exhibit D is a document titled "Timing of Regulatory Proceedings SB146," presented by Judy Stokey, Vice President, Government and Community Strategy, NV Energy.

Exhibit E is a document titled "Clean Energy and Environmental Laws as Human Rights Protections," dated May 7, 2017, regarding Senate Bill 150 (1st Reprint), submitted by Janette Dean, Political Scientist and Sociologist, University of Nevada, Reno.

Exhibit F is a copy of a PowerPoint presentation titled "SB 204 Committee Hearing," dated May 8, 2017, presented by Sarah Van Cleve, Policy Advisor, Tesla Energy, Tesla, Inc. and Daniel Witt, Manager, Business Development and Policy, Tesla, Inc.

Exhibit G is written testimony in support of Senate Bill 204 (1st Reprint), dated May 8, 2017, submitted by Jason Burwen, Policy & Advocacy Director, Energy Storage Association.

Exhibit H is a proposed amendment to Senate Bill 65 (1st Reprint), dated May 5, 2017, submitted by Angela Dykema, Director, Office of Energy, Office of the Governor.

Exhibit I is a summary of Senate Bill 65 (1st Reprint) submitted by Angela Dykema, Director, Office of Energy, Office of the Governor.

Exhibit J is a letter to Chair Irene Bustamante Adams, dated May 8, 2017, in support of Senate Bill 65 (1st Reprint), submitted by Josh Nordquist, Ormat Nevada, Inc., Ormat Technologies, Inc.