MINUTES OF THE
SENATE COMMITTEE ON ENERGY, INFRASTRUCTURE AND TRANSPORTATION

Seventy-fifth Session
February 27, 2009

The Senate Committee on Energy, Infrastructure and Transportation was called to order by Chair Michael A. Schneider at 8:08 a.m. on Friday, February 27, 2009, 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 Michael A. Schneider, Chair
Senator Maggie Carlton, Vice Chair
Senator Shirley A. Breeden
Senator Randolph Townsend
Senator Barbara K. Cegavske

COMMITTEE MEMBERS ABSENT:

Senator John J. Lee (Excused)
Senator Dennis Nolan (Excused)

STAFF MEMBERS PRESENT:

Scott Young, Committee Policy Analyst
Patricia Devereux, Committee Secretary

OTHERS PRESENT:

Crystal Jackson, Commission Secretary, Public Utilities Commission of Nevada
Romaine Gilliland, Administrator, Division of Welfare and Supportive Services, Department of Health and Human Services
Dr. Hilary Lopez, Chief of Federal Programs, Housing Division, Department of Business and Industry
Craig Davis, Weatherization Programs Manager, Housing Division, Department of Business and Industry

Judy Stokey, Director, Governmental Affairs, NV Energy Inc.
Debra Gallo, Director, Government and State Regulatory Affairs, Southwest Gas Corporation
Gregory A. Kern, PE/CEM, Director, Customer Renewable Generation and Energy Efficiency, NV Energy Inc.
Jason Geddes, Ph.D., Environmental Services Administration, Department of Public Works, City of Reno
Anne-Marie Cuneo, Manager, Resource and Market Analysis Division, Public Utilities Commission of Nevada
Jo Ann P. Kelly, Chairman, Public Utilities Commission of Nevada
Robert Buntjer, Assistant Director, Electrical Joint Apprenticeship Training Committee of Southern Nevada, International Brotherhood of Electrical Workers
Bo Balzar, Project Manager, Bombard Renewable Energy, Bombard Electric, LLC
Stephen Wiel, Nevada Representative, Southwest Energy Efficiency Project
Monica Brett, Nevada Program Associate, Southwest Energy Efficiency Project
Chad Dickason
John Sturdevant
Reid Hamilton, Hamilton Homes
Shawn O'Meara, Owner, Aspen Electric LLC
Ron Clark

CHAIR SCHNEIDER:
I will open this hearing with a presentation from the Public Utilities Commission of Nevada (PUCN).

CRYSTAL JACKSON (Commission Secretary, Public Utilities Commission of Nevada):
Nevada Revised Statute (NRS) 702.160 and NRS 702.170 authorize the PUCN to collect the Universal Energy Charge (UEC). Remitted payments are processed immediately and deposited directly into budget account 101-6031, an internal budget account of the Office of the State Controller and a pass-through account for the Division of Welfare and Supportive Services. Nevada Revised Statute 353.250 requires agencies to deposit money no later than Thursday of each week. If the UEC accumulation is more than $10,000, it must be deposited by the next business day.

Effective July 1, 2008, S.B. No. 517 of the 74th Session requires that payments of $10,000-plus be submitted electronically. If those payments are

received before 2 p.m., they settle the next business day; if received after 2 p.m., they settle within two business days.

My handout delineates the flow of UEC collections for fiscal year (FY) 2008 and 2009 (Exhibit C). Prepayments start coming in on each June 15. As of payments received by September 30, 2008, we had $194,000. The PUCN is authorized by statute to retain up to 3 percent for administrative costs, but we will not take that full amount. Our estimated costs are $53,000 for both FY 2008 and FY 2009. That is less than 0.5 percent retained by the PUCN. It is 0.43 percent for FY 2008 and 0.42 percent for FY 2009. Those savings are passed directly to program recipients. We take that 3 percent, along with the first-quarter prepayments, until we reach our actual costs, after which the entire collection is sent to the Welfare budget account 101-6031.

SENATOR TOWNSEND:
On my last NV Energy bill, the UEC charge was just 53 cents. During the 74th Session, this Committee argued whether the charge should be applied. When you take into account what the qualified recipients truly need and that your agency is taking less than its allotted 3 percent, this program is to be commended. This program has been problematic for this Committee because we could not get the money to the people who needed it as quickly as we would like.

ROMAINE GILLILAND (Administrator, Division of Welfare and Supportive Services, Department of Health and Human Services):
We have provided a handout on our presentation (Exhibit D). The first page demonstrates the flow of funds from the PUCN into our budget account number 101-6031. It is an interest-bearing account, and funds remain in it until they are required, based on expenditures, to go to budget account 101-4862 for energy assistance within the Welfare Division or budget account 101-4865 for the U.S. Department of Energy (DOE) weatherization program.

The second chart, Exhibit D, indicates the balance in the budget accounts at the end of each quarter and how many UEC funds are transferred into budget accounts 101-4862 and 101-4865 and to the Housing Division. At the end of February 2009, we had $5.6 million in the budget account, $4.9 million of which is allocated to the UEC and $700,000 for weatherization.

The next chart shows UEC reserves and expenditures and Low Income Home Energy Assistance Program (LIHEAP) expenditures at the end of each State fiscal year. To balance the flow of funds for the projected high demand in State FY 2009, we have reduced the flow of UEC funds to utilize available federal LIHEAP funds that expire on September 30, 2009.

The Governor's recommended budget is based on an average benefit of $559, which would result in 4,346 unserved customers in 2010 and 10,710 unserved customers in 2011. With the $12 million the State received from the federal government and managing the expenditures of UEC and LIHEAP, we predict, if the average benefit remains at $559, we will have no unserved clients in 2010 and 2,561 unserved clients in 2011. Unfortunately, the average benefit is rising, and is now $694; if that continues, we will be able to meet the demand in 2010, but fall substantially short in 2011.

This fourth chart, Exhibit D, shows the Energy Assistance Program benefits based on household size. The Welfare Division uses a chart with income as a percentage of poverty level at various levels, depending on the program. The chart shows the income level based on family size for 150 percent of poverty level in the energy-assistance category.

CHAIR SCHNEIDER:
The Committee has a problem with the reserves going forward, although you have projected they will be gone. We pulled the 72nd Session hearing statements. On February 19, 2003, the Senate Committee on Commerce and Labor said the Welfare Division had had a great increase in caseloads despite a lack of staff and funding, and this may have caused slower implementation and a backlog of UEC applications. The AARP representative Thelma Clark told the Commerce committee if the Welfare Division was not going to use all of its money nor have the labor to disperse it, the money should go to the Housing Division. In February 2005, Nancy K. Ford, Administrator, Welfare Division, told the Commerce Committee that FY 2003 was the first year of the UEC program. Due to start-up costs for three to five years, money would have to be carried over until the client base could be adequately served. She projected the reserves would be gone by 2006. Mr. Willden, Director, Department of Health and Human Services, indicated the Welfare Division has a large number of cases that need to be processed quickly and positions to be filled. Former Senator Sandra J. Tiffany expressed concern on June 1, 2005, about the $15 million in the Welfare Division's reserves and asked that it be spent. Senator Townsend

said administration of the UEC program should be accountable to the Interim Finance Committee and the PUCN.

In 2007, the Welfare Division had $7 million in reserves and $6 million in 2006. Why do reserves continue? I know that Marta Stagliano, Acting Program Manager of the Energy Assistance Program, testified in Assemblyman Marcus Conklin's Assembly Committee on Commerce and Labor that the Welfare Division's stance on the issue is neutral. She added the agency is spending in excess of its revenue and predicted that in early 2009, reserves were expected to be expended. This Committee keeps hearing the same testimony that the money will be gone, and wonders why, if you cannot process it out, you do not give it to the Housing Division and let it do a better job?

Last week you said you were going to zero-out the money, which you had promised in 2003. If you had transferred some reserves to Housing, they could have weatherized 250 to 300 homes so needy people's power bills would decrease. Will the reserves be zeroed-out?

MR. GILLILAND:
Yes, we have added staff to our program to do this. We have reduced the application wait-time to three to four weeks. The reserve would have been lower at the end of 2009 had we not had an influx of additional LIHEAP funds. Our objective is to make sure we have, in balancing those funds, the ability to service clients over the next two years. With proper management of the funds, the reserve will drop to zero. I am more concerned about how we will manage the 2011 applications for which we will not have funds.

CHAIR SCHNEIDER:
Our intent in amending NRS 702 to require 30 percent of the Welfare Division's excess to go to the Housing Division was to let the Welfare Division keep the money if it could spend it on weatherizing homes. I have a problem with that 30 percent if the money keeps sitting there.

In 2008, the Welfare Division's revenue, less expenditures, was $3 million. If 30 percent had not been given to the Housing Division, 250 to 300 more homes could have been weatherized. If you end up with another $3 million to $5 million next year, I would request we check with the PUCN on this every 6 months.

MR. GILLILAND:
I could provide information periodically as to how the reserve is being spent and about the progress of the waiting list. We are projecting the reserve to be about $3.7 million by June 30, 2009, and $1 million by June 30, 2010.

DR. HILARY LOPEZ (Chief of Federal Programs, Housing Division, Department of Business and Industry):
We have given you a packet of information on our 2008 funding, highlighting our LIHEAP, DOE and Fund for Energy Assistance and Conservation (FEAC) dollars (Exhibit E). The latter form about 75 percent of the program's budget. Also detailed are our 2002-2008 FEAC funding, carryover and reserve. We now have a reserve of $485,000 for State FY 2009, which leaves us with a balance of $624,000.

The Housing Division's policy is to maintain three months' operating expenses in the reserve account to offset unforeseen shortages in our variable federal funding. It also allows us to reimburse our subgrantees so they can pay their contractors. We receive our revenue on a reimbursement basis from the Welfare Division, and 46 percent of our revenue arrives 7 weeks after the close of our program.

Out of a total of 1,360 units weatherized, 1,204 were funded by FEAC. Of those, 322 units were single-family homes, 372 were mobile homes, 70 were duplexes and fourplexes and 440 were multifamily. The bulk of our weatherization funding is for elderly or disabled households. With single-family weatherized homes, we are achieving an average annual savings of 27 percent in kilowatt-hours (kWh) and 34 percent in therms savings, compared to a non-weatherized home; for a multifamily unit, it is 11-percent kWh savings and 7 percent therms savings. The average investment in weatherization is $2,000 to $2,500 per unit.

We have four nonprofit subgrantees in northern and southern Nevada. In 2009, we estimate we will receive $3,161,659 through FEAC. We project we will use $3.7 million in FEAC seed funding to weatherize 897 units. Last week, the Committee asked about the transfer of FEAC seed funds. They are transferred to us quarterly from the Welfare Division, via the PUCN.
Page 6, Exhibit E, details the $20 million to $38 million we could get for weatherization from the federal stimulus package for use through September 30, 2010. In the eligibility guidelines, the poverty level has been increased from

150 percent to 200 percent of the federal poverty level. We have collected data by county of State households with incomes at or below the 200-percent poverty threshold, for a statewide total of 377,221 households.

Page 7 outlines actions we have begun in preparation of the stimulus package dollars. They include gathering eligibility data by tenure, location and county; better understanding of how well subgrantees can absorb the funds; talking to the Department of Employment, Training and Rehabilitation about coordination with Senator Steven Horsford's Senate Bill (S.B.) 152 and asking for proposals from service providers.

SENATE BILL 152: Enacts the Green Jobs Initiative. (BDR 58-172)

SENATOR TOWNSEND:
Will there be strings attached to weatherization money from the stimulus package that will interfere with S.B. 152, relative to the nonprofit collaboratives? If not, will this be another layer on top of what you do with existing subgrantees? How will they work together?

DR. LOPEZ:
We are waiting for grant guidance from DOE that outlines program requirements under the stimulus package. Until then, we do not know what potential conflicts or challenges there may be. We have started working with the Department of Employment, Training and Rehabilitation, our nonprofits and Senator Horsford's office to better understand S.B. 152's potential for collaboration and how our current nonprofits will fit into the new program.

SENATOR TOWNSEND:
The purpose of my question was, since we have an existing program, will you be rolled into this proposal, or the proposal rolled into you?

DR. LOPEZ:
We are working through some of those issues in terms of reviewing S.B. 152 and working with Senator Horsford's staff. We will submit for consideration language to clarify how our base program and the new one will work together.

SENATOR TOWNSEND:
Your subgrantees have met some standard in order to qualify. Senate Bill 152 talks about nonprofit cooperatives providing weatherization. Do you anticipate

that those nonprofits would become subgrantees with funding through your current program, or do you see the stimulus money only going to the new program?

DR. LOPEZ:
That is an item we are discussing with our nonprofits: how they fit into the nonprofit collaborative definition in S.B. 152. They have not had ample time to review the bill to understand what changes they might need to make internally. However, we feel they would be able to continue to participate.

SENATOR TOWNSEND:
If the kWh savings are 27 percent, that gives you 4 years to recoup your costs. Let the media and power companies know that is where the money is going so it can be publicized. People need to know the extra charge on their power bill is being used effectively. Do you have quality standards for the weatherization workers?

DR. LOPEZ:
We do extensive training of our subgrantees, their contractors and subcontractors. We randomly inspect the units on the back end to ensure the work was done to standard. New contractors are subject to more frequent inspections.

CRAIG DAVIS (Weatherization Programs Manager, Housing Division, Department of Business and Industry):
We have a three-tiered approach to training subgrantees and contractors. After a six-week online training program, people can apply for Building Performance Institute certification.

We have ongoing monitoring of contractors and the inspection pass/fail ratio of subgrantees. The goal nationwide is to standardize the inspection process and standards. The measures we install must be the most applicable or generate the greatest savings-to-investment ratio—one or greater—by using an energy-audit software program approved by the DOE.

SENATOR TOWNSEND:
Do the auditors actually do the weatherization, or are they separate from the process?

MR. DAVIS:
Generally, the audit or assessment is done by the subgrantees. In rural areas, it is not cost-effective for subgrantee crews to travel far so often the assessment is done by the contractor. He submits the work order for review by the subgrantee, who assures the work is being done according to our priority list. The list considers the applicant's climate zone, housing type and heating-fuel type and cost.

The submitted costs must agree with the negotiated, installed figure so there is no question as to the reimbursement. We put those amounts into our database to ascertain the savings-to-investment ratio. There are checks and balances throughout the entire contracting process. In our Las Vegas office, we have a technical-assistance trainer who travels throughout the State working with subgrantees and contractors.

SENATOR TOWNSEND:
Talk to Senator Schneider about comparing what is currently being done to what is proposed in S.B. 152 and the stimulus package. That way, we will avoid duplication and be able to fix what is not working. We will only receive the stimulus money one time; it is not an ongoing flow of funds to be built into the base budget. We need to get the public's money to the public that needs it in the most efficient manner and avoid creating new things we cannot pursue.

SENATOR CARLTON:
I want to understand your definition of "households." Are these households owner-occupied, single-family homes, or can they be rentals?

DR. LOPEZ:
They can be both. Table 2 shows that out of the 322 single-family units weatherized, 260 were owner-occupied. Multifamily units are rentals.

SENATOR CARLTON:
If occupants of a single-family home meet the income guidelines, can the weatherized unit be a rental property? Is it based on the occupant of the single-family home at that moment, not on who actually owns it?

DR. LOPEZ:
Correct.

SENATOR CARLTON:
How did we reach that decision? It seems contradictory that a person could own five homes, have a very nice income and still get the benefit. I understand the best kWh in the world is that which we do not have to generate, but we have people who do not meet the guidelines getting a benefit that ultimately should go to who pays the electric bill.

DR. LOPEZ:
We have requirements for unit owners to ensure rents are not increased in response to installing the measures. This ensures the tenant-occupant receives the benefit on a longer-term basis.

MR. DAVIS:
In probably 99 percent of the cases, the tenant pays the utility bill. Often, our measures are designed to assist the tenant, but we provide a certain level of other assistance. We cannot make capital improvements, replace a heating, ventilation and air-conditioning system nor install attic insulation. We will invest in tenant-owned refrigerators if they meet a certain kWh usage versus the ENERGY STAR unit with which we replace it.

Benefits provided to the rental sector are not on par with those for owner-occupied, single-family units. Neither DOE nor the NRS allows us to discriminate as far as the investment in owner- versus renter-occupied units. In most cases, the housing stock in which recipients live are not reoccupied by someone with a higher income level.

SENATOR CARLTON:
The people in the unit benefit when their electric bill goes down and they do not have to apply for the energy assistance on the other side. Ultimately, if we really weatherize the unit, everyone will benefit in the long term.

JUDY STOKEY (Director, Governmental Affairs, Government Affairs, NV Energy Inc.):
We will discuss our energy programs, besides the UEC. Our handout details the assistance programs we developed to help customers better manage, not just pay, their utility bills (Exhibit F). We want them to understand what happens when they turn up the heater or air-conditioning and be responsible for changing their behavior.

Our equal-payment plan allows customers to better manage their budgets by averaging out bills over 12 months. We make payment arrangements on past-due balances. We have an interactive Website into which customers can enter their addresses and inventory the home's appliances and temperature systems to save on bills.

Our select-a-due-date program benefits seniors who have money coming in at certain times of the month. We have Project Relief through Energy Assistance to Prevent Customer Hardships (REACH) in southern Nevada and the Special Assistance Fund For Energy (SAFE) Project in northern Nevada. At our energy expos, agencies and organizations present plans to assist people with a variety of needs.

Project REACH targets low-income customers who are over age 62 or medically fragile and those in the National Guard reserves. In 2009, we received $500,000 from the NV Energy Foundation, administered through United Way. The maximum bill-payment benefit is $350 per person annually. The SAFE Project customers must be near poverty level and not necessarily qualify for State or federal assistance or face a family or medical emergency. This year's SAFE budget is $300,000 from the NV Energy Foundation and other contributors.

DEBRA GALLO (Director, Government and State Regulatory Affairs, Southwest Gas Corporation):
We also do payment plans and equal-payment plans for low-income customers. Bill inserts offer energy-saving tips. We work closely with the Welfare and Housing Divisions on the Low-Income Advisory Board. We receive, collect and remit UEC funds from and to our customers. Our Energy Share Program, administered statewide by the Salvation Army, supplements the UEC. We also receive LIHEAP funds through the Welfare Division. In southern Nevada, our Seniors Helping Seniors Weatherization Program partners with the Southern Nevada Water Authority and the Las Vegas Metropolitan Police Department. Seniors perform small weatherization and security projects in peers' homes. We do energy education and safety carnivals in schools. We also do community outreach to mobile home park homeowners' associations and other events.

CHAIR SCHNEIDER:
How is the gas-powered air-conditioning unit plan progressing?

MS. GALLO:
It was included in the International Homebuilders' Show's model home in Las Vegas. It uses natural gas more efficiently to power a unit's heating component.

CHAIR SCHNEIDER:
Is it not available to the public yet and is it from Australia?

MS. GALLO:
It is made by a Toyota Motor Corporation subsidiary which plans to have the units available some time in 2009.

GREGORY A. KERN, PE/CEM (Director, Customer Renewable Generation and Energy Efficiency, NV Energy Inc.):
I will talk about the customer-owned, renewable-energy programs outlined in my handout (Exhibit G), as mandated by NRS 701B. Our "SolarGenerations Program" was made permanent in the 74th Session, and the new wind- and water-power programs are taking off. All three programs provide incentives to customers to develop renewable-power projects.

Our 2008-2009 budget for SolarGenerations was $17 million. The federal investment tax credit stopped all solar installations in Nevada in the final quarter of 2008, but they all started coming through this January. Now we are seeing the tax credit may have a positive influence.

The graph on page 3, Exhibit G, shows the history of SolarGenerations applications in Nevada: the number of applicants, completed projects and rebates issued, and total kWs (kilowatts) rebated. The numbers are growing because an individual has 12 months after a program year to finish the installation, and a school or public building has 30 months. The totals for 2008 and 2009 look small, but there are still 30 months after June 2009 to add to the final total.

Our wind- and water-power programs have a $7 million budget in 2008-2009, and there are 15 kW of wind turbines in operation, with many more contemplated. The water-power demonstration has not been built yet, as it is more complex. We have seven water-power applicants working with us and engineering firms.

These programs show up on customers' bills as the Renewable Energy Program Rate (REPR) line item. The average charge in southern Nevada is 89 cents and $1.65 in northern Nevada. The greater customer base in the south makes the charge lower. We set the charge last year to the full amount the programs could possibly spend, but since that was significantly more than we needed to recover costs, the charge will decrease.

There are many small-business and residential customers stuck on the application waiting list. People sign up at the beginning of the year and hang on to a kW capacity for the entire year. When they relinquish that capacity, there is not enough for the next applicant to do his installation. To release more capacity, we need to give the Nevada Renewable Energy and Energy Conservation Task Force the authority to remove an applicant from the participant pool if he does not meet his installation milestones.

The Solar Thermal Program uses the sun to directly heat water or air. We will have a program ready for the PUCN's approval by June 2009. Clark and Pershing Counties will participate in the School Pilot Program, with nine potential school sites retrofitted with renewable-energy systems.

SENATOR TOWNSEND:
Is there a reason why the next school built in southern Nevada could not have the highest levels of passive- and active-energy design efficiencies, even if it is initially more expensive? We could use our resources and job talent as a gemstone for economic developers and tourists to see. It would also benefit our schoolchildren and ratepayers.

MR. KERN:
We work extensively with Clark County School District's Sure Bet Program on new construction and retrofits. District Facilities Associate Superintendent Paul Gerner has done a lot to advance that.

SENATOR TOWNSEND:
We should ask Mr. Gerner to testify before this Committee. Budgets are tight, but there is no reason why southern Nevada could not build a model school to highlight renewable energy—public projects get noticed. Maybe the school district could do it as a joint venture with manufacturers and vendors. NV Energy worked with Pardee Homes to build a zero-energy model

home with a water meter in the kitchen, nine energy-sucking flat-panel televisions, maximum-efficiency appliances and passive-solar design and tiles.

CHAIR SCHNEIDER:
On a building the size of a school, the Clark County Water Reclamation District will grant a $25,000 rebate on a ground-source heat pump and the federal government will grant a rebate for 30 percent of the unit's cost. This makes installations more economical and efficient. Is the REPR portion required to be on electric bills?

MR. KERN:
About six months ago in a stipulation on a deferred-energy docket, NV Energy and the Bureau of Consumer Protection agreed to put the REPR charge on the bill, which the PUCN so ordered.

CHAIR SCHNEIDER:
I like the idea about the unused kW capacity and removing people from the participation list unless they meet certain thresholds. Could you not carry that unused capacity over from year to year, instead of it ending at the close of the year? You could then add more participants to the list after others dropped out.

MR. KERN:
The Task Force has petitioned the PUCN for that authority, and there will be a discussion of its legality. The Legislature could also make that happen.

SENATOR CEGAVSKE:
I read a letter (Exhibit H) from Gary Handelin, P.E., of Solar Independence in Carson City. He had some questions about the application process the Committee could consider.

CHAIR SCHNEIDER:
We will respond to the letter.

JASON GEDDES, Ph.D. (Environmental Services Administration, Department of Public Works):
I represent the Nevada Renewable Energy and Energy Conservation Task Force and the City of Reno. The Task Force has taken official positions on two ways to improve the renewable-energy program. Removal of applicants from the waiting list by the Task Force could be an easy NRS fix. You have the language

to do that in the demonstration programs for wind- and hydropower. For the solar program, the removal must be done by the PUCN. If this Committee deems it, we could work with the PUCN to craft those regulations' timeline criteria for applicants and contractors.

The State needs to appoint a deputy attorney general for the Task Force. The State created our Task Force with members appointed by the Legislature, the Governor's Office and representative organizations.

Lack of a deputy attorney general makes us very tentative because we do not interpret the law or have the means to monitor individuals in the application process. A deputy attorney general could help the Task Force with this, especially if we remove people from the program participation list.

SENATOR CARLTON:
All of our boards and commissions can apply for a deputy attorney general. Why cannot a State task force do so to give you an opinion on State business?

DR. GEDDES:
We have not had a deputy attorney general assigned to us, despite our request. We do have a member of the Bureau of Consumer Protection, but he cannot give us the legal advice we need. We have asked for opinions, but do not have a deputy attorney general who regularly sits at our meetings.

SENATOR CARLTON:
They have been requested but not assigned.

DR. GEDDES:
Yes, and I do not know why.

SENATOR CARLTON:
We need to investigate that to make sure the Task Force has all the resources it needs. Task forces are an integral part of making sure we do not try to do more than what we are supposed to do.

CHAIR SCHNEIDER:
Are you not assigned a deputy attorney general because of your low funding level?

DR. GEDDES:
Yes, we are not funded at all. As per the 73rd Session, we were receiving $125,000 per year through the PUCN reserves, but in the 74th Session, that was removed.

The program is wildly successful, especially the solar component. I personally recommend raising the cap on the private, small-commercial side from 1 megawatt (MW) to 5 MW or removing the cap completely. We only keep the application pool open for one month a year. This year, we received 5.6 MW for applicants who applied in the first 38 to 48 minutes of the program's opening before we ran out of capacity. Applicants must have done their homework on the program and accept the odds that getting in within the first hour are low. If there were more capacity and people could apply year-round, we could easily go through that 5 MW of installations, if not much more.

The Task Force often gets requests from home builders seeking to install solar panels in subdivisions. We simply cannot accommodate them because they would immediately consume too much of our capacity.

CHAIR SCHNEIDER:
We issued 35 MW of capacity, and you have used 2 MW. There are 33 MW that do not get used.

DR. GEDDES:
Part of that are many years of MW accumulation from when the program evolved from a demonstration program into a full-incentive program. Our total is 3.76 MW per year, divided by residential, commercial and public buildings, and schools. Only 1 MW is for private and commercial installations, which is where we are seeing all of the demand with little capacity being used up. Public buildings and schools are at their capacity levels.

CHAIR SCHNEIDER:
What if we just went back and captured the other 33 MW and increased the allotment? Then you could have a year-round program in which the public could more easily participate.

DR. GEDDES:
The Task Force has asked the PUCN if we could take all of the capacity authorized but not actually allocated by the Legislature and the PUCN and bring

it forward to clear out the backlog and make the program big enough. The Task Force has a preconference hearing on the issue March 4.

CHAIR SCHNEIDER:
Is it looking positive?

DR. GEDDES:
You would have to ask the PUCN about that. There are many benefits to redistributing the capacity. We see the REPR charge on our power bills, but not the line-item cost for bigger programs. Funding for them is built into the overall rates. On the private-sector side, the PUCN has set a very good series of rates that decline every year to match demand.

For the 2009 program, applicants get $2.10 per watt to install. The average cost to install a system is $10 per watt. We leverage the NV Energy rebate of $2.10, and private citizens can get a 30-percent federal tax credit that covers half the cost of their systems. So, we are getting solar power into the grid with the private sector picking up 80 percent of the cost. If we remove or greatly raise the capacity cap or roll forward the previous year's MW, we have peak energy and peak solar without having to wait for the siting and permitting of large, expensive transmission grids to bring in very large projects. Instead, we can do installations on every home and business and utilize what is already out there for substations' grid generation. These systems upgrade everyone's meters to allow customers to better regulate power usage. Private solar installers in the State are eager to put in as many projects as they can, as are large housing developments and private businesses. But they all have to wait too long for the capacity.

Although the 74th Session ruled cities, counties and homeowners' associations cannot prohibitively restrict wind turbines, no compliance timeline was established, so enactment of one has been very slow. Only a handful of jurisdictions have complied with the restriction-prohibition law and established standards.

My handout includes photographs of new types of available turbines (Exhibit I, original is on file in the Research Library). Many people think wind turbines are 90-foot towers with guy wires, but some are specifically built for an urban environment. They are quieter than an air conditioner, are quite artistic-looking, can be built right into the roof structure and can have vertical axes. The article

from *Distributed Energy* magazine is about designing aesthetically pleasing turbines.

We can allow jurisdictions to set turbine height restrictions, but wind installations cannot be banned outright or require expensive special-use permits. We need to get the rules and regulations enacted in NRS 111 and NRS 278 out to the jurisdictions to make sure they are adopting the codes and complying with the law.

CHAIR SCHNEIDER:
Can you send a copy of this report to Barbara Holland, who writes a homeowners' association column for the *Las Vegas Review-Journal*? She has criticized wind turbines and solar installations, and needs to know what renewable energy really entails.

DR. GEDDES:
The RenewableGenerations rebate program is preparing two workshops on wind power in southern and northern Nevada to educate people about the program and new technologies that can be integrated into an urban environment.

SENATOR TOWNSEND:
Wind power has always been on the edge for many reasons, but technology has evolved. When T. Boone Pickens announced his plan for national energy independence using wind and natural gas for transportation, he bought a lot of television time and earned a great deal of media attention. In the Midwest, they use a lot of large turbines, and people believed the 300-foot-diameter turbines Boone depicted would be in their neighbor's back yard. These were commercial facilities of at least 1 MW. Mr. Pickens' effort is important, but it created misunderstandings. When you use the term "solar," everyone conjures up something different, when in fact it is a broad-based, evolutionary market. The same is true for wind, as illustrated in your handout. Understanding will be the most important part of renewable energy.

DR. GEDDES:
The hydro program is very new and limited. We have had trouble finding good applicants to evaluate. We could either remove the agricultural restriction or add a second category that is not related to agriculture. Southern Nevada Water Authority has installed drop-hydro generators in the return lines to Lake Mead, and can recover some of the power from the water the lines return. If there

were urban, industrial or mining categories, we could increase the interest in drop-hydro generators. We still do not have a geothermal option, but the Task Force could work with the Committee on that.

From a public-benefit perspective, the City of Reno just installed a 50-kW solar system at its maintenance yard. The City has secured $1.2 million in NV Energy rebates for solar and wind programs. It is matching that with its portion of DOE energy-efficiency community block grants through the stimulus package and clean-and-renewable energy bonds. With that money, Reno is maximizing its installations then applying the resulting return rates to its other economic issues.

The City is also using its renewable installations to educate the public. Reno has placed nine wind-turbine designs on City properties so residents can see and hear what they are like. Differing designs will be monitored for how much energy is generated when they are near one another.

ANNE-MARIE CUNEO (Manager, Resource and Market Analysis Division, Public Utilities Commission of Nevada):
The difference between the information presented by NV Energy and that in this handout (Exhibit J) is NV Energy has information including January 2009, while my presentation uses information submitted before that.

The Waterpower Energy Systems Demonstration Program, NRS 701B.820, is effective through January 30, 2011. After workshops and hearings, the PUCN set the rebate levels through 2010 at $2.50 per watt, or 60 percent of the installed cost, whichever is less. There were 6 applications that ranged from 3 kW to 650 kW, and none are completed.

The Wind Energy Demonstration Program rebate for schools and other public properties is $3 per watt, or 60 percent of the installed cost, whichever is less, for the first 10 kW and $2 per watt; or 30 percent of the installed cost above 10 kW if that does not exceed 60 percent of the cost. You get economies of scale as the project gets larger. The residential, small-business and agricultural rebate is $2.50 per watt, or 60 percent of the installed cost, whichever is less, for the first 10 kW; and $1.50 per watt, or 30 percent of the installed cost above 10 kW if that does not exceed 60 percent of the cost. There were 91 applications in the different categories for 620 kW total capacity.

The permanent Solar Energy Systems Incentives Program's rebates were set in the same manner as the water program. Factors were the cost of the system, federal incentives and the expectation that the cost of solar systems will decline significantly. Rebates for schools and public properties start at $5 per installed watt. Rebates for residences and small businesses begin at $3 per watt.

The average cost levied on residential customers for the programs is $20 per year. To determine the net costs and benefits of our solar program, we took into account that a value is received from solar panels because customers use less energy. The renewable-energy credits are attributed to the compliance of the utility company, which also creates value. The value over 20 years of the energy and portfolio credits is $4,810,000. However, we must take into account that base-tariff general rates costs are paid by other customers. When a customer installs solar, he avoids his full retail kWh rate, which must be absorbed by other customers. The four-year net cost of SolarGenerations was $2.8 million.

We also recommend giving the Task Force and the PUCN authority to review the programs quarterly and remove applicants prior to 12 months after acceptance. Currently, the PUCN can only remove a participant after 12 months. The Task Force could implement a "financial-fitness test" for applicants to make sure—rebates aside—they can come up with the rest of the costs. This may be why applicants fail to follow through.

SENATOR CARLTON:
Could you explain what is included in the base-tariff general rate?

MS. CUNEO:
Electric bills have two major components: energy and how that energy is created and delivered. The base-tariff energy rate only covers the fuel and purchase-power costs by the utility, and has no rate of return. The costs of delivering and creating energy include power plant construction and maintenance costs, stringing transmission lines, salaries and pensions, buying trucks—the fixed costs of doing business outside of the electricity cost. Those costs must be paid, regardless of how much electricity a customer uses. When a customer installs any type of net-metering renewable generation, he avoids paying both portions of the bill. So other customers will have to pick up the fixed charges when we set rates in the next case. The rate increase will total $370,000 to cover the avoided fixed costs.

CHAIR SCHNEIDER:
The amount rebated is $7,240,000 and the net cost is $2.8 million. What signifies that on the bill?

MS. CUNEO:
The component on the bill is the $7.2 million.

CHAIR SCHNEIDER:
That is not the real cost, is it? The cost is $2.8 million.

MS. CUNEO:
Correct. However, we set rates on a future basis; these charts are looking backward at the value of the energy and portfolio credits, which vary. There is a resulting discrepancy. The rate on the bill reflects the rebates, and over the 20-year life of a power plant, benefits will accrue. The $7.2 million reflects the up-front costs, and the $2.8 million reflects what we expect to receive over 20 years.

CHAIR SCHNEIDER:
You are telling the public they are paying $7.2 million when they will really pay $2.8 million. It seems like deceptive accounting and billing.

JO ANN P. KELLY (Chairman, Public Utilities Commission of Nevada):
I look at it as the difference between the way an accountant would see it and the way an economist would see it. We expect the estimated value of the energy impacts will translate to actual costs in the future, and we will see that come through in the next general-rate case.

MS. CUNEO:
It would come through the deferred-energy filings.

MS. KELLY:
It would go through the energy part, not the base-tariff general rate. Those values and benefits will be translated into costs in future billing. They are just not hard costs at the time we are doing this rate case.

CHAIR SCHNEIDER:
No wonder the rate cases take so long, cost so much and are so complicated. You have Wall Street accountants working on them. It looks like smoke and mirrors, with nothing straightforward.

MS. KELLY:
I am a former accountant, although I never worked in energy accounting. As for the elements of the rate-case revenue requirement, there are costs translated from billings plus other elements when you project the rate to go forward by using an estimated value analysis.

MS. CUNEO:
The $7,240,000 is the up-front cost ratepayers are paying for these incentive programs. The cost in their bills is correct as of the date the bills are paid. The estimated value over the life of the generating units, the solar panels, is $4,810,000. So when customers pay $7,240,000 immediately over 20 years, we expect to get enough energy and portfolio credits to equate $4,810,000.

ROBERT BUNTJER (Assistant Director, Electrical Joint Apprenticeship Training Committee of Southern Nevada, International Brotherhood of Electrical Workers:
I will make some recommendations concerning NRS 701B (Exhibit K). We train people to install solar projects and wind turbines in southern Nevada. We are commissioning a small, residential wind turbine on April 14, 2009, to be installed at our training center. It will be a great example of what can be done. We are training a workforce qualified and certified in the renewable-energy field with that basic knowledge, plus the knowledge of being an electrician. I have a 5-kW solar system on my house installed by a “C-2” contractor. This program has grown to one that can contribute to the industry and the public. I would like to see the first-come, first-served rebate application approach continue, but an open, rolling, online application should be implemented. This would allow individuals to apply outside of the 30- to 40-minute limit. This would apply to residential, public building and school projects. We need to continue the system in which contracts for schools and public buildings are subject to NRS regulations and uncompromised. The integrity of the electrical industry is very important, and recently we have seen the Nevada solar industry grow and regain integrity in both projects and developing a trained, qualified workforce. I do not want to see a regression to anything less than that.

We need to encourage and develop an enhanced, qualified-contractors' standard and a list of them for customers to contact. Currently, we require a Nevada C-2 electrical contractors' license to install solar systems. This encourages and reassures the public that its safety is being taken care with a C-2 contractor's knowledge and State qualifications. A Nevada Occupational Safety and Health Administration (OSHA) photovoltaic (PV) license is required to mount panels on a roof. Licensed C-2 contractors have the knowledge assessment and ability to design, configure and install solar systems with maximum efficiency.

We must maintain all the standards for contractors because State contractor laws protect the public. Photovoltaic systems are highly technical and should be installed by companies with the correct licenses, training certification, and insurance and bonding capacity. There are many outlets for training that are not paid for by utility ratepayers.

CHAIR SCHNEIDER:
What is the address of your training center?

MR. BUNTJER:
It is 620 Leigon Way, Las Vegas. The school has a 30-kW solar system that provides our lights. Our turbine system will be in place by the end of March 2009.

BO BALZAR (Project Manager, Bombard Renewable Energy, Bombard Electric, L.L.C.):
We submitted applications for 350 customers with a total of 1 MW capacity to the SolarGenerations Program. My handout lists my recommendations to improve the program (Exhibit L).

I also support a rolling, online application process. The program gets a lot of applications during the one-month open period, but few constructive projects have resulted. An ongoing application process would allow contractors to qualify more customers and complete financial-means and site tests before even submitting an application. Because of the nature of the current program, there is a 12- to 20-month waiting period, which is the main reason applicants drop out.

Increasing the capacity caps to be more on par with current market conditions would help projects get developed. Each year, the program's capacity is maxed out very early in the application process.

I agree we should develop a qualified-contractors list. Solar panels have a highly sophisticated electrical system with 600 volts of direct current (DC), and working on that is very dangerous. Contractors should have a C-2 classification and Nevada OSHA PV-installer's license. Contractors should also attend SolarGenerations training, including how to guide customers through the application process.

CHAIR SCHNEIDER:
Your suggestions are included in a bill I have proposed.

STEPHEN WIEL (Nevada Representative, Southwest Energy Efficiency Project):
We will provide an overview of energy-efficiency opportunities in Nevada (Exhibit M, original is on file in the Research Library).

MONICA BRETT (Nevada Program Associate, Southwest Energy Efficiency Project):
The Southwest Energy Efficiency Project (SWEEP) is the sole organization advancing energy efficiency in Nevada. Our main industry is tourism, and if we are a world leader on tourism, we should lead on everything that impacts it. Energy drives our tourism, and if we made that vehicle more efficient, we would all benefit. The key distinction between energy efficiency and energy conservation is the former uses technology to become more efficient, and the latter uses behavior to make people turn off their lights. That distinction is key to job creation.

New technology that creates jobs merges with education, such as the Green Jobs Initiative. Creating, manufacturing and selling new technologies will benefit the State economy. Small businesses are the backbone of Nevada. The Small Business Administration (SBA) has said energy efficiency within small businesses is very effective. Efficiency is a bridge to renewables, making them more competitive. The SBA Website has an energy cost-savings calculator. The real estate industry is struggling, and home buyers are looking for houses that are more energy efficient as utility costs continue to rise. Energy efficiency increases a home's value.

MR. WIEL:
This slide, Exhibit M, shows a range of effective policies generally available to state governments. Building codes limit the amount of energy a new building

can consume. That is manifested as an overall cap or a list of components that will achieve the required efficiency. Regulations are just tweaking market rules because it is really the private sector that implements regulations. Appliance energy standards are a similar cap. Yellow energy-guide labels go along with standards. Energy incentive prices are set by government agencies.

Voluntary programs include tax incentives and rebates, utility demand-side management (DSM), government energy management and purchasing, industrial programs and consumer education. Federal, state and local governments must provide incentives to overcome market barriers. When you add the lifetime energy costs to a product's price, conventional products cost more. Consumers need assistance from governments to realize this.

Nevada has instituted some wonderful energy-efficiency policies. Major cities adopted their own building codes, and the Legislature gave assistance to rural areas. The State has achieved the 2006 federal building codes model standard. In 2001, Nevada was tied for last place in its DSM, but now, with NV Energy's support, we are ninth in the country, with an expenditure of $15 per customer. That expenditure results in a $30 return to the customer. The property tax abatement is for commercial buildings that meet silver-or-better standards. Energy audits when homes are sold will be required after January 1, 2011. The 74th Session enacted a standard of 25 lumens per watt for general-service lightbulbs as of January 1, 2012. Six more recommendations for energy efficiency have been identified by SWEEP and were distributed weekly to Legislators prior to this Session. The State should set a long-term target for energy efficiency and greenhouse-gas reductions, as have all of our neighboring states. We should anticipate the future cost of carbon, which affects supply-side investments by utilities. The State should set energy-efficiency standards for appliances, including new televisions, plug-in lamps, and swimming pools and spas. The savings would equal the cost of supplying energy for 40,000 homes or removing 64,000 vehicles from the roads. Nevada should expand its energy-efficiency measures in public buildings, and all new public vehicles and office equipment should be ENERGY STAR or the equivalent. Utilities and the PUCN should encourage more zero-energy homes.

SENATOR CEGAVSKE:
How do current renewable-portfolio standards compare to those presented by SWEEP?

MR. WIEL:
Our proposal is independent of the renewable-portfolio standard, which allows 0.25 percent of the credits to be achieved through energy efficiency. That was an incentive while NV Energy was building up its electric DSM programs. Now, the amount of efficiency from their DSM exceeds 0.25 percent; therefore, they will now apply that to the renewable credits.

SENATOR TOWNSEND:
There is confusion between the DSM programs and renewable-portfolio standards and how they interrelate. If you set a ceiling which someone reaches, there is no reason to reach any higher. Are you asking us to set a standard outside of the renewable portfolio, or to separate the two?

MR. WIEL:
No, nothing is needed in this direction.

SENATOR TOWNSEND:
Then why did you bring it up?

MR. WIEL:
I brought it up to show you a successful program.

SENATOR TOWNSEND:
I thought you said you want a new or independent standard for energy.

MR. WIEL:
I was talking about a standards goal of all forms of fuel and electricity imported into the State.

SENATOR TOWNSEND:
I understood you to say you are seeking a standards set independent of the renewable-portfolio standard that allows DSM to be credited. That is debatable.

MR. WIEL:
I did not address that.

SENATOR CEGAVSKE:
As far as the lightbulb-efficiency standard, how do we rectify the cost of disposing of those bulbs?

MR. WIEL:
The disposal problem is an issue for both compact fluorescent and incandescent bulbs, which contain mercury, lead and other heavy metals. I do not know if you have recycling disposal on your agenda.

SENATOR CARLTON:
Do you consider the cultural differences Las Vegas has from other cities as far as 24-hour shift work? Many families with daytime sleepers do not have a choice as to when they use air-conditioning.

MR. WIEL:
Yes, those considerations are important. Our recommendation is not for specific time-of-use rates. We suggest the utilities investigate and experiment with time-of-use rates more thoroughly. We expect they would take that into account, and will work with them as they do so.

CHAD DICKASON:
I am a consultant on residential and commercial solar systems and am creating a solar-installation business. I have provided my recommendations for changing NRS 701B (Exhibit N). California set a goal of 3,000 MW of solar energy; we could set a lofty goal, too, especially as system prices have dropped. I propose a goal of 250 MW developed through financial incentives with a budget of $475 million over 6.5 years and based on the current REPR rate.

Solar systems do not need much rebate support now, so we need to design a market-based and market-driven program based on demand. The lower the demand, the lower the rebates get, until they are phased out entirely. Before customers receive rebates, they should be required to have an energy audit so they will recognize their opportunities for energy efficiency. Without a rebate, residential customers can expect a 15- to 17-year return investment; the rebate drops that to 10 to 12 years.

The 5-kW cap on residential rebates and the number of rebates released each year should be removed. Because of these issues, many northern Nevadans are installing systems without rebates. If we drastically modify the program, we should set a date when anyone who installs a system will be eligible for a rebate. If people can install a system without a rebate, but their net-metering contract states they must install after a specific date, they should be able to qualify for a retroactive rebate. This will allow us to jump-start work within the

industry. Average system costs should be available to consumers to allow contractors to be more competitive.

There have been issues with third-party ownership through power-purchase agreements which are used to finance public projects. The third-party agency can take the tax incentives and depreciations. The legal issues surrounding this should be set in legislation.

The value of a 5-kW rebate is $10,500 for a home for a system that will produce 10,000 kWh annually. Ratepayers are subsidizing solar systems with a rebate, but we are taking renewable-energy credits for installations, and the utility is getting $15,000 in value over the system's life. If rebate amounts continue to drop, eventually the utility will get significant benefits for minimal up-front costs. Renewable-energy credits should stay with the system purchaser. Solar designers and installers need very specific knowledge. There is an effort in Nevada to undermine longtime installers by forbidding them to touch the alternating-current (AC) side of service panels. Installers must hire C-2G contractors to complete the connection, which makes the solar installer license irrelevant.

JOHN STURDEVANT:
I will soon be a licensed PV contractor, and have been a journeyman installer. I will discuss the differences between a C-2G and C-2 contractor. A C-2G is qualified to access the electrical runs between an inverter and an AC panel. The State Contractors' Board defines the C-2G contractor as qualified to do the PV side of the panel.

REID HAMILTON (Hamilton Homes):
We are a family-run home-building company in Spanish Springs. In August 2008, we committed to building solar on all of our homes as a standard; since then, our traffic has tripled.

People want to do the right thing, but it is cost-prohibitive. Given our rebate system, it is very difficult for developers to grow the system. We were allowed to do solar installations because we were into the property years in advance so we did not have to raise costs. We need to create a flowing, open, year-round rebate system.

CHAIR SCHNEIDER:
I have a bill concerning that. I have heard your houses are selling, despite the market downturn. Some of your competitors were very resistant to renewable energy, but now they are reconsidering.

MR. HAMILTON:
Everyone is reconsidering. We have retrofitted a three-car garage into a "green" museum to showcase what it takes to build an energy-efficient home. The word "green" means building a better home.

SHAWN O'MEARA (Owner, Aspen Electric, LLC):
I own a small, C-2 electrical-contracting company. My concern is the difference between the C-2 and C-2G licenses. Confusion arises from how the solar system ties into the panel.

New classifications require installers to set a back-feed breaker from the Renewable Energy Credit meter and AC disconnect. Sometimes, it is very easy to install the breaker; usually, the panel is out of breaker space so it requires reconfiguring breakers or adding a subpanel. New installation standards mandate we must install the PV back-feed breaker farthest away from the main breaker. We are seeing problems with heat, breakers tripping, phasing and neutrals melting.

Work must be done in a particular way, but PV installers' experience is very single-dimensional. When it comes to the intricacies of the electrical system, they do not know the difference in the phasing and how to safely move breakers or avoid overloading a neutral. The potential to create a fire becomes high due to mixing up breakers. The problem is where the PV system connects to the panel.

The current enforcement by the State Contractors' Board is correct; from the point where the DC stops, a C-2 contractor is needed. A C-2 contractor can safely work on a live panel. It is a life-safety issue for the installer and property owner. The Board states a C-2G contractor's license ends at that A/C disconnect. The C-2G must be legally able to subcontract to a C-2 to make the final connection. From a sales standpoint, if they advertise they can do a job start to finish, C-2Gs must hire a qualifying agent or be qualified to become C-2 certified.

CHAIR SCHNEIDER:
We will work on that with the different unions to develop training, and Senator Horsford has a bill concerning green-jobs training.

RON CLARK:
I am developing a residential energy-efficiency business. I will discuss adoption of the energy audit at the time of the home sale. We are talking about creating a new industry in Nevada. National models are the DOE's Home Performance With ENERGY STAR program and the Residential Energy Services Network (RESNET) rating system. If sellers have received a home energy rating, at the time of sale, the buyer would qualify for an energy-efficient mortgage and wrap needed upgrades into it. The Nevada State Office of Energy should adopt a combination of the national programs.

CHAIR SCHNEIDER:
Scott Young, Committee Policy Analyst, and I will run that by Dr. Hatice Gecol, director of the Office of Energy. If there is no more business to come before the Committee, I will close this hearing by the Senate Committee on Energy, Infrastructure and Transportation at 11:25 a.m.

RESPECTFULLY SUBMITTED:

_____
Patricia Devereux,
Committee Secretary

APPROVED BY:

_____
Senator Michael A. Schneider, Chair

DATE: _____