MINUTES OF THE
SENATE COMMITTEE ON ENERGY, INFRASTRUCTURE AND TRANSPORTATION

Seventy-fifth Session
March 31, 2009

The Senate Committee on Energy, Infrastructure and Transportation was called to order by Chair Michael A. Schneider at 8:05 a.m. on Tuesday, March 31, 2009, in Room 2135 of the Legislative Building, Carson City, Nevada. The meeting was videoconferenced to the Grant Sawyer State Office Building, Room 4412, 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 Michael A. Schneider, Chair
Senator Maggie Carlton, Vice Chair
Senator John J. Lee
Senator Shirley A. Breeden
Senator Randolph Townsend
Senator Barbara K. Cegavske
Senator Dennis Nolan

STAFF MEMBERS PRESENT:

Matt Nichols, Committee Counsel
Scott Young, Committee Policy Analyst
Patricia Devereux, Committee Secretary

OTHERS PRESENT:

Jim Gibbons, Governor
Hatice Gecol, Ph.D., Director, Office of Energy
Greg Smith, Administrator, Purchasing Division, Department of Administration
Gustavo “Gus” Nunez, P.E., Manager, State Public Works Board
Mike Skaggs, Executive Director, Commission on Economic Development
Andrew C. Goodrich, REM, Director, Air Quality Management Division, Washoe County, District Health Department
Dan Schochet, Chairman, Nevada Renewable Energy Transmission Access Advisory Committee

Dino DiCianno, Executive Director, Department of Taxation
Nick Vander Poel, Deputy Director, Office of Energy
Jo Ann P. Kelly, Chair, Public Utilities Commission of Nevada
Anne-Marie Cuneo, Manager, Resource and Market Analysis Division, Public Utilities Commission of Nevada
Jason Geddes, Ph.D., Chairman, Nevada Renewable Energy and Energy Conservation Task Force; Environmental Services Administrator, Public Works Department, City of Reno
Tom Clark, Director, Government Affairs and Public Relations, Holland & Hart, LLP; Cogentrix Solar Thermal; Ormat Technologies Inc.; Sempra Energy Corporation
Judy Stokey, Director, Governmental Affairs, NV Energy Inc.
Joe Johnson, Toiyabe Chapter, Sierra Club
Kyle Davis, Policy Director, Nevada Conservation League
Christy L. Morris, Vice President, Land and Permitting, Ram Power, Inc.

CHAIR SCHNEIDER:
Governor Jim Gibbons is here today to testify on a bill brought forward on his behalf. President Barack Obama and U.S. Senator Harry Reid have given much support to the renewable- and green-energy issues coming before this Committee. We will open the hearing on Senate Bill (S.B.) 395.

SENATE BILL 395: Makes various changes regarding renewable energy and energy efficiency and alters the composition of the Commission on Economic Development. (BDR 58-1219)

JIM GIBBONS (Governor):
Senate Bill 395 is my energy bill. With me today are my energy and science advisor, Dr. Hatice Gecol, and others to speak in greater detail about this bill and our plans. I absolutely believe that renewable energy is the future of Nevada from an energy, environmental and economic standpoint. Historically, Nevada has been a net importer of energy; it has been my policy to make the State energy-independent while maintaining reliability and affordability and eventually making us a net exporter of clean energy. We can do this by 2020 through investments in energy efficiency, conservation programs, renewable energy and building transmissions lines.

We need to harness solar energy in southern Nevada, geothermal energy in northern Nevada and wind energy everywhere in between. We have the

resources to become the renewable-energy center of our nation and the "Silicon Valley" of renewable-energy technology.

I will list what my administration has accomplished in this area. In 2007, I established the Nevada Climate Change Advisory Committee (CCAC), headed by Andrew C. Goodrich and consisting of many volunteers. The CCAC is recommending how greenhouse gases can be reduced in Nevada, including through the use of renewable energy. Several of those recommendations are in this bill.

I also established the Nevada Renewable Energy Transmission Access Advisory Committee (RETAAC), which is chaired by Dan Schochet and includes more than 100 volunteers and experts. It has identified commercially developable renewable-energy zones all over the State, assessed our transmission infrastructure and prioritized corridors for future transmission lines. The Nevada Department of Business and Industry recently finalized establishment of a Title 42 Internal Revenue Codes section 501(c)(3) tax-exempt corporation to reduce the cost of financing transmission lines. I issued an executive order to streamline the State's permitting process for renewable-energy development. Nevada has many challenges to this, including scarcity of water and private land, lack of transmission infrastructure and—most significantly—competition from other states.

This bill has seven main components and is a collaborative effort between the Office of Energy; the Purchasing Division, Department of Administration; the State Public Works Board, Department of Administration; and the Commission on Economic Development. This bill proposes that the Purchasing Division adopt regulations requiring the State to buy energy-efficient appliances, equipment and lighting. We must set an example for our citizens to follow.

The bill proposes the Public Works Board adopt guidelines so State buildings are using water and energy in the most efficient and cost-effective manner. It also authorizes the Board to use renewable energy to supply all or part of the electrical needs of State buildings.

The bill proposes to increase and extend our renewable-portfolio standards (RPS) for providers of electric services so that by 2025, at least 25 percent of energy sold to customers must be derived from renewable sources. The bill proposes to increase renewable-energy nameplate capacity from 35 megawatts

(MW) to 70 MW so projects of less than 70 MW do not need to go through the Public Utilities Commission of Nevada's (PUCN) Utility Environmental Protection Act (UEPA) permit process. This will reduce the permitting time by at least six months.

This bill proposes to restrict new power-generating facilities if they emit greenhouse gases and are not required to ensure reliable customer service. This bill requires all automobile dealers to disclose the amount of carbon dioxide (CO2) emissions for all new-vehicle sales starting with 2012 models. This bill proposes fundamental changes to our tax-abatement program for new or expanding businesses to include abatements for facilities that transmit electricity from renewable resources or manufacture, research or design renewable-energy equipment. This bill proposes owners of certain lines and collector systems that transmit or carry electricity from renewable energy could also receive tax abatements.

Tax abatements are sometimes perceived as a windfall for businesses at the expense of taxpayers. That is why I am proposing to significantly alter the existing sales-and-use tax abatements by removing the local school-support tax from them. By removing the school-support tax, the tools needed to recruit companies will be balanced with a need to protect education funding.

We send billions of dollars out of Nevada to pay for energy we use here. Think of what those dollars could mean for our economy if we could create that energy within the State. With that savings, we could create permanent, highly paid, high-technology jobs for our citizens. Although Nevada already has a very favorable business and tax climate, other states offer aggressive tax incentives to recruit renewable-energy research and design companies, producers and manufacturers. It is imperative to keep Nevada competitive in this area.

While advancing Nevada's renewable-energy goals, this bill will also encourage economic diversification that will ultimately infuse new revenue into our economy. With this bill, businesses and investors will see Nevada as a leader in renewable-energy development.

SENATOR TOWNSEND:
What is the amount of citizen dollars exported to purchase power? Has your staff or outside economic analysts looked at the value of keeping that here? We need to know its ripple effect or if it could provide jobs.

GOVERNOR GIBBONS:
We have looked at that in the overall, gross picture, and the value of that net electrical-energy input—not transportation needs—averages about $2 billion annually, depending on price fluctuations. There is a four- or five-times rollover for dollars invested in an economy, so we are looking at an input into our economy of $8 billion to $12 billion. Then you can multiply what we could save from importing energy by the amount we could export to Western states like California to help them meet their RPSs. Nevada is perfectly situated to take advantage of that opportunity, due to its proximity and vision.

Historically, when the State has suffered a depression or recession, we grew our way out of it by advancing the diversification of our economy and sound business policies to attract firms. Now, in order for us to grow out of the current depression or recession, we can use our renewable resources. It will create a new avenue for economic diversification, and when you add $10 billion, $12 billion or more to that number, this is a significant change. It will take a few years to grow, but the entire country will benefit.

CHAIR SCHNEIDER:
Senators Townsend and Carlton and I are on the Senate Committee on Taxation. As we get into the energy legislation of this Session, we are struggling to get our arms around the revenue needs. You offer abatements as a spur. If we give the abatements to build these very expensive renewable plants, then the electricity is exported, where is the profit for Nevada?

The states with which we are competing to build these plants all have income and corporate taxes and higher property taxes. We already look like a tax haven, and now we are being asked to sweeten the pot by front-end loading this deal. I am nervous that we are going to "give away the farm" with nothing in return. We will create many jobs building the plants, but few workers are needed to maintain it. How can we get revenue coming back to Nevada?

GOVERNOR GIBBONS:
You do it by having reduced-rate utilities that allow consumers to take advantage of energy generated in this State with a renewable base. This allows companies seeking to relocate here to have a more attractive and competitive economic base. If there is a green RPS among their shareholders' desires, they will see Nevada as a center to do that and bring other jobs and businesses to this State. We have created a 501 (c)(3) corporation which will enable

construction and maintenance of transmission lines. If we do not come up with a way to distribute the resources, we may as well not do it. If we do not do this, we will stand here in ten years saying we wish we had.

We are two years ahead of New Mexico, Arizona and Utah with our renewables base, and we have to maintain that competitive edge through tax abatements. The other states are providing extremely aggressive abatements and corporate income taxes—which I do not want, nor a personal income tax. If we are the state that is "the most attractive beacon on the hill," we will once again be the fastest-growing—in economics and population—state we were just two years ago. But we need to keep our eye on the future.

HATICE GECOL, Ph.D. (Director, Office of Energy):
We will review the seven sections of the Governor's bill with this PowerPoint presentation (Exhibit C). We will review each section of the bill and discuss the proposed amendments to it (Exhibit D).

GREG SMITH (Administrator, Purchasing Division, Department of Administration):
Section 8 of S.B. 395 requires the Purchasing Division, Department of Administration, Chief to adopt regulations establishing standards favoring the procurement of appliances, equipment, lighting and other devices that bear the ENERGY STAR label, unless to do so would not be cost-effective. Green purchasing is good for the environment and business. The day is long gone when you had to pay a premium to do the right thing.

The federal ENERGY STAR program established energy-efficiency standards for a wide variety of electronic products, including computers and office equipment. In the State realm, this includes copiers, printers, fax machines, scanners and other devices. Standards identify the most energy-efficient products within any given product category, typically the top 25 percent. Manufacturers that sell products meeting the standards can use the ENERGY STAR label. These products are less expensive to operate and produce fewer global-warming pollutants. Cost-saving and carbon emissions-reduction calculators, found on the ENERGY STAR Website, give our Office a wealth of information with which to draw up specifications to evaluate products.

In section 8, page 11, line 20, of the bill, after the word "electricity," we propose the inclusion of "natural gas, propane and oil" to encompass more of the products we buy. On page 11, line 33, instead of "electricity," we propose

the word "energy." On page 13 of the proposed amendment on line 7, instead of "cost," we propose "energy and water" savings.

GUSTAVO "GUS" NUNEZ, P.E. (Manager, State Public Works Board):
Section 10 pertains to the development and implementation of regulations by the State Public Works Board. The section requires us to adopt by regulation the design and construction of buildings that establish standards for the efficient use of water and energy, including renewables. It also requires the adoption by regulation of performance guidelines for new, remodeled and renovated buildings' energy consumption, use of potable landscaping water and disposal of solid waste.

The bill provides for evaluation of standards and performance guidelines through cost-effectiveness, life-cycle analyses and establishing threshold levels for energy and water savings. It requires adoption by regulation of provisions for enforcement of those regulations.

This slide shows the impacts of the nation's buildings, as reported by the United States Green Building Council. Section 10 will address all of these items to minimize the impacts of State buildings on resources, waste generation and the environment. Buildings consume 75 percent of all electricity. This slide shows the net electricity consumption per capita of 1 billion kilowatts per 1 million people for 15 countries. The United States has the highest rate of use.

This slide depicts the importance of energy efficiency in buildings. Over the life of a building, the operating energy used far outweighs the embodied energy used that is associated with its building materials, physical infrastructure and maintenance. This bill addresses that operating energy.

The goals of S.B. 395, particularly section 10, are to reduce or eliminate the negative impacts of buildings on the environment with energy conservation, renewable energy, water conservation, sensible site planning and conservation of building materials and resources. Benefits will be the establishment of standards and performance guidelines that are customized for specific goals, fully assess cost-effectiveness and are appropriate for the specific project and region.

The main factors influencing the design and construction of buildings are code requirements, State guidelines and project needs. Codes provide for minimum

compliance and are proscriptive for broad applications, irrespective of building or owner type. Guidelines such as the Public Works Board's adopted standards provide for construction methods better than code, and are met for a building's entire inventory. Project needs identify opportunities and challenges of each individual project and focus on practicalities. The approach of S.B. 395 is to assess and manage all of these proponents to achieve the best practices.

The customized standards provided for in the bill will not preclude agencies from pursuing formal certification from other programs, such as Leadership in Energy & Environmental Design (LEED) certification. Over the long term, we anticipate designers and contractors will become more aware of and educated in making endeavors in energy-efficient buildings more usable and less costly. Market transformation and improvements in design standards and requirements will stay under control of the State, which allows optimization of specific goals and avoidance of high costs.

Section 10, subsection 2, paragraph (b), of the bill says, "Produce certain threshold levels of cost savings." Our amendment deletes "cost" and substitutes "energy and water savings."

DR. GECOL:
I will begin discussing the bill's section 3, pages 6 through 9. This map lists the RPSs for the United States. Twenty-eight states have RPSs, and five states have official renewable-energy goals. Nevada's current RPS includes utilities selling 20-percent renewable energy by 2015; up to 25 percent of this can come from efficiency and conservation. The RPS requires 5 percent of energy from solar. Meeting the RPS requirement is incremental. In 2009, utilities are supposed to meet 12 percent of the requirement. By 2015, the RPS requirement will be 20 percent.

In section 3, page 6, lines 35 through 41, the Governor is proposing the RPS be increased to 22 percent between 2020 and 2024. After that, the RPS would be at least 25 percent.

In the bill's section 4, page 9, lines 15 and 16, the Governor proposes to increase the renewables' nameplate capacity from 35 MW to 70 MW to reduce the permitting process by at least 6 months. Section 5, beginning on page 9, of the bill intends to restrict siting of new power-generation plants. The Governor's proposal would advance the State's objective of reducing greenhouse-gas

emissions and other pollutants, while maintaining water supplies, keeping vital transmission corridors open and ensuring reliable utility service. This recommendation came from the CCAC, which suggests Nevada should restrict new generation plants that emit greenhouse gases if they are not required to ensure reliable utility service.

On page 2, lines 20 and 21, of the proposed amendment (Exhibit D), the Legislative Counsel Digest should read, Section 5 of this bill "restricts new generation siting if the facility emits greenhouse gases and if it is not needed to ensure reliable utility service to consumers in this state." Section 5, subsection 1, paragraph (b), of the proposed amendment should read "the facility that is not renewable energy and built in Nevada pursuant to NRS (Nevada Revised Statute) 704.820 to 704.900, inclusive, and emits greenhouse gases," on line 1 of page 10. In that line, we are also deleting "the extent to which the facility."

Sections 18 and 19 on page 23 of the bill concern disclosure of CO2 emissions from all new cars starting with 2012 models. Greenhouse-gas reduction can be achieved through consumer and driver education and smart vehicle purchases. Many vehicle purchasers would like to factor greenhouse-gas emissions and carbon-footprint estimates into their vehicle-purchase decisions. Therefore, the Governor suggests amending NRS 482 so new-vehicle dealers must disclose the estimated CO2 emissions during their sales.

MIKE SKAGGS (Executive Director, Commission on Economic Development):
The changes and incentives regarding what the Commission on Economic Development does are scattered over eight sections of this bill so I will just provide an overview of them. The sales-and-use tax in Nevada is based on capital-equipment purchases. The tax varies above 7 percent, depending on the county. The first 2 percent of the 7-percent sales tax always goes to the State, with the balance a combination of school, county or city taxes. We can abate real and personal taxes up to ten years.

The criteria underlying this, as determined by the Legislature, are tied to meeting certain standards, including the State's average wage. That is $19.69 per hour, so that is the threshold, depending on the number of rural or urban jobs and the amount of the investment. The Commission hears each case independently and judges them on the above criteria.

This legislation intends to create jobs and increase the tax base. The attraction of tax base is as much a part of economic development as job creation. We came out early on these issues when the Legislature embraced renewables and put incentives in place. Now we are able to judge the incentives' value and how they work. We get constant calls from our competing states asking about those incentives because there is somewhat of a scramble on because most of the investment money that has any liquidity in the markets is moving towards renewables.

States are trying to create some kind of incentive package to be competitive. Our neighbors are moving very aggressively. Utah has 100-percent abatement for sales tax on renewable-energy production—across the board in statute with no hearing. Arizona has about the same deal, but it is considering adding more manufacturing incentives because it just lost a project, which Nevada also lost, to New Mexico. In New Mexico, 100 percent of gross receipts are tax-exempt for solar systems. California recently offered a 100-percent property-tax abatement to a solar company. Renewable energy is the one sector of the nation's economy that is moving, so there is a lot of competition.

My Commission has awarded 9 renewables projects with 92 jobs. That job count is lower because so much of this has been in the development of production. The companies paid $4.6 million in wages—about $24.26 per hour—which exceeds the State's average wage. The projects brought $830 million in capital investment, all of which went onto the tax rolls. This brought a net economic impact of $30 million to the State, which includes supplies purchased and secondary jobs at supply firms. The projects have more than 300 MW of renewable-energy generating capacity that has been incentivized.

This slide uses Sempra Energy Corporation's Copper Mountain project in Boulder City as an example. It produces 50 MW of solar energy with 804,000 photovoltaic panels. This is why we are so interested in the manufacturing side of this business. Boulder City granted sales-, modified business-, real- and personal-property-tax abatements to Sempra Energy. Capital investment was $140 million, which makes most county assessors pretty happy.

The part that may be confusing is the estimated $4.1 million in new property taxes generated. With a 50-percent abatement, we often talk publicly about the

taxes that were not collected, but not about those that were. It was the same amount.

The project created 200 construction jobs and 3 permanent jobs. Large projects like this always bring a high number of construction jobs that last around 18 months to 2 years, even though they are not the 5-year jobs we require when we review incentive applications.

Changes the bill proposes include the elimination in the abatement of the local school-support tax for both renewables and general manufacturing. This will affect all of our incentives. This increases the effective sales-tax rate from 2 percent to 4.25 percent, so the amount the Commission could discount is 2.75 percent.

The bill would expand incentive eligibility to manufacturing of renewable-energy devices and research and development (R&D). If we could link R&D done by most of the companies coming into the State to Nevada's R&D assets and start generating new companies based on new solutions to energy problems, we will maximize the impact of this economic cluster. Research and development is a target of everything we are doing, but we have to grow more infrastructure to get there. Nearly all of these companies do their own research; they do not collaborate because they are trying to keep their efficiency high and price per kilowatt below 12 or 14 cents. We always try to introduce the companies to the Desert Research Institute (DRI) or the Nevada System of Higher Education faculty if they want to collaborate, because that is the name of the game: to become more efficient in the design of your solar panels.

Transmission-line developers would receive a 25-percent property-tax abatement, with the intent of encouraging development of companies in the renewable cluster and entire supply chain.

This slide illustrates a "cluster," which is a buyer-supplier network formed in the State based on our uniqueness. We started with mining of endemic minerals; gaming was another thing unique to this State. The renewables cluster has the same potential to be that huge. We can get there by export industries—like generators—where a lot of the activity is now in working to locate as many of these projects as we can. When they locate here, critical mass is developed for the buyer-supplier network, which is where the jobs are. We have had 2 or 3 renewables manufacturers on the books since July 2008, and we are spiking

up to 14. This critical-mass transfer is starting to happen with solar and geothermal component and wind turbine manufacturers and the attendant infrastructure. Underlying this are the State's research and training facilities. A cluster covers this whole, interrelated piece of the economy.

This bill requires producers of renewable energy to bring renewable-energy components or cause manufacturers of them to accompany them to Nevada. Alternatively, companies must purchase a minimum percentage of required components for generating energy from companies manufacturing or supplying in Nevada. The language will require the Commission to set that percentage because it will be relatively new for us to figure out how much of a supply base we have today so we can make it mandatory. That percentage will be about 30 percent. Obviously, we are trying to respond to job creation: the greater the supply base, the greater the resulting job concentration. The company could also be required to sell power within the State to become incentivized.

This bill defines "renewable energy" as biomass, geothermal, hydrogen gas derived from renewables, solar energy and water and wind power. It puts all of the options into this bill and treats them all equally and fairly. It increases production requirements from 10 kilowatts to 1 MW. Companies, both renewable and industrial, must file annual statements certifying their compliance with contract specifications. This has to do with average wage, number of jobs and capital investment. There have been concerns we are not monitoring this tightly enough. The bill also requires us to notify the Office of Energy when abatements are granted.

A final component of this bill changes the complexion of the commissioners of the Commission on Economic Development by increasing the number of rural designated commissioners to two. The new requirement will be one commissioner each from Clark and Washoe counties and two from rural counties with the balance at the Governor's discretion. Renewable energy is impacting the rural counties quite heavily, so we want to give them more of a voice in the process.

ANDREW C. GOODRICH, REM (Director, Air Quality Management Division, Washoe County, District Health Department; Chairman, Nevada Climate Change Advisory Committee):

On April 10, 2007, Governor Gibbons issued an executive order establishing an advisory committee and providing direction that in one year, the body was to

develop recommendations to reduce Nevada's greenhouse-gas emissions. A committee of 15 was assembled consisting of a very diverse group of citizens representing the power, mining and gaming industries. Our task was to be accomplished with no additional resources, outside paid consultants or expenses.

The climate change concerns that the advisory committee identified include threats to public health, with an increase in vector-borne and heat-related diseases; air-quality impacts due to increased fine-particulate matter and higher ozone levels; major impacts to water resources with longer drought periods and increased flood threats; an increase in wildfires and negative impacts on the agriculture industry.

The committee documented the State's accomplishments in conservation and clean renewable-energy development. Nevada was one of the first states with a mandatory RPS, is the largest geothermal-power producer per capita, has two of the largest photovoltaic and solar-thermal generators in the nation and many of our county and local governments are pursuing progressive conservation and energy-efficiency strategies.

The committee forwarded 28 recommendations to the Governor, many of which are addressed in S.B. 395. The complete report can be found on the State's Website. Sections 1 and 2 of the bill encourage and incentivize clean renewable-energy production and transmission. Section 3 increases the RPS. Sections 4 and 5 modify the UEPA to attract more renewable-energy projects and treat all renewables equally. Section 8 requires the purchase of any ENERGY STAR or equivalent equipment and appliances by State agencies. Section 10 addresses water and energy-efficiency standards for public buildings. Section 18 provides vehicle buyers with specific greenhouse gas-emission information.

DAN SCHOCHET (Chairman, Nevada Renewable Energy Transmission Access Advisory Committee):

I am affiliated with Ram Power, Inc., a renewable-energy company. The development and construction of transmission lines has one overarching issue: in many cases, the projects will require funding from external-financing entities, which are careful to finance projects if there is no transmission. We have identified the need for and economics of transmission, but the issue is whether financing will be available.

In today's marketplace, financing is much more difficult. There are many companies with feasible projects that cannot attract external financing. This bill directly addresses the issue of financing transmission construction through a 501(c)(3) corporation and tax abatements. The bill sets the stage for a renewable-friendly State policy and sends a clear signal to the investment community that we welcome renewables projects, especially geothermal.

CHAIR SCHNEIDER:
The amendment is not in the form the Committee is used to so Committee Counsel Matt Nichols will redraft it.

SENATOR CARLTON:
I need some of the terms in this bill defined. What is "cost-effective"? What are the "thresholds" and "performance guidelines"? What does assessing and managing "best practices" mean? What do "different standards" and "optimize targeted specific goals" mean?

I lack the depth of knowledge on tax abatements that Senators Townsend and Schneider have. My concern with them is, yes, we want businesses to come, but we do not want to give away the farm to do so. Jobs have been mentioned, but I need to make sure they are good Nevada jobs. In the sales-tax abatements, how is the Streamlined Sales and Use Tax Agreement addressed? We have tried to pass sales-tax holiday-type bills, a portion of which had to be voted on by the people. Will we have to submit abatements and sales-tax deals to their vote? I need clarification on what the transmission portions of the bill will actually accomplish.

DINO DICIANNO (Executive Director, Department of Taxation):
The national Streamlined Sales and Use Tax Agreement, of which Nevada is part, does not address abatements. Each state can choose to offer abatements without violating the agreement.

SENATOR CARLTON:
A portion of the sales tax must go to the vote of the people; they must agree that the first 2 percent of the tax needs to be waived. Is that 2 percent still in this bill?

MR. DICIANNO:
Be very careful when using the term "waived." Nevada's Sales and Use Tax Act requires a vote of the people to change only the rate of taxation. The Streamlined Sales and Use Tax Agreement does not affect that portion of taxes. The language we are trying to amend would allow the Legislature to give it back to the vote of the people, not to change the rate, but to allow this body the ability to amend the Sales and Use Tax Act in accordance with the Agreement.

MR. NUNEZ:
Typically on a State building, we require that at least two or three mechanical systems be analyzed, including conducting a life-cycle analysis, to determine what the best system would be to meet code. With this bill, we would exceed code, which the adopted standards now require be a minimum of 20-percent energy savings for buildings of more than 20,000 square feet.

The life-cycle analysis would provide what the paybacks may be and how quickly they could be achieved. A threshold may be established through the regulation process that may say we only want to look at strategies with paybacks of less than seven to ten years. If one of the strategies turned out to have a 30-year payback, but the life of the system was only 30 years, if you replaced the system in 10 years, you would be paying for a lot of new technology, because the technology in this area is changing rapidly. Therefore, we would only want strategies with paybacks of less than ten years as part of the threshold.

With respect to establishing the regulations, we have five contractors, an engineer, a banker and an attorney on our Board. When we have public hearings and workshops, we get a lot of people from the design and construction industries.

SENATOR CARLTON:
When the Legislature makes statements of policy without sufficient guidelines, when the regulatory process happens, that is where everyone goes to get what they really wanted. Recently, we have stumbled there on other big policy issues. I want to make sure that when we do get into the regulatory process on this, we take the things discussed by Mr. Nunez into consideration. I do not want a 25-year payback if I am going to have to replace the machinery within 15 years. I am more comfortable when we do the cost-benefit analyses if we are looking at the long term.

Dr. Gecol, the current goal of the RPS is 20 percent by 2015 or thereafter. Of that, 25 percent must come from energy efficiency and 5 percent from solar. In the proposed modifications—25 percent by 2025—what percentages are from energy efficiency, conservation and solar, and is there any designation for geothermal, wind or biomass?

DR. GECOL:
The formula will still be up to 25 percent of the RPS, with 5 percent of the RPS coming from solar by 2025. If you do the math, the rest will come from the other renewables you listed.

SENATOR CARLTON:
Is there a reason why we are still delineating solar and excluding the other options? We have guaranteed 5 percent to solar, but are not making a commitment to other sources. What is the policy decision on why that was not proposed?

DR. GECOL:
The bigger portion of the RPS is a combination of renewables, each of which has a different advantage. Geothermal is a base load, while solar is a peak load. The reason we did not change the formula is because the transmission lines have not yet been built. After consultations with the renewables industry and investor-owned utilities—which are the only ones who need to meet this requirement—stakeholders suggested we not change the formula.

SENATOR CARLTON:
My concern is that if we are going to be looking at this in a new way, if we are going to delineate, we should not give it to one particular component. If we are going to continue doing so, do we want to consider the others, or do we want to eliminate designations entirely? The Committee should consider this.

SENATOR CEGAVSKE:
The Governor said there would be a six-month reduction in the permitting process. Does permitting take about two years now?

DR. GECOL:
The six-month reduction he is talking about is the PUCN's UEPA permit process. Depending on the type of renewables project, the permitting takes one to five years. Geothermal permits take longer than solar.

SENATOR CEGAVSKE:
Are you proposing that, whatever type of project it is, the reduction will be six months?

DR. GECOL:
Yes, for the UEPA process.

SENATOR CEGAVSKE:
In section 8 of the bill, regarding the standards to be used to buy equipment, have we looked at a way to dispose of appliances and lighting that contain lead or other toxic substances? That is a big issue now.

MR. SMITH:
Yes. In our most recent bids and requests for purchase for services, we have developed language to use disposal as an evaluation criterion. For many years, public procurement focused solely on the price of things. Language in the bill's section 9 allows us to evaluate the much greater costs of ownership, disposal, overall operating costs, quality and warranty.

SENATOR CEGAVSKE:
Is that the required standard as adopted?

MR. SMITH:
Yes.

SENATOR CEGAVSKE:
Has the procurement process changed as a result of this bill?

MR. SMITH:
No, that is something that has been used quite expeditiously for a while. Several states are slightly ahead of us in this regard, and we have tapped into a tremendous amount of their experiences to craft our regulations. The beauty of the ENERGY STAR program are the guidelines for each product are not subjective and are clearly laid out, while outlining how products are evaluated and what aspects mandate they become part of the program. There is a wealth of information we can access.

SENATOR CEGAVSKE:
Section 10 of the bill lists guidelines for retrofits, disposal of solid waste, the standards and performance guidelines and things like that. How long do you predict it will take to implement this section?

MR. NUNEZ:
At the end of each session in July, we begin the regulation process to conform to new laws and adopt new codes. By the time we go through the hearings process, workshops, adoptions and sending things to the Legislative Counsel Bureau for review and the Secretary of State for recording, it is December or early January.

SENATOR CEGAVSKE:
During that process, will other things be able to continue, or can you not do anything until you get those guidelines in place?

MR. NUNEZ:
With respect to developing, implementing and enforcing the bill's provisions, that is correct. However, it will not prevent us from using our adopted RPS of a minimum of 20 percent above code for energy efficiency and water conservation.

SENATOR CEGAVSKE:
In section 13, is the abatement two years for machinery and equipment leased or purchased? The abatement is just for the local sales-and-use tax, and one of our issues has been equipment purchased in other states to be used here. From where did the two-year limit come, and which equipment does it specifically cover? Could abatements be issued to utilities?

NICK VANDER POEL (Deputy Director, Office of Energy):
Currently, abatements cannot be issued to utilities, but there is a proposed amendment that could include that. We are working with industry on the issue.

SENATOR CEGAVSKE:
If utilities are helping consumers get that product and consumers are getting some abatements, the utilities should be able to join in on that.

The Office of the Governor, RETAAC and the Nevada Climate Change Advisory Committee are all feeding into the development of this bill. Does this comprise a

working group, or are the entities submitting input to the Governor's Office separately?

DR. GECOL:
This is the working group for this bill. The Nevada Climate Change Advisory Committee's job is complete, and it forwarded its recommendations in the summer of 2008.

SENATOR LEE:
There will be renewables construction projects from which the State will get some sales tax and property tax, just above the rural-undeveloped or commercial designation. There will be jobs for 18 months, with about 8 full-time positions. What is in it for Nevada?

It is like the situation in Alaska with oil or gambling in Nevada. Locals do not get any higher slots payout than a guest, but casinos pay huge taxes for the privilege of doing business here. It is the same with mining. When it comes to this new energy industry, what can Nevada expect from this tax giveaway?

Section 13 of the proposed amendment says, "the business must sell and use its power in the State." If a business is producing power and pricing it on the grid, how can the PUCN make sure Nevadans get cheaper power?

JO ANN P. KELLY (Chairman, Public Utilities Commission of Nevada):
Once the power enters the grid, the rate is controlled by the Federal Energy Regulatory Commission. We have not analyzed S.B. 395.

ANNE-MARIE CUNEO (Manager, Resource and Market Analysis Division, Public Utilities Commission of Nevada):
The PUCN could only administrate this section if there were a bilateral contract with the regulated utility. That is the only way we could ensure the power was sold and/or used within the State.

SENATOR LEE:
Basically, does the PUCN have no real control if a company does not want to deal with the agency?

MS. CUNEO:
That is correct if they do not want to deal with the regulated utility that provides power to residents. The sale of energy is a competitive business, and companies can sell it to whomever they choose.

SENATOR LEE:
Is the statement, "the business must sell and use its power in this State" valueless? There is no value to Nevada's residents—it will just be generation of power to send to the grid to get the highest price to satisfy the investment objectives of corporation. That is it.

MS. CUNEO:
Power generation is a fairly competitive business, and producers are going to sell their product to whomever pays them the most.

SENATOR LEE:
Mr. Chair, I can answer your question: this is a valueless line. There will be nothing outside of us giving out the abatements and breaks to companies; there will be nothing in it for the residents of Nevada.

DR. GECOL:
If utilities meet any of the three conditions in the bill, they can get the abatement.

MR. SCHOCHET:
The primary reason for the abatement, for most development, is renewables are a competitive industry, with providers competing with each other and the utilities' own best interests. The utilities would love to be able to build their own power plants and provide a rate base that benefits investors. This bill provides some relief from that so the utility shareholders will have a partial benefit from the purchase of renewable energy, plus the abatement.

This bill tends to put renewable energy produced in the State then sold anywhere on the same market plane as coal- or fossil-fuel-produced energy. The benefit to Nevadans is if the energy is sold and used in the State, it is insulated from the volatility of fossil fuel on a portfolio basis. The abatement provides some relief for project investors in the early stages.

These are very capital-intensive projects. A typical Nevada geothermal project would provide about 30 MW of power at a cost of about $120 million. It is money spent in the State, although the components may be purchased elsewhere. That project would employ 15 to 18 people with an average income of more than $70,000 annually, including overtime pay and benefits. People can be trained for these jobs; they do not necessarily hire college graduates.

Because of the capital intensity and necessity to attract investment, the abatement does help, especially in this time of investment dearth. If the abatement is only available to projects that sell their electricity in the State, there are two benefits. In geothermal, there is potential for another 1,000 MW from 30 projects, each of which may hire 15 people—400 to 500 direct, permanent, high-paying jobs in rural counties, which are usually hardest hit in an economic downturn.

Whether the cost of renewable energy is the same or slightly higher than that from traditional sources, that is irrelevant to the fact that over the next five to ten years, we will see more price fluctuations in fossil fuels. But the price of renewables is fixed. That fixed portion of the portfolio sold to the ratepayer stabilizes the portfolio; it is like having tax-exempt bonds in your personal portfolio. If the bill can limit the abatements to companies selling power within the State, there is a definite benefit to the ratepayers.

SENATOR LEE:
I question the return on the investment. While I welcome the new jobs and a few dollars in sales tax, what you give up will amortize negatively from day one. It sounds like we are producing power for California.

MR. SCHOCHET:
If companies sign a power-selling agreement with a Nevada utility to sell here, they put up a certain amount of security for their ultimate performance. For a 30-MW project in Nevada, the security would be $3 million or $4 million, and they are held to guarantee the performance during the project's lifetime. For the same project in California, companies must put up a year's revenue, which is closer to $30 million. The difference between selling power in Nevada, even though the price may be a little lower, is that California has its own set of problems. It is a good market, but there are some real benefits to selling in Nevada, on a competitive basis.

SENATOR LEE:
That begs the question, why do I have to offer an abatement to investors to build in Nevada? Obviously, you just made my case that they are going to come anyway.

MR. SCHOCHET:
It is very difficult now to attract investors to renewables projects. Many projects are going begging only because the investors are not ready to invest because of all kinds of resource and utility-strength risks. Many geothermal, wind and solar developers are having great difficulty attracting investments. These investments require very heavy upfront capital, with high risk. Anything that can help improve this climate will improve the ability of the renewables industry to grow in Nevada, provided it does not hurt its citizens.

MR. SKAGGS:
This market is that competitive now. This is a black hour, and we do not have many options for growing our economy. Nevada is down 140,000 jobs, and neighboring states are suffering similarly. We are all hard-pressed to find economic opportunities to draw financing to make these projects work. Renewables are the best bet we have to turn this economy around.

Power generators provide the base for the industry because they have the demand for solar panels, the engineering work and the job-producing sectors of the economy. Therefore, the reason we are providing abatements to generators is to create critical mass to drive the location of manufacturers and suppliers. Our competitors are working just as hard, but we have an 18- to 24-month jump on them.

CHAIR SCHNEIDER:
If we front-end load it and give it away with an abatement, that makes it easy to get into business up front. Renewables should then pay an ongoing privilege tax, just like gaming, so we would then make money down the road. Companies are paying a 10-percent tax in California, Utah and other states.

SENATOR NOLAN:
We have not seen our neighboring states' RPSs. What are the different matrices at which these businesses are looking? What incentives does California offer? It is building solar and wind plants without problems. We know it has a high business-tax base, but there is a proximity to power users that Nevada lacks. If

that is what is driving California's success, what will pull renewables companies into Nevada? We just do not understand the competition. What will make Nevada absolutely competitive? We need a matrix of our neighbors' property, employee, sales and construction taxes to find ways to make Nevada more competitive.

MR. SKAGGS:
In conjunction with the Legislative Counsel Bureau, we have tried to develop that matrix, but the problem is each state's budget is set up differently. When you look at how states like Nevada with no income tax go about this, you end up comparing us to a state like Alaska. The most-requested abatement is sales tax. There is so much purchasing that a company needs to see relief on sales tax or property tax. California's market-proximity advantage, resource base and property-tax abatements all incentivize companies to stay there.

SENATOR NOLAN:
What type of abatements do neighboring states offer, and how do they compare to what is in this bill? Senator Lee made a good point when he compared this situation to Alaska. Alaska pipes its oil to the Lower 48 states while its citizens pay some of the highest fuel taxes in the country.

If a business must produce and sell its power in Nevada, the goal is to drive down the cost of power generation for consumers. Tenants of the Tahoe-Reno Industrial Center have a power plant right on the property, yet they pay some of the highest user-fees in the nation. What can we do to maintain incentives for generators while guaranteeing we will be able to use that power in the State and drive the costs down so Nevada citizens and businesses will benefit? Can we do that?

DR. GECOL:
I need to explain the intent of the three conditions of sections 13 and 17 of the bill. These are new conditions. If a power generator gets an abatement, it must bring its manufacturing facility here because that produces the most permanent jobs. If a generator is unable to do that, we want it to purchase components from a manufacturer in Nevada.

This second requirement is a bid for commercial economic development without a regulation determining the percentage purchased here, which depends on the technology and if it is commercially reasonable. There are technologies for

which a generator may not be able to find parts in Nevada. Can a company purchase a certain percentage of materials from Nevada suppliers? That percentage can change each year as more suppliers come here.

The third condition is to encourage generators to sell their power in Nevada so we can achieve energy independence. Bills in both Nevada Houses are proposing an increase in our RPS. How will investor-owned utilities meet that? We are losing business to states that offer cash, not abatements. They have a cash flow from oil and gas royalties that we lack. On the federal level, investment and production tax credits and the economic stimulus package offer incentives to the renewables industry. We still do need abatements to attract companies. We have the resources, but if we do not bring business here, we cannot develop high-paying jobs around it. We do not want to give the farm away, but we need to develop a baseline to get things moving.

SENATOR NOLAN:
If we are going to give a tax abatement to these companies, what can we do to force them to sell power to Nevadans at a reasonable rate? Why are we paying the highest energy and power costs in the West if we have generation facilities here? We need to hear from the industry because if we do not do this right and do not reduce consumer power costs, we have not done ourselves a big favor.

Everyone on the Committee would agree that we need to diversify and see more out-of-state businesses come here, even if they only provide 18 long-term jobs. On the front end, a plant will provide several hundred construction jobs for two years. That is important because companies will pay property and employment taxes. However, whatever tax incentives and abatements we provide make sense to them, and, at the end of the day, if we are trying to get them to sell power to the State to drive down the cost so everyone prospers, we need to build that into this bill. Do the abatements apply only to new projects and businesses that intend to generate green energy?

MR. SKAGGS:
The abatements would apply to existing projects that are expanding, but only to new capital and jobs. It provides an incentive to expand their businesses. As we move towards attracting a supply-manufacturing base, another important incentive is training dollars. We have good curricula in our community colleges for solar panel manufacturing and installation. In the cluster paradigm, we have

the right training plans in place to expedite this because that is the real reward: training people in a new skills set.

CHAIR SCHNEIDER:
The proximity of the plants to California, especially in southern Nevada, is not that big a deal because electricity moves over the border at light speed. There is a very nominal charge to use the lines.

We also need to look at the costs and the permitting of plants in Nevada. Our workers' compensation insurance is much less than in California and surrounding states. It will cost a lot more money and as many as ten years for a company to satisfy all of California's environmental requirements. There is a real financial benefit to Nevada when all of that is taken into account.

As for the amendment requiring companies to sell and use their power in Nevada, we will have the Committee Counsel take a look at that because I do not think it is constitutional.

SENATOR CARLTON:
The Boulder City plant is a very good example to follow. I do not know what abatements and incentives Sempra Energy Corporation was offered, but we can look at how much it cost to get that plant on line. If it got a sales-tax abatement, how much did that cost the State, versus how much money the State would have gained in property taxes? If a company gets a $75 million sales-tax abatement, and the State only gets $20 million in property taxes, we have to look at how this would work. By using that example as something to which we can all relate, we should apply what you are proposing to that to get a feel for how the State would have been affected had we granted the abatement then.

MR. SKAGGS:
The Boulder City project is new so it might be good to follow through on to gauge the impact of sales tax, because the company is buying inputs now. There are other Nevada projects we could use for historic-modeling purposes. People do not realize that this was Bureau of Land Management or agricultural land originally, so tax collections were zero or negligible. Now that the facility has been sited, there is a revenue stream, albeit discounted.

SENATOR CARLTON:
Instead of talking in the abstract, if we could apply it to what is already out there, it will be easier for the Committee to understand.

SENATOR CEGAVSKE:
Are you looking at any of the stimulus package money to help implement this bill?

DR. GECOL:
The Office of Energy is going to get $34.7 million in state energy program funding through the stimulus package. We have forwarded the initial application for the funds. Within the stimulus guidelines, at the direction of the Governor, we identified six areas of need. I have forwarded our initial application proposal to the Legislative Counsel Bureau, Committee Policy Analyst Scott Young and Senator Schneider.

The U.S. Department of Energy encouraged us to create a revolving loan fund because this mechanism has been successfully implemented by other states' use of Petroleum Violation Escrow Accounts since the 1980s. Nevada does not have such a mechanism for energy usage. The Governor asked my office to set aside $14 million to create the revolving loan fund to support renewables projects. The loans will be continuous and long-term. The Governor sent a letter to Senator Schneider and Assemblyman Marcus Conklin requesting help for my office with this language and meeting the requirements of section 10 of the stimulus package act.

SENATOR CEGAVSKE:
Are you looking at $14 million to put into the revolving loan?

DR. GECOL:
When I was part of Senator Townsend's utility working group, we raised a similar question. How does our tax base compare to those in other states? We have several extra taxes in Nevada. I have not seen the group's final report, which will be informational for all of us.

SENATOR NOLAN:
It is critical for us to hear from members of the renewables industry because we are supposing, based on this bill, what will be the driver to attract companies to

Nevada. They are the companies that have already analyzed where and why they are going to locate facilities in specific places.

CHAIR SCHNEIDER:
We will postpone the hearing on S.B. 358 until April 1, 2009.

SENATE BILL 358: Revises provisions related to energy. (BDR 58-1146)

SENATOR TOWNSEND:
We need the exact comparisons being used by the Commission on Economic Development between Nevada and those states competing against us. What are their sales and property taxes, abatements and cash incentives, as seen side by side with their RPSs and available renewables? We need to see exactly what we are competing against because I take everything I have heard today with a substantial grain of salt. If we have the resources here, we cannot move some of these renewables somewhere else.

The amendment is patently unconstitutional. There is a pending federal case concerning selling energy inside and outside states. You have a problem. The Chair is very clear that he does not want to give away the farm to other users or states while we try to help our own customers and taxpayers. There are solutions to that, but this is not it.

In section 2 of the bill, where it talks about a partial abatement of taxes from the Commission, the amendment proposes new language: "a facility for the research and development for renewable energy." What do you mean by that?

MR. SKAGGS:
It is a dedicated facility at a university site or a cooperative agreement with one.

SENATOR TOWNSEND:
You are talking about abatements for the actual construction of a facility in sales, and if someone builds it on university property, there is no property tax. So is it the sales-tax abatement on construction materials?

MR. SKAGGS:
On a university site, that is correct.

SENATOR TOWNSEND:
Do we pay sales tax on materials when we build a State facility? Mr. Nunez says yes. On page 3, line 35, of the amendment, why did you go from 10 kilowatts to 1 MW?

DR. GECOL:
Before answering this question, there is a correction in the amendment about selling power within the State. I just came from the presentation of industry and stakeholders—

SENATOR TOWNSEND:
"Industry and stakeholders" is a wonderfully generic term. Be specific: Did this come from NV Energy, Inc. or a solar generator?

DR. GECOL:
I crafted the amendment, but that suggestion came from the renewables industry.

MR. VANDER POEL:
We will have industry representatives work with the Committee Counsel on that matter.

SENATOR TOWNSEND:
Before you do that, have them work with the Chair or me. On page 3, line 35 of the amendment, what was the purpose of redefining the generating capacity?

DR. GECOL:
The 1 MW is the minimum industrial scale. For example, 1 MW is a reasonable MW for biomass, like the plant at the Carson City correctional facility. Ten kilowatts is really small scale, something you would put on a rooftop. We have net metering that goes up to 1 MW so it picks up where that stops.

SENATOR TOWNSEND:
So you are trying to match this definition to the increase in net metering and where it cuts off. Where did "landfill gas" come from? This is the first time I have seen that discussed.

DR. GECOL:
I do not recall. I will need to get back to you on that.

SENATOR TOWNSEND:
When you talk about a carve-out in the RPS section of the bill, you propose to leave solar at 5 percent and conservation at 25 percent. Most of the Committee was involved in the debate about conservation and because that has a broad base of effects, we thought the best way to shave our peak and other things with greenhouse gases was to lower the usage.

I question a carve-out for a specific industry. Traditionally, government does a very poor job of picking winners and losers. Senator Carlton articulated that, and the debate should continue as to whether that should stay in or other things should be added.

In section 4 of the bill, concerning the 70 MW and nameplates part, we knew what we meant when we wrote it, but those at the regulatory level did not want to fix it. So now are you going to fix it in law? In section 5, where it says, "except with respect to a geothermal facility that is built in Nevada ... and emits greenhouse gases," what does this mean?

DR. GECOL:
The Legislative Counsel Digest's synopsis of section 5 captures the intent of the section. We are also amending section 5 with language that better captures that intent.

SENATOR TOWNSEND:
The intent provision in your amendment is much clearer than the bill. You are saying you can restrict the siting of a fossil-fuel-based facility if it emits greenhouse gases and pollutants, unless it is needed for the base load. In essence, you are saying, "No coal, no gas, none of that unless you absolutely have to have the lights on."

DR. GECOL:
That is the intent.

SENATOR TOWNSEND:
Page 9, line 37, of the bill says, "Except as otherwise provided in subsection 3, the Commission may not grant a permit ..." It is a preclusionary component. If you want to build a coal plant, but we do not need it, you do not get a permit to build it. Under section 10, page 12, of the bill, there is a laundry list of

standards to set up for regulation. Was there any discussion of using LEED standards?

MR. NUNEZ:
We have examined LEED extensively, and have LEED-accredited designers on staff. We are not using LEED standards because this bill's purpose is to target some very specific things, and LEED is a very broad standard for the entire nation. We did not feel it met the intention of this bill.

SENATOR TOWNSEND:
Nevada made a change in LEED standards for its commercial buildings when we wanted them to focus on energy reduction. You might want to have the same discussion, using LEED as your base with adjustments. It is a standard recognized worldwide; for Nevada to stick out like a sore thumb because we totally ignored it might not be helpful. My last question concerns the car issue.

MR. VANDER POEL:
We are working on that language. We have had this conversation.

SENATOR TOWNSEND:
On this bill, there has been a substantial and continual debate over the value, versus the costs, of abatements. Some take the position that the State will get no tax money, but if we let someone build something, we will at least get something. Others say companies might come here anyway, and we are just giving up too much. Both sides are probably both right if you analyze enough cases. These are legitimate areas for debate and vetting.

The question persists that runs headlong into this philosophy of clusters and abatements, particularly encouraging "a facility for the research and development of renewable energy." How do we do that when we have very little money coming from the Senate Committee on Finance focused on higher education in renewables? How do we marry those philosophies? The Senate has multiple bills focused on intellectual competence and development and the commercialization of intellectual property. The Finance Committee does not allocate a dime for any of that.

MR. SKAGGS:
In this piece of legislation, we are trying to bring in private dollars. What are the prospects of us dealing with a facility doing its own in-house research now?

Some companies' most coveted possession is the efficiency of their solar panels. We are getting organizations like DRI more engaged in this process of collaborating on increasing that efficiency so we can start having R&D based here so it will drive the launching of companies. When I requested this language, I was thinking about the private-sector side.

SENATOR TOWNSEND:
If you are looking at stimulus package money and want to amend your budget, I would really ask you to consider a focus on what drives companies here. If we get into a bidding war in the West, we will lose; otherwise, we have to go to zero. If so, we have other problems. Against whom do we compete, and why?

Proximity is important, but look at California State Polytechnic University, Pomona; University of California, Los Angeles; University of Southern California; Stanford University; San Jose State University; University of California, Berkeley; and Lawrence Livermore National Laboratory. At Arizona State University, the extent of the marriage between investment from the private and state sectors is driving that state. Look at Los Alamos National Laboratory in New Mexico and what is going on in Seattle, Washington, and Oregon—we are up against some of the intellectual giants of the world. Unless we institute the other half of this component, which is investing a serious amount of money in engineering and renewables at the higher-education level, we will always be here trying to play with the numbers. It is a zero-sum gain if we just compete on dollars.

Michigan has great intellectual capacity, but has a failed car industry. It has great manufacturing facilities and workers who know how to run them. That is why Mariah Wind System is manufacturing its components in Michigan, not Nevada. When you look at what is going on in Austin, Texas, and other states' universities, that is why the growth is going there: it is all about higher education. Young chief executive officers want to be around universities to generate excitement in intellectual and finance capital.

We have very little control over our other problem: this has always been a capital-poor state. It was capital poor when we needed to expand gaming, and we are still capital poor in regard to renewables. We must find ways for capital markets to see us positively, and it not just about the dollars. Risk is very important, and that includes customers of NV Energy. What kind of stability

does NV Energy have when it signs contracts with renewables companies? That is what capital markets look at. We need to work on many planes.

SENATOR LEE:
The amendment's page 10, section 4, lines 34 to 39, talks about the six members of the Commission on Economic Development. It lists four people who are State residents, but two could possibly be nonresidents. Why is the entire Commission not made up of State residents? Do you want to reach out to people who will bring something we lack? If that is the case, would they be able to make the Commission meetings?

MR. SKAGGS:
We will tighten that language because the intent is not to have someone from out of state on the Commission.

JASON GEDDES, Ph.D. (Chairman, Nevada Renewable Energy and Energy Conservation Task Force; Environmental Services Administrator, Public Works Department, City of Reno):
I support the goals of S.B. 395. I do not think we need to change the section that defines renewable energy as far as expanding into landfill gases, which is covered under municipal solid wastes. If we try to limit it as far as landfill gases, we can change the definition and intent. There are several different technologies beyond landfill gases we can look at to extract renewable energy from municipal solid waste. We spent a lot of time adding fuel cells into that section, and we should not remove that.

In section 5, the amendment expands the bill beyond geothermal, but we need to look at the 70-MW cap, which essentially limits it to geothermal, solar, photovoltaic and biomass sources. Large wind and solar thermal developments produce more than 70 MW if they are trying to be cost competitive, so with the 70-MW cap, we are picking technologies. It is worth looking at what is being proposed, as Senator Carlton said, to see what is out there and what limits we really want to have.

Why is section 20 of the bill limited to amending the Charter of the City of Henderson? I know the City of Reno and other cities and counties would be interested in having more ability to attract renewable-energy companies.

As far as the life-cycle costs discussed by Mr. Nunez, it would be good to give more direction to the regulation side as to the cost limits. If we are looking to install State and public buildings which we will own for 30, 50 or 100 years, we should not put a 10-year limit on that. It would be good to have some flexibility to make sure we are looking at those issues for the long term. In section 8, where it talks about ENERGY STAR designation, that is limited to mostly residential purchases. The California Energy Commission has a long list of rated, commercial energy-efficient appliances which it would behoove us to look at in terms of our hospitality industry. We should expand that section to beyond ENERGY STAR to the list previously adopted by the Office of Energy, as per the direction of this Committee.

As a regent of the State higher-education system, I know it is a key component in all of this. The cluster analysis dictates we need strong higher-education initiatives to support these industries in R&D if we want them anchored—not just located—here.

TOM CLARK (Director, Government Affairs and Public Relations, Holland & Hart, LLP; Cogentrix Solar Thermal; Ormat Technologies Inc.; Sempra Energy Corporation):
Cogentrix Solar Thermal has six facilities in southern Nevada, and Sempra Energy Corporation has a 10-MW facility in Boulder City. I would like to tell the Committee why Sempra came to Nevada, instead of some other Western state.

This type of solar energy needs an anchored tenant, and we have a 500-acre, combined-cycle, natural gas plant in Boulder City. We have the same kind of plant in Arizona, but it is surrounded by thousands of private acres we own. In Boulder City, the City owns all of the land surrounding us. When we added up all of the numbers for workers' compensation insurance, income tax and abatements, Nevada came out on top. Because of the 50-percent property-tax and sales-tax abatements we received, we built that 10-MW facility in Boulder City.

We have recently received abatements to expand the 10-MW facility to 60 MW. We hope to break ground by the end of 2009 on that facility. The question we are often asked is, "You have received all of those abatements, only have one long-term employee and are selling the power to California—what gives?" I would like to turn that debate around and ask, "What gets?" What does Nevada get for that one employee?

Nevada gets more than $100,000 a year in property taxes, and more than $160,000 goes to the lease payment to Boulder City. The State received a portion of the sales, property and ancillary taxes during the plant's construction from the 130 workers we had at its peak. More than 65 percent of the workers were Nevadans; 20 were International Brotherhood of Electrical Workers (IBEW) members, making prevailing wage to plug our system into the grid. For the 6 months it took us to build our facility, which consists of 161,000 solar panels on 88 acres, we employed 131 people. We only have one long-term employee because, due to rain, those panels do not even need someone with a squeegee and Windex. In 2008, Sempra Energy gave more than $30,000 to charities within the Boulder City and Clark County areas.

When we look at the importance of abatements in this bill, had they not been in effect, our facility would be in Arizona, which would be receiving all of these benefits. We hope to eventually expand to 150 MW—there is a lot of land in El Dorado Valley.

We hope that as people fly into Las Vegas and see our plant, they will recognize Nevada as a true leader in renewable energy. Maybe one of those visitors has some new, proprietary manufacturing process that puts the solar panels together or some renewables technology, and will say, "Nevada is the place I have to be because it is the heart of renewable energy in the West." When we build that, manufacturers and labor will come, higher education will benefit—everyone will benefit. We are at the beginning of something that will become very important, not just to Nevada, but to the entire country.

SENATOR CARLTON:
Was there a 50-percent property-tax abatement on ground that would have generated 100-percent property taxes? It was not Bureau of Land Management; it was currently on the tax rolls.

MR. CLARK:
The land is owned by Boulder City. In El Dorado Valley, they have set aside thousands of acres.

SENATOR CARLTON:
Did you get a 100-percent sales-tax abatement on the components you bought to build the plant?

MR. CLARK:
It was not a full 100 percent because there is the 2 percent not abated.

SENATOR CARLTON:
How much money did that save you? That is a key question.

MR. CLARK:
I do not know, but I will find out. Conversely, I will also find out how much we spent in sales tax because it is important to understand that relationship. We are paying something, not just getting a free ride. You are not giving away the farm because the farm does not exist.

SENATOR CARLTON:
Did you say you had 131 people building the plant at peak, and that 60 percent of them were Nevadans? Were only 20 of them IBEW workers? Were they Nevadan IBEW workers?

MR. CLARK:
They were from Nevada.

SENATOR NOLAN:
If this bill passes, and Sempra Energy were to apply for abatements and build the plant now, would the provision requiring businesses to make and sell their power in Nevada keep it out? The provision is wide open, not requiring the power to be sold at a discount, nor must all of the power must be sold within Nevada. If Nevada wanted to reduce power costs to its residents, could we put language into this bill to not disincentivize companies from building here?

MR. CLARK:
The crux of your question is that we need to drive down the cost of manufacturing and construction before we can drive down the costs for consumers. It is a competitive market, and, just like any other widget manufactured in Nevada, we are going to sell power to get the best return. We are negotiating on building our 50-MW plant, but we do not know who will end up with that energy. Do we hope it is NV Energy? Absolutely.

SENATOR NOLAN:
If the only cost driver is the construction and operation costs of the generation facilities, there is a point of diminishing returns where we have to recoup those

costs—especially on 20- or 30-year-old plants—and we should be reaping the benefits of lower power cost. We are not, instead we are paying some of the highest power costs in the nation. If we are going to give this much, how can citizens benefit from lower energy costs?

SENATOR TOWNSEND:
Senator Nolan has made a point: It is a zero-sum gain relative to the construction. The construction of these generation facilities is very competitive. They are primarily located in the "red zone": southern Nevada, part of eastern California and part of Arizona. When it comes to bringing manufacturing types and R&D to Nevada, that is when the investment in higher education becomes important. We cannot just look at this as isolated, but must understand each component's role.

There is an advantage to being where we are. We do not have to give away the farm, but we must incentivize in order to change investor behavior. We should not get into a bidding war because if we do not believe in ourselves, no one else will. When it comes to the generated electricity, company owners have a responsibility to their shareholders, and the bill's commerce clause precludes us from keeping the energy here. You get a better deal out of state, and we know why; our neighbors have a higher RPS and a very big penalty if they do not meet it: companies have to pay more. In the end, that will drive more companies to Nevada.

We must make sure we bring the right people here, those with manufacturing and R&D facilities. There is more to this than just the manufacturing and turning on of the lights. We want to encourage companies that relocate to take advantage of our topography and climate and be more philosophically inclined to support efforts to bring intellectual capacity here. NV Energy invests heavily in our community colleges and higher-education facilities, directly in areas in which they are involved, and that is paying rewards.

MR. CLARK:
I was recently with Sempra Generation sector Chairman and Chief Executive Officer Mike Ullman, giving tours of our facility, and that point came up. Sempra wants to get the 50-MW plant up and running in order to become a larger player with the Nevada universities and R&D. We will have almost a million panels at that plant. First Solar, Inc. will manufacture them in Arizona, but we could pull that into Nevada, where transportation costs are less, thus continuing to drive

down the costs of that energy. We want nothing more than to bring the panel manufacturers to this State.

JUDY STOKEY (Director, Governmental Affairs, NV Energy Inc.):
We support S.B. 395 and participated in many of the meetings to formulate it. There are many items we would like to amend, and we are working with the Governor's Office to that end. We will come back to this Committee with those suggestions.

JOE JOHNSON (Toiyabe Chapter, Sierra Club):
We support this bill and most of its principles. We do not have a position on what is an appropriate incentive, but we do support them. Dr. Geddes' comments on redefining "biomass" are appropriate. Legislative record and history clearly demonstrate landfill gas and municipal waste are biomass. I applaud the redefinition of "fuel cell" as hydrogen derived from renewables. Many fuel cells are driven off of natural gas and separation that would not normally qualify as biomass.

We have concerns about the appropriateness of the 70-MW cap in section 4. We are not opposed to increasing the cap, but wish to see large projects that have fairly extensive environmental impacts subject to a review process. Presently, the Nevada Department of Wildlife is not allotted enough time to review some projects, particularly those on private land.

KYLE DAVIS (Policy Director, Nevada Conservation League):
I was a member of the Nevada Climate Change Advisory Committee. The provision raising the MW cap was not part of our discussions. In general, we support the concepts of S.B. 395, but would echo Mr. Johnson's concerns that we do not know what the appropriate abatement amount is. However, abatements are a good policy to encourage the development of renewables.

As per the discussion of extending abatements beyond current statute, hydropower is already a fairly competitive market. It is not completely environmentally benign nor even an appropriate investment, given the dwindling water resources in the West. The Committee should take a second look at what are the appropriate technologies to incentivize.

We definitely support increasing the RPS and the cap to 70 MW. If we raise the cap, we must tighten the environmental review process so it is required in all

counties—not just Clark and Washoe—and putting the Department of Wildlife into the provisions of NRS 704.875.

CHRISTY L. MORRIS (Vice President, Land and Permitting, Ram Power, Inc.):
I am a geothermal developer who served as Vice Chair of RETAAC phase 1 and was coordinator of the environment and lands subgroup of RETAAC phase 2. We support S.B. 395 because there are many things in it that will help renewables development. Anything to help Nevada power transmission is desperately needed. Maps from RETAAC reveal there is a lot of bare land with a lot of renewables resources that could come onto the grid if we had an enhanced transmission structure. How the 70-MW cap might work can be found in California, where developers tend to build geothermal facilities at 49.9 MW because the cap is 50 MW. Having a higher cap may encourage developers to shoot for a higher capacity.

CHAIR SCHNEIDER:
This bill obviously needs some work so I will meet with staff to work on it and then probably form a subcommittee. Seeing no other business before the Senate Committee on Energy, Infrastructure and Transportation, I adjourn this meeting at 11:40 a.m.

RESPECTFULLY SUBMITTED:

Patricia Devereux,
Committee Secretary

APPROVED BY:

Senator Michael A. Schneider, Chair

DATE: