MINUTES OF THE
SENATE COMMITTEE ON COMMERCE AND LABOR

Seventy-fourth Session
March 29, 2007

The Senate Committee on Commerce and Labor was called to order by Chair Randolph J. Townsend at 7:02 a.m. on Thursday, March 29, 2007, in Room 2135 of the Legislative Building, Carson City, Nevada. The meeting was videoconferenced to the Grant Sawyer State Office Building, Room 4412E, 555 East Washington Avenue, Las Vegas, Nevada. Exhibit A is the Agenda. Exhibit B is the Attendance Roster. All exhibits are available and on file in the Research Library of the Legislative Counsel Bureau.

COMMITTEE MEMBERS PRESENT:

Senator Randolph J. Townsend, Chair
Senator Warren B. Hardy II, Vice Chair
Senator Joseph J. Heck
Senator Michael A. Schneider
Senator Maggie Carlton

GUEST LEGISLATORS PRESENT:

Senator Dina Titus, Clark County Senatorial District No. 7
Assemblywoman Marilyn Kirkpatrick, Assembly District No. 1

STAFF MEMBERS PRESENT:

Kelly S. Gregory, Committee Policy Analyst
Lori Johnson, Committee Secretary
Wil Keane, Committee Counsel
Scott Young, Committee Policy Analyst
Laura Adler, Committee Secretary

OTHERS PRESENT:

Hatice Gecol, Ph.D., Director, Nevada State Office of Energy, Office of the Governor
Don L. Soderberg, Chair, Public Utilities Commission of Nevada
Eric Witkoski, Chief Deputy Attorney General, Bureau of Consumer Protection, Office of the Attorney General

Walter M. Higgins III, Chair of the Board, Chief Executive Officer, Sierra Pacific Resources
Jeffrey W. Shaw, Chief Executive Officer, Southwest Gas Corporation
Fred Schmidt, Southern Nevada Water Authority
Cindy Ortega, Senior Vice President, Energy and Environmental Services, MGM Mirage
Renny Ashleman, Southern Nevada Home Builders Association
John C. Sagebiel, Ph.D.
Jason Geddes, Ph.D. Renewable Energy & Energy Conservation Task Force
Brad Spires, Nevada Association of Realtors
Greg Kern, Director, Energy Efficiency, Nevada Power Company
Terry K. Graves, American Chemistry Council
Stephen Wiel, Ph.D., Nevada Representative, Southwest Energy Efficiency Project
Pete Coates, Construction Manager, Kit Carson Development
Victor Buron, President, Solar Seeker
Suzanne Johnson
Marion I. Barritt, Director, American Solar Energy Society
Rose E. McKinney-James, Clark County School District
Paul Gerner, Associate Superintendent, Clark County School District

CHAIR TOWNSEND:
We will open the hearing on Senate Bill (S.B.) 437.

SENATE BILL 437: Revises provisions concerning generation and consumption of energy. (BDR 58-232)

SENATOR RANDOLPH J. TOWNSEND (Washoe County Senatorial District No. 4):
The purpose of this bill is to address some of the main components of the problem facing Nevada in energy. The biggest problem we face is the spread between our base load and our peak load. One of the things most people do not understand is that in order to drive energy required by Nevada's growing economy, we send over $3 billion a year out of state to provide energy services to ourselves. That is to buy fuel for the power plants we have to purchase power. One of the components of our discussion is to make sure we start to refocus that to keep the money in Nevada.

As you can see in the presentation (Exhibit C, original is in the Research Library), the spread in southern Nevada is significant in terms of what happens

in base load and peak load during those unique summer months. As a result, the companies are required under their certificate of convenience to make sure the lights stay operative. That means, in many cases, the companies are out on the open market buying peak power, and we want to deal with that.

Although natural gas is an American and Canadian commodity, it is nonetheless a commodity and fluctuates in price, and we are at the mercy of that industry. In the resource planning act you will find our utilities, over a 5-, 10- and 20-year period, have to tell us how they are going to provide the energy needs in Nevada. That is why you see all these proposed plants being put forward. They are required to let us know so we can figure out the best way in which to get the cheapest energy at the most immediate capability, and get those projects financed.

I think if you review some of these numbers, you will see it is nearly overwhelming. Right now, there are almost 6,000 megawatts of additional electric generation capacity, either under construction or planned. That is a huge amount of energy.

SENATOR TOWNSEND:
This Committee is familiar with the fact that southern Nevada drives, at this point, not just everything in Nevada with regard to population growth, but energy growth as well. It is getting to the point where Las Vegas may, in fact, drive the entire western market, because of the intensity with which they grow. You look at the projects in southern Nevada, for example, the City Center project by the MGM Mirage. They have a 10 megawatt cogen plant on their property. One property of 66 acres is going to have a base load of 55 megawatts, and a peak load of about 85 megawatts. That gives you some context on what we are dealing with. Some of us are old enough to remember when the entire Strip was not 55 megawatts of base load.

The residential energy audits in this bill are there for a reason. Residences or households use about 20 percent of the energy used in the United States. The transactions in southern Nevada are over 36,000 new home sales a year, and close to 42,000 resale homes a year. When you look at over 75,000 transactions, just in the Clark County area, it is overwhelming.

The average American spends about $1,300 a year on home energy, and the efficiencies proposed in this bill can cut around $400 of that.

The two components with which we have to deal are simple, either produce more energy, or reduce the consumption. Many components of this bill deal with the specifics of reducing consumption. The energy audits help us in many ways, because the more you can reduce your energy cost, the greater chance an individual has to get a lower cost mortgage; and more importantly, they can buy more house for the same amount of money.

The energy audit is an issue. If you have not done this in your own home, please avail yourself of that opportunity. When you call the company, they will send someone who analyzes your home from top to bottom to let you know where you are energy inefficient. It was a great learning experience for me, particularly in a bathroom with decorative bulbs. The auditor pointed out that those bulbs were burning at 10-percent efficiency and the 90 percent was heat. That is an example of what an energy audit can do for you. Not just the fact that most of us would have a refrigerator in our garage, which is the most energy inefficient thing in your house, and the highest drain of electricity.

People need to examine the type of appliances they buy. One of the goals of this bill is to help the public, through energy audit, understand how efficient they are, and what they can do to control their own energy costs. That does not mean everyone has to spend $50,000 to make their house energy efficient. But at least they will know that if they plan on staying in their house a long time, they can help themselves by purchasing, when ready, different kinds of appliances, and how they approach maintenance on their homes. These kinds of things can only be taken advantage of if you know the problem. Energy audits are extremely constructive and positive.

SENATOR TOWNSEND:
As you look through the bill, you will see the recommendation that the energy office drafted these regulations so individuals will have a rating. This can be presented to mortgage companies who will include it in your mortgage to give you a break, which can be helpful in dealing with a home mortgage.

In the past, this committee has debated at length the Universal Energy Charge (UEC). You will probably hear testimony on the value of this project. I still believe in it, but do not believe we are using it in the appropriate manner to help those who qualify for this project. In this bill there is an opportunity to redirect the money. It is there, it has already been collected from consumers to the right area. Inappropriately built apartments or stick-built homes are where we need to

do weatherization to help with energy efficiency, and that is the way it needs to be directed.

SENATOR TOWNSEND:
The important thing with many of our mobile homes is the subsidy for their actual power bill, because for us to take UEC money and put it into a mobile home is not the most efficient use of those funds.

There is also the ability to pay down surpluses by getting it into the hands of people who need the money. That is the purpose of that energy charge, and this redirects by authorizing 50 percent of a surplus to be transferred to the Housing Division, Department of Business and Industry, for use on low-income homes that receive poor ratings on audits. Low-income households pay a disproportionate percentage of their disposable income on energy costs, sometimes as much as 15 percent of their gross income. Look at your own income and compare; you will see these people need some serious help.

ASSEMBLYWOMAN MARILYN KIRKPATRICK (Assembly District No. 1):
As we talk about the energy audits, it is important to know we looked and spoke with the Realtors to find out some of the problems to get people to move into the older neighborhoods. We realized the Realtor plays a big part in showing the different homes and help people decide where they are going to invest their livelihood.

In this bill, it says that older homes as well as newer homes have to bring forward an energy audit before it can be listed. This lets the buyer know going in that these are the changes that will have to be made, this is where your power bill may go. You know when getting a home you can pay the $1,000 mortgage, but not consider your power, trash and other costs. At the end of the day we would like this to help the consumer know their projected costs.

The other part allows for mortgages to be included. There are different types of mortgages people can receive as a benefit if they agree to do these audits. If they agree to a certain part of it, in the long run they know where their energy bills are going to be.

Currently in Nevada, you have the opportunity to be the leader in energy efficiency. We have everything here that does not cost a lot. We have solar and

wind energy to provide another way to build commercial projects, and power our state buildings. We can step up to the plate and encourage our younger generation. I know our younger generation is more energy conscious than I was when I was growing up. We want to allow people to receive the property tax abatement; there is already federal tax abatement. When you combine the two, it encourages energy efficiency.

There are developers who are already stepping up to the plate. We have just seen in Mountain's Edge that 90 percent of the developers there are 30 percent to 40 percent above Energy Stars. We want to encourage the process to come forward. When everybody else sees this is good, they will want to be part of it. I spoke with the developer of Mountain's Edge who said it was part of the agreement to come in by meeting standards such as water conservation. There are three developers in the entire State that did not want to participate, so there was a waiting list. Currently, it is in process and people are doing it, and we want to help move the process along.

SENATOR TOWNSEND:
Assemblywoman Kirkpatrick pointed out something that needs to be underscored. That is the fact that, particularly in southern Nevada, the largest user of electricity is the Southern Nevada Water Authority. The biggest cost component of delivering water to your house is the electricity. We have to be concerned that as you look through these abatement programs, it includes water as part of the discussion. It is not that we do not have any water; it is if we want to continue to grow throughout the State, we have to manage the water resource, because the cost is in the electric consumption. That can never be forgotten.

The value added in this bill relative to extending the Leadership in Energy and Environmental Design (LEED) for residences and extending the property tax break we have for commercial projects is an extremely important one. As you remember, we went through a regulatory process the last two years that is a result of the bill which says whether a commercial component meets the LEED or its equivalent. Because we had Question 5 on the General Election Ballot come forward, that took the smoking debate away from any discussion. It was set into law, and that was the end of the debate. As a result, we moved over and accommodated that in our regulatory hearing. There are other things now, how things are sited on the lot, the way they face, which are different kinds of things we did not have before.

What has been pointed out is it includes public buildings for the first time. The State Public Works Board has made huge strides, and this sets some standards for them that are important to meet. If we are not willing to do this as a State and its government leaders, it is hard to ask the private sector to do it.

SENATOR TOWNSEND:
The decoupling for natural gas utilities issue is an important and complex issue in the bill. One of the issues we face concerning the differences between natural gas and electricity is simple. So far we have talked about conservation and how we are going to incentivize those utilities to change their behavior. That is all right in electric, but when you tell natural gas they need to consume less, that commodity requires an infrastructure that will be there no matter what. Unlike electricity that is consumed the second you generate it, natural gas is an animal of a different color. As a result, if we regulate them in the same manner, and we ask people to conserve, then you end up with a broken system. That means the natural gas utility is not going to get the revenue they need in order to maintain the infrastructure to run the gas through the pipeline. Every time people are asked to conserve natural gas, it hurts the gas company's system. It sounds odd, but when you think about it, you can understand it. It is a crucial and difficult situation, it is a hard thing to do, but it is something we believe follows in the spirit of getting people to conserve without it costing them too much money. It you end up with not enough revenue to provide the service, maintenance can go down, safety is going to go down, and that is something none of us want. In order to do that, we have to change the way we regulate natural gas. We have decoupled what amounts to the infrastructure from the commodity itself. It is a financial disincentive for us to get people to conserve. You cannot ask any company, in this case utility people, to rely on it, to cut their own throat; that makes no sense, and we have dealt with that in this bill.

SENATOR TOWNSEND:
Looking back at the history of this State, we break our regulatory process for rate cases into two components. One is the general rate case. A general rate case includes profit, administrative cost, infrastructure and other basics of a utility company. Then there are fuel adjustments and purchase power, which is the deferred-energy accounting adjustment (DEAA). When you look at it, those are two separate components. Right now the State is buying more power in order to provide it to our citizens. The DEAA is the account where you are constantly accruing dollars that are owed for purposes of fuel and purchase

power. The longer you let that accrue, the greater the carrying costs, just like a credit card; the company makes no money on this, it is a direct pass-through. If it is prudently purchased, whether it is fuel or purchase power, they have a right to receive the balance. But the longer we leave it on the books, the more it costs the customer in the end. This is something we have all known; this is the toughest job for the consumer advocate. The consumer advocate has a number of jobs, and one of them is keeping the rates as low as possible, and to make sure the service is a good as it can be. The other thing is to make sure that you are not falling into the Fram Oil Filter commercial problem which is, you can pay me now or you can pay me later, but you are going to pay me, and paying me later is going to be expensive.

When you look at the December 2004 to December 2006 time frame, there was nearly $59 million in carrying costs. This is a gigantic number. The customer did not get anything for that, the company did not get anything from that, we did not get more energy. Those are the things we have to balance. This moves that to a quarterly rate adjustment—not a rate case. This is the actual recording of costs incurred for fuel and purchase power. It is crucial to move that to quarterly to minimize the carrying cost.

SENATOR TOWNSEND:
Section 12 deals with general rate cases, which are currently filed every two years and are extremely expensive. I heard the figure of $1 million 30 years ago, and I think that has not changed. A rate case is a serious and expensive document that is extremely detailed. I admire the fact that one of these cases went before the Supreme Court of Nevada. I watched the arguments in that case, and a number of the justices actually read every page of that count. It was impressive to observe that they knew what they were talking about. Rate cases are incredibly complex.

This bill requires rate cases to be filed every three years instead of every two years. The cost is not borne just by the company, it costs the Public Utilities Commission of Nevada (PUCN) and the consumer advocate a huge amount of staff time to respond to these rate cases, that is why the change in the bill.

Net metering was debated from the day we started talking about this last session, and we will probably continue to debate it now. This bill increases net metering from 150 kilowatts to 1 megawatt. The portfolio energy credit to a

customer generator who pays the entire cost of the net metering system belongs to them. There are those who will come with a bill asking for it to be greater. This is a difficult issue to debate, the ability of the customer to be able to provide their own energy. Not only just bring theirs down to zero, but feed back to the system the additional generation of power.

There are reasons not to make this too big. We do not want the entire community or developers to get into competition with the power company; otherwise it shifts the cost of the company over to the smaller portion of people picking up the tab, which means your rates will go up. There is a fine line in which we think 1 megawatt for this part meets our time frame.

ASSEMBLYWOMAN KIRKPATRICK:
Out state and local buildings need to be the leaders in energy efficiency, so what we are asking is to allow the Public Works Board to look at the life cycle of being energy efficient. In their bidding process, they would include that. I am sure you will find it may be 4 percent more in the initial run, but in the long run it will save the State and local buildings a lot of money.

We have seen that just by changing all the lights in an older building. For example, the Community College of Southern Nevada changed all the lights in their buildings and saved $28,000 a year with an initial $5,000 investment. We believe, in the public works side, when thinking ahead when building these new buildings, then we would be energy efficient in our cost in the long run, and benefit the public.

Throughout the United States the LEED Silver is becoming more popular, and more public buildings are going this way. They have found that the life cycle is an additional savings, and we believe this is a great part of it. We have the opportunity to be the leader in Nevada.

SENATOR TOWNSEND:
This bill continues to put Nevada on the cutting edge. It is not just important for us to go to national conferences and tell everyone about the good job we have done in Nevada. That is not the point. The point is what happens after we pass these bills. I can tell you that when you see the people who come to speak, the amount of interest in energy efficiency and renewables is remarkable—we are right there. We are not on the cutting edge, we have stepped over, and are moving in an entirely new direction.

This is a state blessed with a huge amount of solar energy, giving us a chance for a new industry. We have the second largest deposit of geothermal in the country, and are already developing it. Wind seems the greatest potential, but we have not fully figured it out. We have a biomass plant going into the correctional institution in Carson City. We are not talking about it anymore, we are doing it. If you have not been to El Dorado Valley to see that remarkable project on solar, to Southern Nevada Water Authority's facility for solar, or to Nellis Air Force Base, it is here. That is what happens when we pass a bill, it starts moving. Based on what we put in this bill, working with the numerous parties that will be affected by it, we can advance the ball so when we return in two years, we will see the fruits of that labor.

SENATOR SCHNEIDER:
It appears in your presentation that you are having the Realtors as the gatekeeper regarding the energy efficiency in a home being sold. The word "may" was in there instead of "shall." You are proposing the Realtors become the gatekeepers, and they would have to have continuing education. It seems we are putting a lot of liability on the Realtors. What would be the cost to have a house inspected?

ASSEMBLYWOMAN KIRKPATRICK:
I have lived in my house for 20 years, so I am not familiar with buying and selling houses, but my older children buy houses. There is a certain amount of paperwork you have to present when you sell your house, whether it is an inspection, a punch list and many others; so, this is an additional piece of paper. Currently, our local utilities offer energy inspections free to residents who request them. The point is to educate everybody when buying a home, about all the other costs of home ownership. We are asking the Realtor to become a partner within our communities to help us. Some people cannot qualify for a particular mortgage, but if they see they can make some additional improvements such as upgrading the dishwasher or changing the windows, it would put them in another category, which is beneficial to the Realtor, allowing them to have more tools to help the consumer buy the home.

SENATOR SCHNEIDER:
I watched a relevant story on *MSN News* today, saying that oil had already jumped to over $65 a barrel and speculating that the situation in the Middle East could cause oil to jump to $90 a barrel within hours. This points to what we are doing in Nevada to be more relevant.

CHAIR TOWNSEND:
Please do not misunderstand, the goal is to get as close to energy independence as we can. Interest is growing in many areas, it cannot happen overnight, but it also cannot happen until we take the first couple of steps, and this is a beginning.

The gas company has reminded us that they play a much greater role in this issue of energy than we think. They are providing gas directly to consumers and Sierra Pacific Resources not only provides gas to consumers, they use it to generate electricity. Do not misunderstand, gas plays a monster role in Nevada. Then there are companies like the MGM Mirage who are so big that they drive their own market and do their own things. This is a collaborative effort. The energy office was made part of this because we need a state energy policy and someone to help drive it.

SENATOR HARDY:
I would like to be sure what we are talking about in the LEED system or its equivalent. What currently is considered an equivalent?

HATICE GECOL, Ph.D. (Director, Nevada State Office of Energy, Office of the Governor):
When it comes to the different ratings, we are very familiar with the LEED right now, but we do not know the details for the Green Globe. However, talking with the experts for the Green Globe, there are certain groups that are equivalent. For example, the Green Globe II is equivalent to the silver.

SENATOR HARDY:
You have determined that there is some finding. I do not know the details of Green Globe; all I know is I have been contacted by a lot of people saying that ought to be part of it. Have you already determined that the Green Globe II standard is equivalent to the LEED Silver?

DR. GECOL:
We have not ruled it in or out yet, but talking to the experts, they are presenting the way it is. For example, the LEED Silver is equivalent to the Green Globe II, but we need to study the details to make sure.

SENATOR HARDY:
I understand the wisdom statutorily of its equivalent. Maybe we ought to have some mechanism for determining and posting what is considered equivalent. We do not need to put everything into statute; that would be a mistake; we would probably have to come back here every session. I do think it makes sense to list something as a minimum, specifically as a minimum standard. But maybe we could have methodology on a Webpage, something for saying that this is now determined to be equivalent to the LEED Silver standard, so the public has something to easily understand.

CHAIR TOWNSEND:
Senator Hardy's point is well taken. When we first processed the bill that became Assembly Bill No. 3 of the 22nd Special Session, the reason LEED was chosen is that it was the most fully developed standard at the time we could actually approach and it was the one best understood nationwide. We also wanted to make sure that we did not preclude anything, that is why we put in "or its equivalent." As fate would have it, the 2006 Statewide General Election Ballot Question 5 came into play, which had a major impact on what we were trying to do with driving energy costs.

There are probably things in the LEED residential requirements that are not necessarily applicable in Nevada. Since we have adopted a regulation on the commercial side, I think Senator Hardy's point about making sure we know what is out there and what is available to fit Nevada's particular need, is crucial. At the end of the day the issue of LEED that people tend to forget is it is not only energy but also environmental design which is an important component. We are entrusted with the energy component, that is why the "or its equivalent" has become valuable in Nevada relative to the debate on energy.

DR. GECOL:
Mr. Chair, I would like to make an examination of that issue. We would be looking at all the available rating systems when it becomes law. We understand the LEED better now, but we will be evaluating all available systems and compare them to each other, and bring in the vendors to have this discussion through the work sessions.

CHAIR TOWNSEND:
Chairman Soderberg, since we have not had a chance to dialogue on the changes now in the bill relative to the regulatory mechanism, is it satisfactory

relative to what our goals were in terms of making the work flow more reasonable in keeping down the cost?

DON L. SODERBERG (Chair, Public Utilities Commission of Nevada):
Yes, that is correct. When you look at the work flow of the Commission, which is also the work flow of the utility, and the work flow of the consumer advocate, we need to be doing the things we need to be doing. It is clear to us that things like general rate cases every two years are not the things we need to be doing. Your presentation pointed out that it costs utilities $1 million or more to put on a general rate case. What the presentation did not say is, the consumers pay for the utility's cost to bring forward that rate case, that is a cost of doing business. They pay for the PUCN to process that rate case, and they pay for the consumer advocate to represent them in that rate case. So, they pay for that rate case three times.

There are other things in the bill such as doing quarterly adjustments on the energy component of bills and looking at ways to increase efficiency in a natural gas sector without causing financial harm to the natural gas company. Those are the things we need to be doing and spending our time on. This bill not only achieves a number of good policy goals, but it frees us up to put our work flow and our efforts into providing progress in solving our problems, as opposed to just churning those problems over and over again.

CHAIR TOWNSEND:
The regulatory mechanism changes in this bill are ones leading to substantial discussion on how do we best keep costs to a minimum, even in a rising and growing market.

ERIC WITKOSKI (Chief Deputy Attorney General, Bureau of Consumer Protection, Office of the Attorney General)
We talked about the quarterly adjustment last summer but were a little worried because in 2000 and 2001 we did some monthly adjustments as part of a settlement. It caused some concern with ratepayers, and there was a lot of misunderstanding. Last session, this Legislature passed a bill for Southwest Gas Company, and it is available for other gas companies for quarterly adjustment. We implemented it last year, and it is working well. The rate adjustments that occur are on a quarterly basis, done on a 12-month average, so the rate rolls up and down, and the carrying charges associated with that are minimized. In fact, this year when they file in May, we expect there will be a little credit for

ratepayers, and we will not have any big deferred balance to then have to collect over the next year from ratepayers. Last year, we had $30 million in the south, and in the north it was $7 million or $8 million in ratepayer credit. By adjusting the rates on a quarterly basis, we can cut cost; if the rates are going up, we can catch up and reduce the carrying cost; if they are going down, we can pass that on to the ratepayers sooner rather than waiting a year to adjust the rate.

Looking back from 2001 to the present and all the carrying costs that we incurred, we said if we could adjust, it is just changing the rates and the mechanism, and we could really save ratepayers money. Also, it gave the company cash flow, then they do not have the big balances on the balance sheet. I think it is a win-win situation for both the ratepayer and the company.

WALTER M. HIGGINS III (Chair of the Board, Chief Executive Officer, Sierra Pacific Resources):
I enjoyed being part of the working group to bring forth what appear to be wise policy proposals for the Legislature to consider. One of the policies is the quarterly adjustments as a way to help consumers pay less for the products by virtue of fewer carrying charges which help make changes, when they occur, be more palatable to consumers because they are smaller; therefore, no sticker shock or suddenly finding the bill is going to change. It evens out things which helps consumers and low-income businesses deal with the, unfortunately, changing energy costs in our society. We are supportive of the idea of doing this. We think it is as Mr. Witkoski said, a win-win situation.

JEFFREY W. SHAW (Chief Executive Officer, Southwest Gas Corporation):
We are supportive of the conservation of the natural resource, natural gas. It has been a volatile commodity. Senator Schneider referenced oil, and gas has been just as volatile. We do not have an energy policy in this country that is going to be a panacea to solve that problem, so we are going to live with this, for a period of time. Fortunately, we came through this last hurricane season without any major hurricanes, so we did not see the volatility of the 2005 and 2006 time frame. We have seen a positive effect of the quarterly adjustment mechanism on the price of natural gas with Southwest Gas Company, and the balances we carry have been minimal. This is good, it sends a price signal to the consumer and we want to do that. They can react to prices and use less. We appreciate being able to participate in this process. This bill has language that will provide the Commission with statutory guidance in being able to address

through its regulatory proceedings how we achieve conservation, while at the same time making sure our ability to access capital and provide service is preserved, and we do not send the wrong signal to the markets.

Being the best-run utilities, we are highly attuned to the way Wall Street reacts. Rating agencies are important, they determine the cost of capital and the customer pays for that cost for a long time. So, the higher the credit rating, within reason, the better your rates ought to be on an ongoing basis for the consumer.

FRED SCHMIDT (Southern Nevada Water Authority):
I participated in meeting with the group and learned a lot through this process. In particular, I participated in the sections of the bill that deal with net metering. Expansion of the net-metering concept was first introduced into law by Senator Titus in the 1990s when I worked with her as consumer advocate. The net-metering expansion contained in this bill can provide some benefits and opportunities for additional entities to participate in development of renewable projects. This would not be on a large scale, but on a larger scale than has occurred to date; particularly as it involves public entities and small businesses.

With regard to the rate-making provisions of the bill, I am not here to support or oppose those provisions, but I did participate in discussions with others, and I will leave it at that.

CHAIR TOWNSEND:
Mr. Schmidt, you have two important clients in the renewable area of both solar and geothermal. I would like you to touch briefly on both of those components.

MR. SCHMIDT:
My one client, Ormat Nevada, Incorporated, the largest geothermal developer in the State, does not have a position on this bill, because there is nothing in this bill that affects Ormat's business one way or the other.

Ormat owns and operates 9 geothermal power plants in Nevada that produce a net of over 100 megawatts into the system. They have 4 other projects that are near completion or under development with approved contracts by the PUCN that will generate an additional 80 megawatts. It is hoped that all those projects will be online by 2009, and they hope to build more. Ormat's headquarters are in Reno, even though it produces and develops just as much power in California

and some in Hawaii. That is where the geothermal resources are in the western United States. It is a unique opportunity for Nevada to develop more of it, and we hope to continue to expand business in Nevada. We have a good working relationship with the power company and have two contracts approved by the PUCN, so we think we have good support from the PUCN for what we are doing.

My other large renewable client is PowerLight Corporation. Those who read the press may have heard we have approval from the PUCN of a unique contract to develop what will be one of the largest solar photovoltaic facilities in the world. Fortunately, this is competitive and there are plants being built at the same time in Europe and other locations. We have a good working relationship with Nellis Air Force Base and plan to build what will be the equivalent net input of up to 18 megawatts of photovoltaic into the utility system, because that is our main concentration. PowerLight has not had a significant interest in the net-metering component of the bill, though they support net metering to the extent that the State would expand, so it would be a larger net system for photovoltaics. They think that is a good idea. There are opportunities for them on a smaller scale than Nellis as a result of that in Nevada.

I think the net-metering part of the bill is important. The other part is to build energy efficiency. I will work with the group to provide my personal input on that. I think a lot of the energy-efficiency ideas are good for Nevada and good for what is happening in the global climate on energy issues.

MR. SCHMIDT:
Southern Nevada Water Authority has an interest in the net-metering component and supports that portion of the bill. We are the first ones to put significant photovoltaic online in southern Nevada. The Ronzone Reservoir, which is about an 800 kilowatt system, is the largest photovoltaic facility system in the State right now. We have a facility at Las Vegas Springs Preserve Park that will also have photovoltaic in the form of parking structures and also create shade for the parking, which is a nice additional benefit, that will be going online and be dedicated at the end of May this year.

We have four other reservoirs we are putting photovoltaic on in various stages of completion. We are looking at four more, although we do not have any specific plans yet. When we went forward with those facilities, they were all under the one-megawatt threshold that is in this net-metering bill. We did that

even though it did not have the net-metering component. Obviously, having a net-metering concept which works better, particularly in avoiding unnecessary standby charges, will make it more economical. As a result, you will have an expansion.

In the special session last year, we looked at the original concept of net metering, done with Senator Titus, which had a 30-kilowatt threshold back in the 1990s that was expanded to 150 kilowatts. The 150 kilowatts in that bill was not done in the context of avoiding all the other charges or tariffs that can apply to a customer who tries to do that. The change from 30 kilowatts to 150 kilowatts, frankly, had no impact whatsoever on people building any more photovoltaic systems or renewable systems, because it did not address those issues. One of the reasons I participated in that issue with this group was to make sure that was addressed this time as we tried to expand it. The net metering increased one megawatt as a compromise from all the discussions we heard.

We know there will be a bill later from the school district proposing two megawatts; there were some ideas for five megawatts. Senator Titus has the bill that has the 30 kilowatts raised to 500 kilowatts. I have talked with her and she agrees with raising it higher than that, as this bill does. You have to consider that when you add these type systems into a utility operation, the one megawatt system is a good compromise, making sure the utility has a reliable system.

MR. SCHMIDT:
We never intended the net-metering concept to be other than for the customer's actual use. For example, with photovoltaic you want to oversize it because you will have more credits in summer than you will in the winter because of more radiation and output from the sun. But as far as the sizing, one thing this bill does that some of the other net meterings do not do is make sure that the sizing of the systems is not larger than 150 percent of the customer's peak. That way there are no issues with regard to whether the distribution designed for a particular customer's facility is appropriately sized to handle the system they put on their side of the meter, and may feed electricity back into the system.

There are parts of this net metering that were discussed and carefully worked out with staff of the PUCN, Eric Witkoski's office and the utility. I think they

are good. The only thing that may not be as customer friendly on the net metering part is the PUCN, and I think for good reason. For administrative purposes, they said it is difficult to have a continuing cycle of credits to a customer's bill on an ongoing basis, and they asked that once a year that be cleared out. I said the only reason that may not be customer friendly is because the customer would like to continue those credits on their bill. They would not like the annual clearing of that done on the date listed in the bill, which is either September or October. That is right at the end of summer, and from a customer's standpoint, something later in the year or early in the spring would be more favorable. The group worked things out so there could be an expansion of a concept of net metering. This way the customer does not have to pay other changes that otherwise could make uneconomical what is already an intensive capital investment on their part to put a renewable system on their home's side of the meter.

CINDY ORTEGA (Senior Vice President, Energy and Environmental Services, MGM Mirage)
I would like to reiterate a few things others have said. In my job, I am continually in the public forum in other states. I am in the green building forum, energy forum and the Environmental Protection Agency forum. Believe it or not, due to this Legislature and the previous Legislature, in particular, we are mentioned as being the foremost leading state in thought and environmentalism. My comments are about how these policies have been developed and the many people who have come before you. These esteemed people in the group have had a chance to bring their issues forward and have them heard; that is not the case in all different sectors. There have not been those forums that Chair Townsend has had over the past 12 months for the renewable task force. Many other agencies have come forward with their issues in energy into a decision-making group like the chairmen of the power companies, gas company, the PUCN and the consumer advocate.

I would like to start my comments by talking about staffing for this committee. As Senator Schneider said, it is the biggest visible issue, but nowhere last is the devil in the details. Energy, electricity, gas and air pollution are tedious subjects that we can talk about at the 100,000-foot level and understand what we are talking about. Then you go down to the real topics and issues that will be obstacles as we move forward. This staff, in particular Mr. Young, has an expertise in this area that is surprising and your Committee knows that. My guess is that the people behind me do not understand that. They tie together

these issues that are not the same and provide information to this group that allows us to work through details that would likely cause the regulatory mechanisms to bog down. From the MGM Mirage's perspective, and my own, I am pleased that over the past 12 months we have had the focus of the most knowledgeable and prominent people in various environments in Nevada focusing to bring forward issues. All of the issues did not come forward. There are many issues which were determined by the group that the State was not ready for, or there was silent agreement in the group. This bill represents, in my view and in our company's view, the combination of policy issues in Nevada that are ready to be brought forward in public debate.

CHAIR TOWNSEND:
The good news is there are three people on the Federal Energy Regulatory Commission who are from the West, which means somebody might pay attention to us and the challenges we face now. When you look at what all of these stakeholders have been involved in, one of the things over which we do not have much control, although we get to pay for it and plan for it, is the issue of transmission on the grid. That is mostly impacted by what goes on at the federal level, and maybe over the next couple of years we will have resolution.

SENATOR CARLTON:
You are sophisticated and know what you are doing. The corporation I work for, Echelon Place, the water authority etc., can make these types of decisions. I would like to know, in this discussion, how did you deal with the fact that some people must get off the grid, that the energy must go to someone else? How do we deal with those who live in my neighborhood who are going to be left behind in some of this? I know that is probably 30 years off. I want to make sure that 20 years from now, we do not have people from the neighborhoods holding a larger piece of the cost. Was that part of the discussion on how we are going to deal with the changes and how we look at energy in this State?

CHAIR TOWNSEND:
We did take up the issue of the past debate which was on a deregulated environment, particularly that wonderful one in California. We saw how well that worked for everybody. The larger businesses would exit a system, narrowing the pool over which you can spread the base. It is similar to health insurance. It was not successful and we retreated from that, probably quicker than anyone as a state, keeping our native generation with our Nevada-based utilities. The issue now is not about who connects it, who can get it cheaper,

but about how are we going to get it because of the growth issue. On the project we make reference to and the four or five others that are on the books, their focus has been how do we conserve energy so we do not need as much, so we do not get whipsawed into having to find a way out, because we think we can find it cheaper on the open market. The focus ended up being conservation, which we did in A.B. No. 3 of the 22nd Special Session. Now the focus continues on conservation for the small commercial and residential customers. We do not see a great demand from people who want to exit the system because they think there is some panacea on their own. The mines did leave and we did not see a big glitch in their exit. I believe that went smoothly even though that is a constant loaded base as they operate year-round. Those are more anomalies now than there would be. I think the debate between the PUCN, the advocate's office, the company and those who have a desire to go out, has changed dramatically because you leave this big gap with the residential customer, and how do you, for lack of a better term, keep from having a tail, like we do in insurance and workers' compensation.

I think the dialogue, which was important in the beginning, has died down substantially. When you talk with the developers of these large projects in southern Nevada, it is not part of the debate any more. The debate is focused on whether we can meet a LEED standard. That is where their debate is going, it is not about leaving. The Molasky Group of Companies deserves a lot of credit for their new building which will meet the LEED Gold standard.

MR. SCHMIDT:
The Southern Nevada Water Authority and the Molasky Group are putting a lot of investment into energy efficiency related to that building. That is dollars spent to do the right thing. Ultimately, it will save us on our power consumption and power bills, but it also helps the utility avoid unnecessary additional construction of new generation, which will help all customers. The entities doing those investments, whether a solar photovoltaic system or something else, are getting the benefits and how that affects other customers. Most of the benefits customers will get are a long time in coming. These are long lead times to have a cost return of any type on these facilities, so we are not doing it up front now to save any money as much as we are taking some load out of the requirement that the utility has to serve. We are helping to avoid that tremendous growth which causes difficulty building enough power plants.

In the short term, there are benefits for the other customer base from some of those decisions. The Water Authority and water district are willing to make the investment over the long term, because we finance things for 20 years or so to make a commitment that we know over time will benefit in terms of efficiencies achieved from the way in which that building consumes energy. This is from the customer's perspective, because we think it is the right thing to do. In fact, Southern Nevada Water Authority feels so strongly about it that the new Springs Preserve facility being built will have a sustainable living center showcase for southern Nevada. We think these types of decisions are emphasizing energy efficiency.

In every decision we make, it has too long been ignored. As you now see, the price of oil has hit $64 a barrel again. It is not something we can continue to ignore in this country. We have to do things about it, and my client is committed to that, even though they understand they have to invest dollars up front. Those dollars come from the same customer base, Mr. Higgins and Mr. Shaw. Our customers are the water authority and the entities who make up the water authority are all the water utility purveyors in southern Nevada. We all have the same basic residential customers, industrial customers, commercial customers and casino customers. What is refreshing in the last few years is the change in mentality at the utilities that I went headstrong against in the late 1990s, that they too should be going into renewable energy and focusing on energy efficiency. We had to do some things in the form of inspiring or incentive on demand-side measures to get more involved in it. They have turned that corner. I know from discussions with their executives that they are committed, although they have to worry about revenue and their bottom line, to this new approach. Sometimes they are a little more tepid in stepping into that water because of revenue issues, but they are more committed than before, and that is positive. It is exemplified by Mr. Higgin's company, by the number of new renewable contracts signed with a variety of developers, not just my clients, but with other geothermal power suppliers and other solar companies as well.

MR. SCHMIDT:
I know Senator Titus has a bill to continue and expand that. We should never lose sight of the rate effect or rate impact. I am not sure there is a lot in this bill that deals with that, but there are other ways. People are very conscious of that because they have to deal in those forums, and Mr. Witkoski has to deal with every rate case that comes in. A number of my clients have to deal with that as well. I am not sure there is a lot in this bill that deals with that.

RENNY ASHLEMAN (Southern Nevada Home Builders Association):
Section 1 recognizes there are standards for rating energy consumption and standards by which you can tell the change in the rating of energy consumption. It becomes important when we talk about section 26, which primarily affects the Southern Nevada Home Builders Association (SNHBA). We have concerns about the SNHBA program called Southern Nevada Green Building Partnership that currently has a minimum achievement of 15 percent above the energy code. We are building homes that are considerably better than that on average, some quite a lot better.

Our concern has been in the past with some of the energy czars, that they were having a reluctance to consider your equivalency of silver or not, or base or not, by measuring the actual energy saved. That becomes a difficulty because the LEED does not directly address energy saved. The LEED talks about various things that generate points. You can generate points by pre-wiring the house for solar, but if nobody puts the solar array on the roof, you do not save any energy. You can save points by pre-plumbing for passive systems, but if you do not put in those systems, you did not save anything. There are difficulties with the LEED in the West, as Mr. Sherman alluded. I am not knocking the LEED; they have done some wonderful things in sharpening the debate and giving people a place to start. If you build a home over roughly 1,500 square feet, you lose points; in the West, we do not build homes under that very often.

CHAIR TOWNSEND:
Do you have specific recommendations on this?

MR. ASHLEMAN:
If we had something that referred to the actual energy savings to be aspired to match whatever level this Committee wants to set, we can work with that. That way we can avoid some of the awkwardness in the LEED. We need to do that throughout the statutes where we use the LEED on the public and private large-building construction side, as well as residential.

CHAIR TOWNSEND:
What we chose to do because your organization, Mr. Ashleman, appeared before the working group at some length was to simply extend what was in the commercial sector once the LEED has a residential component. We also left in the Ormat equivalent to give ourselves some wiggle room. That started the

debate that is important on what is effective in Nevada for home builders. This is geared entirely to the residential component and what we want people to do in the future. Your points are important to this debate in terms of what is being done, what can be done, what should be done and how to get them there.

MR. ASHLEMAN:
Let me give you an example. If it simply said "or its equivalent in energy savings," that would be helpful. The question is equivalent to what?

Directing your attention to sections 21 and 22, the public entities I work with, and more specifically the State Public Works Board, already prepare a careful analysis of the cost of our building, occupancy and so on to the extent you can do that before we put anything out to bid. Obviously, things do vary. We are currently at the State Public Works Board demanding and achieving considerably more savings than the LEED would give us at base and silver levels in most cases for our buildings. It is not, in our view, practical to ask the bidders to do any of this. They really do not have the information. In theory, they all bid our specifications so every bidder should be bringing in the same savings and estimates. I think having them tweak various little ways that they could, the energy savings will lead to even more difficulty in determining what is a true low bid and will lead to more litigation. It is not necessary to get the cooperation of the State Public Works Board on saving energy to put anything in law. If it is desired to do that, for various reasons, I can give you language as to what we think is obtainable in a reasonable way, and have you ask us to do this task and disclose that information to the bidders. I think it would be more constructive.

CHAIR TOWNSEND:
The reason this is in the bill is the substantial fight on this issue between this Committee and the one across the hall because we see things long-term and they look at the cost of the building. Unfortunately, I was volunteered to chair the building of this facility. I fought with the State Public Works and that committee on the cost of doing a cost-benefit analysis long-term versus the cost of the building, and I lost. We have been in this building seven years, and now they are coming back saying we should have done it. Can we put in solar panels? Well, where were you seven years ago when I was telling you that is what we should have done to start with? The argument has always been between these two positions. At that point I think it is important they have the information. They may choose not to accept it and that is fine, but this is

important including the language we put in the bill, if you could help us with that. You understand the goal is that they need to understand it is going to cost something up front to save long-term, just like Mr. Schmidt's commitment with his client on their new building.

MR. ASHLEMAN:
We can readily supply that language and information to you both. You will be happy to know they have become enlightened on this subject. If you make the change where we can talk about the energy efficiencies in the other statutes that affect us on what we must obtain, the argument over cost will largely go away. Our objection on cost to the Public Works Board on the LEED was always on things we had to do to gain points that we did not think did us any good in energy efficiency.

In section 24 of the bill, the omission of the 20,000 square feet has some problems. Let me give you a couple of examples. We build maintenance bays which people occupy all day long. The doors are open all the time and we are going to have a lot of trouble handling those issues. We have drive-through inspections and though considered small, doing those things is not good. The 20,000 square feet was ideal from our viewpoint as we do not build things under 20,000 square feet that are your traditional office buildings or structures that people occupy and work in in a traditional sense. If you have concerns about the 20,000 square feet and you want to lower that slightly, we could certainly use information on where another cutoff point might work for us. The change to the kinds of definitions you have would cause some difficulty with these smaller structures. The percentage of cost in doing things with those would be very high for what you would achieve under those circumstances.

JOHN C. SAGEBIEL, PH.D.:
I am a Ph.D. environmental chemist and currently work at the University of Nevada, Reno. Prior to that, I spent 14 years at the Desert Research Institute. More relevant to this, I am also the owner and builder of a residential green building that is a zero net-energy building. The building actually produces more energy than it consumes on an annual basis. I am a direct residential user of the net-metering provisions this body helped put into place. I appreciate that because without that, it is economically impractical to go off the grid, so to speak. With the net metering, it becomes somewhat economically practical. More importantly, the house is also water and material efficient. Both of these are ultimately energy issues.

In addition to encouraging and supporting the residential energy audit provisions in the bill, I am a LEED-accredited professional credited by the U.S. Green Building Council. I have studied both the LEED and Green Globe and a number of other rating systems, including the Green System. In reference to section 23, which raises the standard for the State to the LEED Silver or equivalent; the LEED is a holistic building model. It looks at all aspects of the building. This is important because as was discussed earlier, water is an important part of the LEED, and water is fundamentally an energy issue. It is a large energy issue, particularly in southern Nevada. Direct energy costs and consumption are addressed in the LEED, but what is important is the LEED starts from a high standard. They use what is known as ASHRAE/IESNA Standard 90.1-2004 as the baseline for a building. That is a rigorous standard, so when you talk about energy savings over ASHRAE/IESNA Standard 90.1-2004 for which you can get increased points, and the benefit to the builder being increased energy savings, that is starting from a very high standard. It is a higher standard than you start from in other green building rating systems.

Energy is also addressed indirectly in the points for using locally produced materials. Additionally, we export a lot of money from this State to buy energy and fuel for our electrical power plants. We also export money for fuel for trucks and vehicles that move materials around. The more locally you can incorporate your materials, ultimately, that is the energy issue for this State. Energy is also addressed in recycled materials, which are encouraged in the LEED as well. The less energy you put into the materials that go into your building, ultimately the less energy you expend on that structure.

I want to address the other side of green building, which is important in the LEED as well, and that is the human side. The point is that we build buildings for people, not for the buildings. The buildings themselves are inanimate objects that do not care if they are hot or cold, it is the people inside who worry about that.

Green building addresses issues like day lighting and the ability to control your own environment, which is important for people's comfort and productivity. The best place this has been documented is in schools. In documenting test score improvements, the numbers are between 11 percent to 25 percent with day lighting providing better learning environments for children. Then we address the air-quality issues, the indoor-quality issues and a lot of other things. I would encourage you to continue to look into the LEED, understanding there may be

some specifics that may need to be adjusted to the Nevada situation. I would encourage you to continue to look to the LEED as your baseline standard for green building, because it is truly the best system available.

CHAIR TOWNSEND:
Mr. Schmidt, approximately when will you open the building as the new tenant of the Molasky building?

MR. SCHMIDT:
We expect it to be the end of summer.

JASON GEDDES, PH.D. (Renewable Energy & Energy Conservation Task Force):
There is one correction to Senator Townsend's earlier statement I would like to address. If you look at the last page of the handout (Exhibit D), we updated some of those numbers, as far as the energy leaving the State. You will see the current estimate is between $6 billion and $8 billion a year that is exported out of the State for energy. That is using 2003 and 2004 numbers.

I did serve as a subcommittee chair for the Nevada Renewable Energy and Energy Conservation Task Force, and this is prepared as a grid to show the three bills you are hearing today, and what we recommended. This is what came out of the Renewable Energy Task Force. Specifically, I support S.B. 437 and S.B. 427. I would like you to notice the bill came out with energy in residential; it is energy, water, and living environment. There is a lot of energy consumed in the construction as well as the operation, and moving it to the residential side is fantastic.

SENATE BILL 427: Makes various changes relating to energy, net metering and the portfolio standards. (BDR 58-677)

DR. GEDDES:
I like looking at the LEED Silver and the life-cycle energy cost for the State Public Works Board, it is important to look at that. The current standard says energy and operation for up to 10 years, but some of these buildings are 30, 50, to 100 years old, so it is important to get that up front on the cost. It can be cost-neutral, there could be additional costs up front, but you need to have the numbers there, calculate it and make the best decisions for long-term use and occupancy of the building. Both those sections dealing with the LEED and the life-cycle costing are fantastic. On the incentives that did come out last

session, we do have the Patagonia building in Reno which has just been certified as a LEED Gold. The interesting thing about the building is the first part was built ten years ago and a lot of the features they put in ten years ago are in the expansion, enabling them to receive the LEED Gold with what they have been doing for years. They will be going before the Commission on Economic Development next month for their incentives based on A.B. No. 3 of the 22nd Special Session.

CHAIR TOWNSEND:
Will you notify us for that meeting?

DR. GEDDES:
As the chairman of the subcommittee dealing with the recommendations from the task force, net metering came up as the number one issue. I know your working group, our working group, the utilities and everybody interested in it have struggled with the right mix. My personal hope is that I never have to testify on net metering again after this session, so I am thrilled with the one-megawatt cap. The only comment I would make is on the lower end of it, that 30-kilowatt cap. The one area that we tried to capture that I am not sure is holding the 30-kilowatt level is the schools. If you look at the load the utility provides, the schools in this State are in the 500 kilowatt to 1-megawatt system. We want to figure out a way to get the schools on those systems as easily as possible. I think the difficulty we run into in having that 30 kilowatt to 1 megawatt not well-defined, is that we have to turn around and go back to a school board or to a local jurisdiction to talk to them. Going to another political body with a lot of unknowns makes the process somewhat difficult. As best that can be defined or giving direction to a utility commission to define how to set those rates would make the process easier and faster for those people when inputting them.

Just a few statistics. I am a net-metering customer; I am in the solar-generating program. I am thrilled with having the photovoltaic on my house and what it is doing. We have had net metering for about 10 years, and there are a total of 228 net-metering systems in the entire grid. That is compared to 1,150,000 meters in the overall Sierra Pacific Resources system, and they are putting in standard meters on residents and businesses at the rate of 126 a day. If you look at the ten years we have been doing net metering, and it takes two days to put in net metering, there are still some obstacles to work out. Hopefully, the 30 kilowatts to 1-megawatt area where we can define those and

come up with the recommendations alluded to will fix the problem and increase the number out there.

The real difficulty is the cost above 30 kilowatts, and who bears those costs as far as the ratepayers and the individuals. The key is to get them on schools, and get them out there. These systems, as overall systems, are not cheap. I put in a system on my house with the highest level of solar generation rebate, and I am still looking at about a 16- to 18-year payback on my end, and it does about 40 percent of my house load. I wanted to do it. I am firmly committed to doing it. I am willing to put up that cost. Luckily, I was able to convince my wife to put off that cost, but it is a significant investment on our side, and I think that is why you only see 228 systems.

CHAIR TOWNSEND:
How old was your home when you started the process?

DR. GEDDES:
I have a 1988 home, and I installed net metering in 2005 after doing a whole series of energy-conservation retrofits in the house. Again, I encourage proceeding on the bills.

BRAD SPIRES (Nevada Association of Realtors):
As a sideline, the National Association of Realtors built the first green building in Washington, D.C., and we are committed.

First, I would like to address the marketing value added. I grew up in Arkansas in the 1950s. There was a little operation in Hot Springs that had these little green bottles of Mountain Valley water, and you could buy a bottle, but nobody bought Mountain Valley water. Now you cannot go anywhere that somebody does not have a bottle of water with them. What that shows is marketing and added value.

Today, in the real estate business, particularly in Nevada, buyers do not question the energy efficiency of the house, it does not come up. Our homes are well-built throughout the State and our energy is not a real factor in the monthly payments that individuals make when compared to the cost of the house. We have a job ahead of us to do this. We applaud the Committee. Years from now, I think we will look back at this as the point where we put Nevada on the cutting edge. We are concerned about how we do that and want to help

to get out that added value. Right now in Douglas County, we have a new development building an Energy Star and moving towards the LEED. Mr. Geddes did a training session for our real estate office last week, and they are all good things. We want to work with you on the marketing.

MR. SPIRES:
The other side of the Legislature is the implementation and making this work. In section 3 of S.B. 437, it talks about low-income home owners. I think that needs to be expanded to a greater scope. Particularly, it is going to be applicable in older neighborhoods that are going to be stigmatized because they are going to have poor ratings. It should not be just low income, but housing that is not, as a group, going to be able to be brought up to standard to whatever that may be. That stigmatizes the ability to sell that house. Just as you have a provision for underwriting it for low income, there should be a way to underwrite the house for that owner who does not have the ability to bring up that house.

In section 18 of the bill, we are pleased that you have made the seller the base of providing that inspection. One thing that happened to Realtors as a group is the commissioners implemented a woodstove ordinance to cut down on the smog in Douglas County. They put forth a form for Realtors to use, making them the point of enforcement for woodstoves. There were not any woodstove inspectors, nor any guidelines written down, and it was a difficult proposition which made it incredibly uncomfortable. What evolved, for a period of time, was if the woodstove did not conform, the seller would remove it and put it in the backyard. The owner had done his part and the buyer was then free to install whatever he wanted in the house, which could be a new stove or the old stove sitting in the backyard. As that developed, the Realtor was taken out and the seller was put back in at the close of escrow to sign that he, in fact, had not just removed, but he removed and capped or removed and placed.

The specific implementation of this can be far-reaching and difficult to put the Realtor on the front line as the person who is going to enforce. The second part is a continuing-education program to make Realtors ready. We believe there is a system that exists right now, and most of you are familiar with the disclosure guide. What we provide to individuals now are the duties owned by a Nevada licensee: disclosure on impact fees, the sellers real property disclosure form, construction-defects disclosure, lead paint, open range, septic systems, underground tanks, radon, environmental issues and special improvements. We

have courses on disclosure and what needs to be disclosed. We do not believe a separate system needs to be set up as a requirement of education for this specific implementation. It could be made part of the training we receive through our residential-disclosure training.

We are concerned that we encounter another Douglas County implementation of woodstove ordinance. The inspection process needs to be in place, the inspectors need to be there, the process needs to be established. It needs to be in place before that first seller has to provide. Whatever the time frame, there needs to be education of the public. Again, we are willing to participate in that education of the public, but what is critical is to realize while Realtors do about 85 percent of the transactions, there are still 15 percent that are not going to pay any attention. The education process for any home seller needs to take place while the system is being developed. The system needs to be in place before the day it is required for the first seller.

Tying this process to a lender is wonderful. The ability to be rewarded for your efforts and hold that carrot out there is outstanding. The person sitting in the back room that nobody sees is the underwriter, and we are waiting for the underwriting approval. If this adds one more piece of paper the underwriter has to have prior to closing, it becomes more critical that we have the process in place before implementation. Otherwise, deals will fall apart, sales will not go through and buyers will be asking over and over when we can close; well, we have to say we are waiting on one more piece of paper from the inspector who is doing the analysis.

Those are our specific items. We have concerns that when we roll out this program we have the minimum aggravation and liability. We are going to be on the cutting edge and we do not want to make it up as we go along.

CHAIR TOWNSEND:
As we work through the component of the effective date, put aside the education component right now. We could assign Senator Schneider, who is a licensee, to go in with you and the division to say there needs to be a 15-minute discussion about getting an extra piece of paper, which solves the education requirement. At the end of the day, we are about results, not all the other things.

Section 28 is the concern you had about how are we doing and the timelines. The effective date is January 1, 2009. That is an arbitrary date that we wanted to push up as far as possible, but not be too close. As you help us with this bill, if you will think through what it takes to have the public's okay, not just your licensee colleagues, they will start to say, okay, I get it now, this is coming. First, is the date right, and second, what does it take to get them to understand what we are asking them to do for their benefit? Someone said, the more we conserve, the less the PUCN and Mr. Witkoski have to argue over a 250-megawatt additional plant and its cost. At the end of the day, that is what this is about. You can help us think through what the public acceptance is to avoid sticker shock so we do not have that for your colleagues. This is about a gradual but positive behavioral change for everybody and every component. If we cannot get the public to understand these basic things, then all they will do is call Mr. Witkoski to complain about rates. Rates are a function of a great many things, and with your help, we can deal with them.

SENATOR HECK:
I appreciate the position on continuing education because as a licensee of another board, we hate having continuing education mandated on us by the Legislature.

These audits required of every home seller are currently being done for free by the energy companies. I would like to know how many of them are being done in the course of a year right now. Once this becomes mandated, and by your numbers, Mr. Chair, that is 40,000 resales in Clark County alone, is the energy company still going to be able to do it, and do it for free, and if not, how much is being added to the cost of selling the home?

It says, any sale. Does that include brand new homes that have never been sold? Do they have to undergo this audit as well before a sales contract can be entered into?

CHAIR TOWNSEND:
As written, it is homes that are five years of age or greater. We are trying to capture the older home that has the bigger energy problem. The company discussed at great length how to manage this.

Again, as Mr. Spires asked, how long does it take to gear up and ramp up to have enough individuals capable of doing energy audits based on this? That is a question that is, again, arbitrary, perhaps 18 months or 2 years. If you are going to casual labor and ask, do you want a job as an energy auditor, it is not going to happen. You do not want that, you want someone who actually knows what they are doing and looking for when they are in the home.

I remember in our discussion, Mr. Young, the numbers of 30,000 to 35,000 homes 5 years or older, or did we ever decide on a number? Transactions are a little over 75,000, based on the numbers.

SCOTT YOUNG (Committee Policy Analyst):

> Mr. Chair, I remember we did discuss some numbers. As a matter of clarification, my understanding, and it is only my understanding, is that the way the bill is presently written, that the audit provision would apply to all new houses.

CHAIR TOWNSEND:
Somehow, that is a glitch.

MR. YOUNG:
I think, perhaps, it was.

CHAIR TOWNSEND:
It was hard, because we addressed your board with this, to look at five years as the right number. If we cannot handle five years, should it be seven years, and try to back into it from the oldest homes up.

SENATOR HECK:
The way I read the bill, the only reference I saw to five years was that if an audit had been done in the previous five years, they did not need to have another one, but it did not clearly state this only applies to homes that are five years old.

CHAIR TOWNSEND:
In drafting the bill and I will take full responsibility, it was not clear that it needed to be an older group. I think one of the reasons might have been we were waiting for a number so we could pick either five or seven years. We were

trying to back into it from the oldest homes forward, so we could help those individuals. That is a good point, and we need to make that change.

SENATOR HECK:
One of the representatives from the energy companies may be able to answer the question of how many energy audits they currently perform during a year.

I am concerned that even if it is 35,000 or 40,000 homes greater than 5 years of age, all of sudden this is going to become another commodity to be charged for and added on to the selling price of a home.

GREG KERN (Director, Energy Efficiency, Nevada Power Company):
We have four energy auditors, two in the north and two in the south, who perform audits. They are not exactly similar to what we are talking about here, because you may have specifics in this type of energy audit. Right now we are doing about 3,000 audits a year.

MR. SPIRES:
Several years ago, this body licensed home inspectors, which we think was one of the best things ever done, because prior to that anybody could be a home inspector. With a liability being created and the ability to take money out of somebody's pocket or put money in somebody's pocket, we would urge you that the person who is going to be doing this is licensed with a set of guidelines to follow, so that it is not capricious and arbitrary. You are talking of the potential for a lot of money to be lost or gained.

CHAIR TOWNSEND:
Senator Heck's point is an excellent one. What we do not want to have happen is for the guy who pulls up in a panel truck and says he is an all-around handyman; nobody wants that in their house. We want someone dependable, who is qualified and without creating the problem Senator Heck articulated, which was whether this eventually is added to the bill. That is not the goal. We already talked about carrying charges.

As you walk through this process, there are a lot of little minefields where it is a balancing act. We want to continue the dialogue that includes a lot of the parties like yourself. Senator Schneider has gone through what your colleagues go through. We do not want to come up with this great idea but in functional reality hear a lot of things. Dr. Heck sees great ideas people have put before this

Committee, but as a practicing physician, he explains to people that it does not really work that way. The same with ideas put forward on behalf of what are the good interests of those who work in our service industry, as Senator Carlton, and she knows exactly how it works. It is important we listen to people who ask to do things, and I think it can be done.

The company has been remarkably helpful. I had an energy audit done. I called the company a couple of times asking where it was and they kept saying it was sent. My wife had received it, looked at it, had no idea what it was and set it on her desk, and it had been there for weeks. When I got hold of it, I said we may have to rethink how we do energy audit reports. It was a great document for an engineer. My wife is the perfect consumer, she reads everything, and tries to understand it. But unless you regularly have these energy audits, you would not have a clue how to make it operational as to what you have to do in changing something and buying a certain bulb. The company has been helpful in making it easier to understand in what they send the customer. These changes come from dialogue, that is why we are doing this.

SENATOR SCHNEIDER:
You brought up some of the problems. The energy inspection is so critical it will greatly change the value of real estate. Identical houses will swing in value tens of thousands of dollars. I think for the Realtors, if it is not set up right, the errors and omissions will go through the ceiling, and it will be on their backs. It is critical. I have talked with other business owners about their insurance and how it increases. I am not sure how we can get energy inspections to work properly. The companies will have to work with the Realtors. Even though that date is over a year away, it may be too quick, but I do not know. The Realtors should talk with the companies in the next couple of weeks, and I will volunteer my office for them to get together to figure it out. It is a huge deal. We do not want to put the Realtors out of business.

The other thing is the listing agreements. If you have to absorb all the liability and cost in your insurance, then your listing agreements have to increase. We handed the consumer a huge bill, because the listing agreement could go from 3 percent, 4 percent to 5 percent just on the listing side. I know you would have to do that to recoup your costs.

CHAIR TOWNSEND:
The point is well taken. The group was unanimous on not adding any liability in this issue to the real estate agent. They are not the inspector or the auditor, they are the transactional person who wants to make sure that clients who agreed to something have their appropriate documentation. They are liable for what is in that documentation. In a perfect world, you can write a lot of things, but we wanted to make sure that someone had this document, at the same time not adding any additional liability to the Realtor.

SENATOR CARLTON:
I am going in the opposite way. I hope if we pass this bill I can still list my house. My home is over 30 years old, which in my life is new, as I grew up in a house that was over 100 years old. We have installed new windows, new air-conditioner, new roof and have done everything we can. Will we be able to fix the house to the point that somebody is going to want to buy it? My husband swears every time we do a home improvement, that the person who built our house finished it the day before the energy crisis started. We were doomed from the moment we moved in, but we were prepared to do whatever we had to do to the house. But, will we be able to succeed?

MR. SPIRES:
In real estate, people can tell you anything about why they buy, sell, like and do not like; but it is always the money. Money is what drives the transaction. What was talked about in section 3 needs to be looked at again for certain older areas that are not going to come up to that requirement, the base level, the marketing of this program by the utility companies and by the home builders. If the new home builders show it makes sense to do energy assistance and drive that market, then the other market will tend to follow. The person who has lived in a house for 25 years and is getting ready to sell is not going to be motivated to get another inspection or to improve, unless there is a money chain that is going to give him the benefits the utility companies provide or the quality of life. How the marketing is done by all the players is critical to create the desire and the implementation. We are concerned about some of the older neighborhoods in Washoe County. In Great Britain they use an A through F rating, and if your house is an F and the best you can improve it to is an E, you have guaranteed a decline of value in that house on the day that lettering is assigned. From the day before that letter is assigned, you have taken value. By the same token, the person who bought the home that met the Energy Star and the LEED standard has the ability to recoup at the sale which is going to be greatly increased. It is

a complex problem to bring the older homes up to a standard that does not kill value. A lot of those older homes are owned by seniors who have lived there forever, that is their nest egg. One of the spouses passes and the surviving spouse may need to go into care, their retirement is that home, and we are going to take the value away from that home by giving it a number they do not have the money to improve. There are lots of little mines to avoid.

CHAIR TOWNSEND:
The details in the bill are a little more than expected, and a little more complex than thought, as opposed to showing individuals who are now entering into a transaction. The energy audit found you can change these bulbs, get a new refrigerator, and here is what it will do to help the individual put that into an energy-efficient mortgage. Your articulation of the value issue is a crucial one. The flip side is you have to balance that against letting people know what is available to them. They do not have to do it, that is their business. The new person who buys does not have to do it, and the old person does not have to do it. They need to be aware of it. That is the prime goal of what we wanted to accomplish by letting them know what is out there. I went to home supply stores to see what was on the market in energy-saving items, and the technology that is out there is remarkable. We are not trying to develop a technology, or to drive that, we are hoping to educate people to the deficiencies they can correct. You have made a compelling case, and I agree with it, but I do not want to lose sight of what we are trying to get people to understand.

TERRY K. GRAVES (American Chemistry Council):
I want to weigh in on the standards issue. Senator Hardy asked are these standards equivalent to the LEED and Green Globe. I would like to give the Committee a perspective about standards. I spent a career in chemical manufacturing.

CHAIR TOWNSEND:
Mr. Young, do we have any side-by-side comparisons on the LEED Silver, Gold, Platinum and Green Globe?

MR. YOUNG:
"I've not seen one, but I will look and see if I can find one."

MR. GRAVES:
I do have some of that information. There is a University of Minnesota study that rated these two programs at about 85-percent alike.

When the doctor built his energy-efficient home and weighed in on the LEED, and is a certified-LEED expert, he had a free shot at giving the LEED a plug as being the best standard out there. If you had a Green Globe representative here, he could give you an equally convincing argument that Green Globe is the best standard.

The point is that neither one of those standards is the best standard. I would suggest the best standard for Nevada is one created by the State. This process would involve the U.S. Department of Energy and experts from the private sector, architects, structural engineers, heating-system experts and so on. We do not have the resources to do that now, and I am not suggesting we embark on that program, but I am suggesting some day the State should undertake that program. Failing to do our own program would be a mistake to select any of these standards as a monopoly standard for the State. These standards are, in fact, in their infancy. This is going to be an evolutionary industry, the green building industry, and these standards will change dramatically over the next few years. To commit the State to one of them may impair the ability of this industry to develop in its most efficient and effective manner.

I would argue that you keep options open, allow multiple standards to be used and eventually the best standard will evolve out of that process. Without competition at this point in the process, the best standard is not going to evolve. As a policy, I would encourage this Committee to embrace multiple standards and allow competition in that business.

SENATOR SCHNEIDER:
We are proposing to add an amendment to S.B. 427 or S.B. 437, and that would be the Chair's choice (Exhibit E). As you know, the cheapest megawatt is a megawatt that you do not produce. In this proposed amendment is information on our rates compared to the western states and how we have increased in energy costs over the year. One area we do have control over is our lighting. As mentioned, the light bulbs we use are 10-percent efficient in producing light, and 90 percent in producing heat. We are proposing to change the light bulbs in Nevada. Over a period of time, we will go to florescent lights. The lighting industry is changing rapidly, so the current florescent will not be in

use much longer, we may go to light-emitting diodes or some other type. I have a letter in support from Ric Erdheim, senior counsel for Philips Electronics North America Corporation that makes light bulbs (Exhibit F).

SENATE BILL 427: Makes various changes relating to energy, net metering and the portfolio standards. (BDR 58-677)

SENATE BILL 437: Revises provisions concerning generation and consumption of energy. (BDR 58-232)

CHAIR TOWNSEND:
I think it is important to go through the two charts that Senator Schneider provided.

STEPHEN WIEL, PH.D. (Nevada Representative, Southwest Energy Efficiency Project):
I have testimony on the provisions already in S.B. 437 and will comment on Senator Schneider's amendment as soon as I can peruse it.

SENATOR SCHNEIDER:
I will go over the amendments. What we are doing is affecting the light bulbs sold in Nevada. The first drop-dead date is January 1, 2012, and then on or before January 1, 2016. The light bulbs must not have less than 25 lumens per watt, and after 2016, not less than 60 lumens per watt. This is for general purpose lighting in a house. If you change all the light bulbs in the house, you can realize a huge energy cost savings.

The Retail Association of Nevada will look at this and wonder what we are doing here. As we go down the road, Phillips and other companies will be rolling out these light bulbs. You will see the new light bulbs already offered in many stores, and the lights will get more efficient over time, and the old standard light bulb inventory will dwindle away.

DR. WIEL:
This legislation would accelerate that process. Earlier this year, I became aware of a global effort in this direction. Colleagues of mine, through a nonprofit organization called the Collaborative Labeling and Appliance Standards Program that promotes energy-efficient appliances, equipment and lighting products, do this globally. Most of the work is done in developing countries. Several people

on the board have been prominent in initiating a global initiative to effectively ban incandescent lights. The Australian Greenhouse Office has been in the forefront of bringing this issue to prominence, and Australia has announced its effective ban over the next ten years.

The International Energy Agency, Paris, France, has issued a booklet on lighting efficiency, and there is much discussion in Europe on such a ban. The United Kingdom has already started moving in this direction. California has a bill, and other states are also drafting bills, as is Canada. There is a global movement.

Earlier this month, Phillips Lighting North America and a group of other organizations, including the American Council for an Energy-Efficient Economy are also looking into lighting efficiency.

There are two graphs (Exhibit G), of which one is on average retail prices in cents per kilowatt-hour over time. The other graph is the energy intensity, the average kilowatt-hours per year used in various western states. This graph shows the rates compared among six states: New Mexico, Arizona, Utah, Colorado, California and Nevada. Nevada has the highest consumption by a noticeable amount. Coupled with the issue over rates and consumption, it indicates there is a lot Nevada can do to reduce its consumption. Starting in the late 1970s, California introduced an aggressive energy-efficiency policy and virtually flattened its growth in electricity. The other states have done as well, and the opportunity exists for them to be aggressive in energy efficiency to achieve similar results.

CHAIR TOWNSEND:
If you take out the Las Vegas Strip with its 40-million visitors a year and its energy consumption, where are we?

DR. WIEL:
I have not done that analysis.

CHAIR TOWNSEND:
That probably has a significant impact on this line. I do not disagree with what you are trying to do, I just want to know the size of that impact. The average home owner and the average business person who are not flipping on neon all day, are we that much worse than California?

DR. WIEL:
Worse being energy intensive?

CHAIR TOWNSEND:
Energy intensive.

DR. WIEL:
The answer is yes, we are more energy intensive than California.

CHAIR TOWNSEND:
I like that California flattened out the line, and did it with this kind of approach.

DR. WIEL:
Efficient lighting is one component of the total energy-efficiency package. That is correct. By the way, this chart also includes commercial and industrial, it is not only residential. You have the mining industry, agriculture and normal commerce affecting it as well.

The effective ban, essentially, is accelerating the demise of the incandescent lamp as we know it. We are only talking about the screw-in, medium-base bulbs that are the common general service bulbs. They are on their way out and the new technology will replace them. This legislation would join in this global movement to ensure Nevada gets the benefits of this as early as possible. It would result in 1,200 gigawatt-hours a year annual savings after the total change out to the new efficient lighting. That would have carbon savings equivalent to removing 160,000 cars from the road. It would save $1.3 billion a year. It would have an effect on power of avoiding about 300 megawatts. That is equivalent to 40 percent of one of the coal-fired power plants that is going to be built in Nye County.

As the Task Force letter shows, the lighting industry is capable of delivering these bulbs. The dates come from this international conversation of the collaborative. The date 2016 was announced in a Philips consortium announcement earlier this month as the target date for the effective total ban. The interim is one of the dates being discussed by this coalition. The coalition has not come out with a specific recommendation to expect to do it over the next months.

SENATOR SCHNEIDER:
On the chart, Nevada is way up there in consumption and right below it is Arizona. I suspect if you eliminate the Strip and some other big things, we would fall more in line with Arizona. Arizona also has heavy mining. The big casinos in this State are loaded with light bulbs, and the air-conditioning bills reflect the use of those light bulbs. I got excited after talking to Dr. Wiel about this. What will be looked at is that we are mandating and throwing up costs, but all we are doing is speeding up the market. The public sector will respond to the market if we do this. They will turn these out faster and sooner and costs will come down. The new light bulb was shown last week on the *Today Show.* It may cost $5, but it lasts so much longer that it will pay for itself.

CHAIR TOWNSEND:
Let us assume that we do not have the debate about the Strip, and say we want to get close to Arizona, and we want to level out like California did. No matter where we are, we do not want to keep doing this. Do you think that would get us there?

DR. WIEL:
Just for lighting?

CHAIR TOWNSEND:
Is it a component to get us to that flattened energy-usage area you want to get to?

DR. WIEL:
For sure.

CHAIR TOWNSEND:
Is it 10 percent or 20 percent of the component of flattening?

DR. WIEL:
We are shooting overall for 20-percent to 30-percent energy savings from energy efficiency, and this would provide 5 percent, so that would be one-quarter to one-fifth of the total. If you are going to match that flattening, you have to attack every single use.

CHAIR TOWNSEND:
Ms. Ortega, please tell us how your project is addressing what Dr. Wiel is talking about in terms of light.

MS. ORTEGA:
As was pointed out, lighting is one of the most fertile areas for energy conservation. The return on the investment is very good on lighting projects. The advances in lighting technology have moved more quickly than in renewables and other areas. I understand there was a comment about the consumption per capita in Nevada, and we have taken those statistics with a grain of salt, because in Nevada we service hundreds of thousand of people that are not in the per capita number on a regular basis. We have lights on that serve a percentage of southern California that happens to be blessing us with their presence and their dollars.

In particular, the MGM Mirage embarked upon an aggressive energy-conservation project. Last year it targeting around 23 million kilowatt-hours, which is the equivalent of 1,750 homes in Nevada taken off the grid. About 25 percent of that project was targeted at lighting, and we completed replacing the lighting in all our garages in Las Vegas. The Treasure Island garage has gone through an entire cycle with the lighting, and the power bills show a decrease of about 40 percent.

CHAIR TOWNSEND:
You did well. Dr. Wiel is talking about banning certain bulbs. I want everyone to understand what you accomplished by making those changes.

You have a competitor, one of our newer internationally known properties, that is looking, as they expand, to make sure that all their properties meet these standards. They went back through their newest property and took one floor and only addressed the lighting. As the board of directors and management team went through, the lighting was so good that they asked the person in charge when they were going to do this project; they said, we already have and you are standing in it. The reduction they found from one floor was close to what you talked about.

I think you are right, and underscoring the term "this is fertile ground" is important. We would hope our largest industry would take a lead in the chain of pulling us along to meet that energy standard. I have asked our Legislative

Counsel Bureau to start going through this building to see as we replace things that we do so in an environmental manner. This is funded by taxpayer money and it does not mean we ought to first spend it on ourselves.

MS. ORTEGA:
I have had a chance to look at this graph. I am not an engineer so I do not know what 25 lumens or watt means, but I think it is important to companies and individuals to be able to balance out their lighting requirements with different colors of lighting in different uses. From a personal standpoint, I would be in favor of legislation that requires people to pick a particular bulb of lighting, because in our business so much has to do with theater, appearance and beauty and we are increasingly competing with other jurisdictions in the gaming area, especially on the world stage, and we should leave some choices for the artists. Those artists are people who design the entire look and feel of a casino. We should leave them the latitude they need and let us put that technology into our total use, including across the administrative portion and the back of the house.

CHAIR TOWNSEND:
So, what you are volunteering to do is work with Dr. Wiel on Senator Schneider's amendment, is that what I heard?

MS. ORTEGA:
That would be my pleasure.

SENATOR SCHNEIDER:
I have lived in Las Vegas for 40 years and all the signs in downtown Las Vegas years ago were of millions of lights. Now those have gone away and casinos are going to these big screens. All those neon signs downtown are virtually gone, and the new signs have changed. I believe Philips and other companies are going to have the lights done properly. Actually, the bulbs in this room are the fluorescent type that do not work in lamps, but they are making them now so they look similar to a regular light bulb, and they are getting the color down right. These new lights are now in production and will hit the market soon, and we are helping to create the market for them.

CHAIR TOWNSEND:
We want everyone to look to Nevada in a positive light, as we get enough negative national publicity.

DR. WIEL:
I would like to state that the Southwest Energy Efficiency Project supports S.B. 437. Specifically, we support four of the provisions and are neutral on the rest. We support the provisions (Exhibit H) that provide for the energy rating and the audits on home sales; the provision providing for the property tax relief; the provision providing for, what we call life-cycle costing that would have public works account for the operating cost as well as the purchase cost and we support the adoption of natural gas decoupling.

My written comments provide all the information you need, Exhibit H. Essentially, they say almost nothing that you did not already say in your introduction, except the written remarks offer five suggestions for tweaking, none of which change the essence of the bill, but address aspects of the implementation of it. Let me list them and you can read the details.

In terms of the home energy rating system, two things are important; either you provide guidance for the implementation or for perhaps another implementation. As long as you are announcing to the home owner terms of the Nevada house rating, you ought to at least state whether or not it meets Energy Star.

We join in on the fuss about whether it should be the LEED or equivalent, and we have no information to add other than what several other people have already raised on that issue.

We have a suggestion on a comment about the property tax relief. Whatever system you use, we especially encourage accounting for the size of the building in offering more credit for smaller buildings than for larger buildings.

Finally, on the natural gas decoupling, we see that as one element of at least three that are required in order to bring energy efficiency in the natural gas sector on a parallel to what already exists in the electric sector. The decoupling is one of those components where you also need appropriate rules from the PUCN and appropriate action by the company. We hope you would provide language that requires the natural gas utility to file for their conservation plans. Instead of just opening the door for them, invite them in, and suggest to the PUCN to provide regulations that are parallel to the electric industry for the natural gas industry.

PETER COATES (Construction Manager, Kit Carson Development):
We are the lead pilot program for the LEED homes in Nevada and support S.B. 437. You had asked the question, can you meet the LEED standards, and can you construct a building to meet the LEED standards. The answer to that question is, yes. I have built four of the LEED-certified buildings as shown in our handout (Exhibit I).

Last winter I worked for the University of Nevada, Reno as their construction manager on the girls' dormitory at the 4-H Camp, and we have reached a gold certification level on that building. We now have three silver certification level buildings that have been finalized and issued certificates of occupancy on our housing project in Gardnerville.

I would like to invite the Committee to find the time to tour these homes to see what the LEED certified home and its amenities can look like at the silver level.

We are in support of S.B. 437, and particularly section 26, the tax abatement. As Brad Spires mentioned, construction and real estate are all about money. No matter what you put into the building, grounds or the view, the bottom line is dollars. In order to construct a structure, particularly as a residential building that will meet the LEED silver certification and take advantage of the 50-percent tax abatement, you have to invest 20 percent to 30 percent more in the construction of that building.

SENATE BILL 437: Revises provisions concerning generation and consumption of energy. (BDR 58-232)

MR. COATES:
In other words, a $200,000 construction budget for a conventional stick-frame building will cost $240,000 to $250,000 to build. Those expenses have to be passed on directly to the consumer. When it comes to recapturing those expenses, selling that building to the consumer, selling the energy efficiency and the environmental amenities of these structures, you have to provide the financial incentive; section 26 does that.

Along with the energy savings, it was pointed out that there is an energy savings of around $500 a year for an Energy Star-certified building. All of our buildings are Energy Star certified. Not only do we meet the 30-percent requirement above the international energy code, we have designed our

buildings to reach 40 percent to 50 percent, which translates directly to 50 percent of your utility bills.

We anticipate around $500- to $800-a-home-a-year savings. You extend that out over 10 years and that is $8,000. Our $250,000 construction budget translates to a home that sells for around $400,000. The tax burden on that home is approximately 1 percent or $4,000 a year. A 50-percent abatement would amount to $2,000 a year. What we can say to our consumer is that with a silver-certified building, you can take advantage of a $2,000-a-year tax abatement on the property for a period of 10 years that would amount to $20,000. You will save between $5,000 to $8,000 in that 10-year period. We can offer back to them the financial incentive of between $25,000 to $30,000 over a 10-year period. They still have not totally recovered the $40,000 or 20-percent increase that we had to pass on to them.

We take advantage of the $2,000 tax credit that Energy Star gives to the developer when we meet a certain Home Energy Rating System (HERS) rating, which I am happy to say, just last night I was able to achieve on our homes with our HERS rater, Jeff Bender of Bender Engineering, Truckee, California. We can take advantage of the $2,000 tax incentive and rebate and pass that directly on to the consumer, that will not go in our pockets as profit. We have to market these homes. We have to market a $280-a-square-foot home against the competition that is selling for $220 to $230 a square foot.

MR. COATES:
The final selling point we can offer our consumers is that in ten years, given all the rhetoric and dialogue today on the rating systems for inefficient-energy homes is the property value of those homes. I certainly appreciate Brad Spires's concerns on having to market the older inefficient-energy homes. In ten years, you will have a state-of-the-art energy-efficient home.

Yes, the industry will continue to progress, refine energy efficiencies and find better ways to increase the savings. For example, right now we use a 95-percent energy-efficient hot-water system in our homes. The "R" value on our exterior walls is an R-24 which is equivalent to an R-50 on a stick-frame wall. You will have a state-of-the-art building with a silver-certified LEED structure in ten years. The value of that building will retain its original value and increase proportionately.

VICTOR BURON (President, Solar Seeker):
The homes just described, are they equipped with any solar hot water or solar photovoltaic?

MR. COATS:
They are not at this time. I am currently doing value engineering to equip the hot-water systems with a solar hot-water system. We have three new homes under construction, hopefully, one of those will be equipped with a solar hot-water system and in-floor radiant heating.

CHAIR TOWNSEND:
How far are you from the project?

MR. COATS:
The project is located in the Gardnerville Ranchos on Kimmerling Road, about 6 miles south of Gardnerville and about 20 to 25 minutes from Carson City.

SUZANNE JOHNSON:
I would call myself a solar-energy idealist. I see in S.B. 437 the potential for encouraging more houses that are highly energy and resource efficient and, hopefully, solar powered and net metered.

I do have a couple of concerns about the bill. I built my house without any of the buy-downs or participation in the demonstration program. I made that as a conscious decision because I wanted to participate in the portfolio energy credits (PECs). There is a great potential with that program to encourage people to install renewable-energy systems. We do not have the program completely off the ground in this State. I just did an energy transaction for the first time, and should be getting a check soon, so there is the potential, but it needs a little help.

One of my questions goes to the intent of a portion of section 16. It appears to change the basis by which the PECs will be calculated for solar energy. Right now, there is a multiplier of 2.4 applied for each kilowatt-hour of electricity generated, there is a complex set of laws, but this appears to change that. Was that the intent of this section? That may not be something you can answer right now, but I would encourage leaving the PEC calculation as it is until we see the process fully functional in this State.

My larger concern is also in section 16, page 21, subsection 2, paragraph (c), subparagraph (3). That is the change I like to call the big wall at the end of September. I have prepared a handout about net-metering (Exhibit J) in which graph 1 shows a fairly typical distribution of the way a renewable-energy system, a solar system, generates energy. The most energy generated is during the spring and summer months, usually April or May through August or September. What happens with our current net-metering billing system is that in those months we generate excess, the excess is carried over into the following month or any succeeding month in which we do not generate an excess, and it is applied to cancel that out. In other words, it is a rolling excess. This works well, because my system will produce a lot of energy in the summertime, and that is good for the utility. The utility gets that energy to use during the period when there is most demand. In return, in the winter, when I am not producing a lot of electricity, I pull electricity from the grid and use any excess I generated during the summer to balance what I pull off the net during the winter.

If you look at graph 2, Exhibit J, it will be virtually impossible for somebody with a solar system, one of us small distributed customer generators, to actually be able to use the excess we generate against those times of the year when we are not generating much energy. Basically, we are going to be losing the whole reason for net metering. I am very much opposed to putting in this September wall. In reading section 16, it does not appear to do what we used to do when I lived in the Pacific Gas and Electric territory, which was to do an annual true-up where they collected all your bills for a year and at a certain time, they added or subtracted. What this seems to do is put a wall at the end of September and throw away any excess. I believe this will be a strong disincentive for people to put in small generators, to put in a one-, two- or three-kilowatt system on their rooftops. I do not think we want to do that at this point.

MS. JOHNSON:
Most states and cities are trying to find innovative ways to get the small distributed customer generator to generate more. I read that the city of Austin, Texas, was looking at a way for people who have plug-in hybrids to charge them inexpensively at home at night, and plug them into special parking places in the city during the day. The utility could draw energy from the batteries if needed. There is a lot of innovative thinking out there. Section 16 seems to be telling people that we do not want you to net meter, you are not going to get any benefit from it. I question whether that is what we want to do.

I would like to add that I have gone through the process that Senator Carlton is involved in by making an old house energy efficient. I did something similar; I sold a 45-year-old house after I had increased its energy efficiency with a small solar system on the roof. The Realtor told me what would positively sell the house was the school district where I was located. All the families that put in bids did not have children and the person bought the house because it was energy efficient, had a small solar system and they liked the permaculture or xeriscape landscaping which used little water. Based on my experience, you are on the right track.

CHAIR TOWNSEND:
It was generous of you to invite us to your home, and there have been articles written about it. It is difficult to fully appreciate what you have done until you have seen the home.

MARION I. BARRITT (Director, American Solar Energy Society):
I was a director for many years of the Solar Thermal National Regulatory Group, so I understand the systems. It is like déjà vu because it was ten years ago when you did the first net-metering bill. I participated and helped write some of the verbiage. The reason I did it is because I wanted to put solar on my home. I am proud to have the first solar net-metered house in Nevada.

At that time, Nevada became a leader in renewables. It was wonderful to boast about what we had done in our State as I traveled throughout the country and the world. We were recognized for taking the lead on the renewable-portfolio standards and on net metering. With the help of our Legislators today, we are continuing in that pattern.

Everybody should consider that you have to do the energy-efficient things first. I was happy to hear Ms. Ortega talk about the lighting and recognizing its importance. That is something we can all participate in whether we are in a small or a commercial building. I had the first fluorescent dimming lights put into a home in Nevada. Unfortunately, they have not yet become commercially available for regular home owners, and they should be. I think that when I sell my home, the energy-efficient features I put into it that reduce my energy bills considerably will be the selling point. I never gloat with my neighbors, but every so often they ask about my monthly bill. When I tell them, it is always at least 50-percent lower than theirs because I started out with the premise of doing an energy-efficient home.

Concern was expressed about training people to do the energy audits. Personally, I would leave the time at January 1, 2009. The reason I say that is the Nevada education system can come up to a point where they are training the people we need to do those audits. It is a new technology job we can introduce in this State.

I have the same concerns Ms. Johnson expressed about section 16 over the billing period in September of each year where all those energy credits produced by people would suddenly disappear. The only one I could see this benefiting is the power companies. If you want to do a section like this in the bill, you have two choices. Personally, I would like to see it go away completely. You could make it in March or April, which would mean for most small producers, you would have used up the credits you had accrued during the previous summer; so delay it for six months on the billing cycle. My preference would be to delete it completely or make it that the credits accrued would disappear at the time the house was sold or the owner died.

Just think, it has been ten years and we have not made a lot of progress in net metering. I think this bill will help, but it is disturbing that we only have 228 systems in all that time.

MR. BURON:
I want to thank you for this bill, it is interpretable. When I read a lot of these items that come out in this form, there is always a right and a left hand in interpretation. This is straight forward and helpful. The only place with a negative mark is section 16. I have been a proponent of double metering. I have begun to realize that system cannot be changed overnight.

I would like to present a paper on S.B. 437 and on S.B. 427 (Exhibit K). The reality is there are a number of people who do not have the ability to host their homes with solar, either because of roof elevations, age of the community or trees hampering the possibilities. It has been mentioned there are only 228 existing units. I have been told by the power company only 35 applications have been turned down because of location, and that is out of 1,300 applications made through the years. Those 1,300 did not happen because of attrition, people found out they could not afford it or it was not right for them.

I present this proposal as an amendment to both bills. With this situation, the double metering could be an alternative where an individual cannot host the single metering or they need more than they can apply to their property and utilize a single metering system. The first will be at an installation where adequate solar can be installed at a location at their home or business or possibly both to utilize that power. We are not asking for payment of extra energy, but an individual should be able to, within the input metering and output meters, establish a balance and a use for their needs.

CHAIR TOWNSEND:
We will suspend the hearing on S.B. 437 and open the hearing on S.B. 427.

SENATE BILL 427: Makes various changes relating to energy, net metering and the portfolio standards. (BDR 58-677)

SENATOR DINA TITUS (Senatorial District No. 7):
I have been a long-time supporter of renewable energy. I have met with representatives in the industry and believe there is great potential for renewable and natural resources energy in Nevada.

I have prepared a written statement on my position with S.B. 427 (Exhibit L). It covers solar power, wind power, water power program, net metering and renewable-energy portfolio. This bill will enhance development of Nevada's generous endowment of renewable energy, help preserve our environment for future generations and provide jobs and money for expansion of our economy. It will also help us as a nation become less dependent on foreign sources for our energy. I also included information on a wind-power program (Exhibit M is in the Research Library).

CHAIR TOWNSEND:
You have given us a lot to think about. We will work directly with you as we also work on the other bill in a collective thought process.

SENATOR TITUS:
There is such great potential. We need to seize the moment. I met with some of the representatives from the utility industry, and they are willing to work with me on some of the amendments we might need to make. I think what I am trying to get at is the same thing you are, and I am looking forward to working with you to move these bills forward.

CHAIR TOWNSEND:
We will close the hearing on S.B. 427 and open the hearing on S.B. 27.

SENATE BILL 27: Revises provisions governing net metering systems that use renewable energy. (BDR 58-438)

CHAIR TOWNSEND:
We requested Ms. McKinney-James be here not because she introduced the bill; it is because in southern Nevada, Clark County School District is the second-largest user of electricity and we cannot ignore them. It is important because every dime we have to spend unnecessarily in that district is money they cannot use for something else that might go directly to children.

ROSE E. MCKINNEY-JAMES (Clark County School District):
In your observation, you shared with the Committee some of the information I wanted to pass along. We are, in fact, the second-largest customer for utilities in southern Nevada. We have been active over a period of time in attempting to advance these technologies. We simply face some barriers.

During the interim, we made efforts to interact with stakeholders. We spent some time before the PUCN offering testimony, and at that point indicated the barriers were significant enough that we needed to come to the Legislature to ask for consideration in an effort to reduce those.

We are also aware that there have been lots of discussions regarding net metering, which is the essential component of this bill, although we were not given an opportunity to participate in some of those discussions. Forgive us as we go through this presentation focusing on why we needed to bring this bill in this format. We express a willingness to work with those who have a common interest in advancing these technologies toward the same goal.

In the interest of time, I am going to turn to Paul Gerner who is the assistant superintendent of the facilities.

PAUL GERNER (Associate Superintendent, Clark County School District):
These are my credentials in talking about energy: I am a registered, certified energy manager and a green-building engineer.

I would like to draw your attention to what we have done with the latitude we have had so far. We received a Cashman Award Finalist program in energy conservation that has saved us over $23 million since 2000. We are on track to save probably $10 million this year alone, and we saved $9.2 million last year.

I am one of the few people around who has installed photovoltaic cells. I have 50 kilowatts online in four elementary schools. Economically, they were combined with highly reflective solar reroofing while replacing a leaky school roof. Each of them comes with a 20-year warranty, making it a great deal for us, and there are interesting educational tie-ins for the kids. I have the most educational target that anybody has in Nevada, 30,000 BTU per square foot per year, and this is the meat in the LEED sandwich, it is the thing that changes your life-cycle costs. I have a school under construction that appears to meet that very aggressive target. Burkholder Middle School is coming in at 28,000 BTU.

I am going to go through this slide presentation as quickly as I can while giving you all the pertinent points (Exhibit N is in the Research Library).

Nothing we are contemplating here, if you can open the door for me, is going to make a significant difference to Nevada Power Company's requirements and plans. We have some room to work on these bills, and it is around the difference between collection and export. We can set up a system that would collect two megawatts, but if it is an issue, we could guarantee we would never try to export more than one megawatt, which is easy to do. We are willing to work with the utility on the metering costs, and if there are any stabilization issues, we do not think we should get away for free on that, that is not realistic.

Our proposal to you is that you figure out some way to allow a pilot program. We would like to start with ten high schools at two megawatts each. I suggest you might want to have the PUCN do a quality-control check after we have the first ten schools online. I would like to have an automatic provision that said if we get an upcheck from the PUCN, we can go on to the next 30 schools.

I have a realistic plan that would put up to 80 megawatts of renewable power online, and I do not think anybody else has that. The neat thing about that is it is not going to cost anybody any money. We would have to exempt schools from some other provisions of the other bills. If we can figure out how to do

that, as I said, I would expect to put 80 megawatts on line. We would be showing you projects either completed or in completion when we talk about this two years from now. In that same time frame, we will have a tremendous opportunity to expand the curriculum to tie it in for those future scientists and engineers. Right now, in our program we are building something called career and technical academies, and I see a wonderful tie-in for these future technologies that we would like to have be the centerpiece and make Nevada the center of the universe for renewables, and we can tie that into our program.

CHAIR TOWNSEND:
In a short period of time, you have given us fascinating and creative approaches to renewables, and as we move through this process all of that will be part it. I am particularly fond of the wind at night and the plug-in of electric cars during the day, because everybody seems to get something good out of it.

There being no further business before this Senate Committee on Commerce and Labor, the meeting is adjourned at 11:05 a.m.

RESPECTFULLY SUBMITTED:

_____
Laura Adler,
Committee Secretary

APPROVED BY:

_____
Senator Randolph J. Townsend, Chair

DATE:_____