



# **NEVADA LEGISLATURE LEGISLATIVE COMMISSION'S COMMITTEE TO CONDUCT AN INTERIM STUDY ON THE PRODUCTION AND USE OF ENERGY**

**(Senate Concurrent Resolution No. 19, File No. 99, *Statutes of Nevada 2009*)**

## **SUMMARY MINUTES AND ACTION REPORT**

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The fourth meeting of the Legislative Commission's Committee to Conduct an Interim Study on the Production and Use of Energy was held on Tuesday, April 20, 2010, at 10 a.m. in Room 4401 of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. The meeting was videoconferenced to Room 2135 of the Legislative Building, 401 South Carson Street, Carson City, Nevada. A copy of this set of "Summary Minutes and Action Report," including the "Meeting Notice and Agenda" ([Exhibit A](#)) and other substantive exhibits, is available on the Nevada Legislature's website at <http://www.leg.state.nv.us/interim/75th2009/committee/>. In addition, copies of the audio record may be purchased through the Legislative Counsel Bureau's Publications Office (e-mail: [publications@lcb.state.nv.us](mailto:publications@lcb.state.nv.us); telephone: 775/684-6835).

### **COMMITTEE MEMBERS PRESENT IN LAS VEGAS:**

Senator Michael A. Schneider, Chair  
Assemblywoman Marilyn Kirkpatrick, Vice Chair  
Senator John J. Lee  
Senator Randolph Townsend  
Assemblyman Marcus L. Conklin  
Assemblywoman Heidi S. Gansert

### **LEGISLATIVE COUNSEL BUREAU STAFF PRESENT:**

Scott Young, Committee Policy Analyst, Research Division  
Wayne Thorley, Senior Research Analyst, Research Division  
Matthew S. Nichols, Principal Deputy Legislative Counsel, Legal Division  
Anne Vorderbruggen, Senior Research Secretary, Research Division

## **OPENING REMARKS**

- Senator Michael A. Schneider, Chair, welcomed the members, presenters, and public to the fourth meeting of the Legislative Commission's Committee to Conduct an Interim Study on the Production and Use of Energy. Chair Schneider stated that the Committee is continuing to examine broad energy issues and soliciting recommendations for possible legislative action. He announced that recommendations are needed no later than the next meeting of the Committee on Thursday, May 20, 2010, in order to be considered at the final meeting and work session of the Committee scheduled for June 17, 2010.
- Chair Schneider stated that at this meeting the Committee will look at some aspects of energy efficiency in buildings and solar thermal heating initiatives in Nevada. Chair Schneider reported that earlier that morning the Committee had toured the new LEED certified PBS building in Las Vegas.

## **APPROVAL OF MINUTES OF THE JANUARY 19, 2010, MEETING IN LAS VEGAS, NEVADA**

- The Committee **APPROVED THE FOLLOWING ACTION:**

SENATOR TOWNSEND MOVED TO APPROVE THE MINUTES OF THE JANUARY 19, 2010, MEETING HELD IN LAS VEGAS, NEVADA. THE MOTION WAS SECONDED BY ASSEMBLYMAN CONKLIN AND PASSED. ASSEMBLYWOMAN KIRKPATRICK WAS ABSENT FOR THE VOTE.

## **PRESENTATION ON LITHIUM BATTERY PRODUCTION AND USES**

- Johnnie Stoker, Ph.D., Chief Executive Officer, K2 Energy Solutions, provided a Microsoft PowerPoint presentation regarding K2 Energy Solutions, Inc. ([Exhibit B](#)). Dr. Stoker stated that K2 Energy Solutions was founded in 2006 in Henderson, Nevada, with four employees and currently has over 30 employees. He noted that their technical team was the first to commercialize a lithium ion phosphate battery in 2001 at Valence Technology before they moved on and started K2 Energy Solutions. Highlights of Dr Stoker's presentation included the following:
  1. The mission statement, and strategic and financial goals of K2 Energy Solutions;
  2. That K2 Energy Solutions' technology is competitive with "big name" companies, information about the company's key customers, and current applications;
  3. The company was started in southern Nevada because of the availability of technical resources, the business climate, and the right conditions for producing and using batteries; and

4. To attract businesses, Nevada should demonstrate the availability of technical people, create a cluster of technology, and show support for high-tech.

Responding to questions from Assemblywoman Kirkpatrick, Dr. Stoker discussed the competition K2 Energy Solutions faces with companies that receive large short-term government incentives, their long-term goal as a company to be profitable and build best-in-class products, and the feasibility of bringing in a cluster of companies to support Nevada businesses.

- Dr. Stoker continued with his presentation, noting that since K2 Energy Solutions has gotten a higher political profile, it is now getting some support at a federal level. Dr. Stoker concluded his presentation with a discussion of K2 Energy Solution's current projects, including: (1) the development of a one megawatt-hour grid storage battery; (2) a research and development cell development laboratory; and (3) the development of a large format cell.
- Dr. Stoker invited the Committee to visit the K2 Energy Solutions facility in Henderson to look at their products.

In response to a question regarding the size of the battery industry, Dr. Stoker stated that the battery industry is huge, and K2 Energy Solutions' next expansion would produce only enough batteries for 3,000 electric cars annually. He noted that the company is paying for the research and development and that is where government funding helps so they can afford to do the research and development and build a demonstration unit. Dr. Stoker noted that what K2 Energy Solutions is looking for is start-up help and the recognition that they have real technology. He further stated that the tax base in Nevada is a great incentive but Nevada has to find a better way to sell it.

## **PRESENTATION ON ENERGY EFFICIENCY IN BUILDINGS**

- Chair Schneider stated that for many years, the legislature has emphasized the importance of energy conservation in terms of both economic impact and environmental benefits, which is a reflection of many sessions under the leadership of Senator Townsend. He noted that buildings account for 40 percent of the primary energy used in the United States and, according to the U.S. Energy Information Agency, homes and commercial buildings use 71 percent of the electricity in the United States which is expected to increase to 75 percent by 2025.

Chair Schneider stated he would like the Committee to consider the following proposals, the first two of which were included in Senate Bill 242 from the 2009 Legislative Session:

1. Require that residential builders who have projects of 25 or more homes offer renewable energy and energy efficiency upgrades;
2. Require that residential builders who finance or assist in financing homes use mortgage lending programs that offer “green mortgage” options; and
3. Require that the Real Estate Commission, the Commissioner of the Division of Mortgage Lending, and the Commission of Appraisers of Real Estate adopt regulations for continuing education to cover their respective licensees.

Chair Schneider noted that during the discussions on S.B. 242 in the 2009 Session, his presentation included a slide which indicated that 86 percent of Americans would choose one home over another based on energy efficiency and that 78 percent of Americans who had recently purchased property said that nobody had talked to them about energy efficiency. He further reported that studies indicate energy efficient mortgages allow an average of 6.8 percent more families to qualify for a mortgage.

Chair Schneider stated that the continuing education concept was included in the original version of Senate Bill 437 (Chapter 509, *Statutes of Nevada 2007*) introduced by Senator Townsend, but it was amended out, along with some other excellent provisions. He stated this is a concept that needs to be implemented now, given the change in economic conditions since the last legislative session and the intensified emphasis on energy issues at the national level.

Chair Schneider asked the Committee to consider these proposals as it continues working on energy issues in Nevada.

- Annette Bubak, CMP, CSP, Director of Marketing and Business Development, Distinct ENERGY Performance, stated she was present as the President of Nevada ENERGY STAR Partners and as a business owner of Distinct ENERGY Performance. Ms. Bubak gave a Microsoft PowerPoint presentation on Nevada ENERGY STAR Partners and Distinct ENERGY Performance ([Exhibit C-1](#)) and provided a packet of information on the two companies ([Exhibit C-2](#)). Highlights of Ms. Bubak’s presentation include: (1) that Nevada ENERGY STAR Partners was founded in 2001 in collaboration with the United States Environmental Protection Agency; (2) the company’s objectives and the results they have attained; and (3) information on the Nevada ENERGY STAR Partners Green Alliance and their focus on education for homebuilders, contractors, and trades.
- Senator Townsend asked that Ms. Bubak report back to the Chair on what the new International Energy Conservation codes and Energy Star codes will be to give the Committee an indication of how much the energy efficiency standards are going to improve.

- Continuing with her presentation, Ms. Bubak discussed: (1) Distinct ENERGY Performance's philosophy; (2) home performance; (3) common complaints from homeowners; (4) steps in home performance; (5) what a comprehensive energy audit is; and (6) retrofitting.

Discussion ensued among the Committee and Ms. Bubak regarding energy audits and retrofits.

- Chair Schneider stated that within the next couple of weeks he plans to hold a hearing to discuss appraisals. He noted that a new energy star home cannot be compared with a 40-year-old home with single-pane windows and no insulation; yet, these homes are receiving identical appraisals. Chair Schneider also noted that homes are being appraised lower than their replacement value and the low appraisals are creating a problem for the budgets of local governments and school districts.

## **PRESENTATION ON ENERGY EFFICIENCY IN BUILDINGS**

- Hervé Mazzocco, Ph.D., President, RA Energie, Inc., provided a Microsoft PowerPoint presentation regarding energy efficiency and distributed generation in commercial buildings ([Exhibit D](#)). Highlights from his presentation include: (1) buildings are the largest energy consumer in the U. S.; (2) how to work towards net-zero energy buildings; (3) setting ambitious goals; (4) available tools; (5) technology strategies; (6) economics; (7) addressing climate change and green house gases; (8) alternative solutions; and (8) states with green house gas emissions targets which do not include Nevada. Dr. Mazzocco stated that Nevada has all the resources but needs to set goals and have the right regulations in place.

## **PRESENTATION ON NV ENERGY'S INTEGRATED RESOURCE PLAN AND SOUTHWEST INTERTIE PROJECT**

- Judy Stokey, Director, Government Affairs, NV Energy, introduced Jack McGinley, Development Director, Renewables, NV Energy, and Gary Smith, Project Director-Smart Technologies, NV Energy, who were present to discuss integrated resource planning and advanced service delivery.
- Jack McGinley, Development Director, Renewables, NV Energy, gave a Microsoft PowerPoint presentation ([Exhibit E](#)) on NV Energy's integrated resource planning (IRP). Mr. McGinley's presentation included information on NV Energy's three-part IRP strategy to increase investments in energy efficiency and conservation, expand renewable energy initiatives and investments, and add transmission and highly efficient dispatchable generating plants.
- Gary Smith, Project Director-Smart Technologies, NV Energy, continued the Microsoft PowerPoint presentation with a discussion of advanced service delivery (the Smart Grid program for Nevada). He noted that it is a \$300 million program that is

funded 50 percent by the U.S. Department of Energy. Highlights of Mr. Smith's presentation included a discussion of building consumer confidence by mitigating security and privacy risks, ensuring and verifying system accuracy, and the benefits to the customers.

- Senator Townsend stated that it is important to educate the new legislators on the advanced service delivery program, as they will be faced with helping constituents understand their usage and the cost of peak power.

Responding to questions from Senator Townsend, Mr. McGinley stated that NV Energy has enough capacity for the customers in northern Nevada. They are also close to owning enough capacity in southern Nevada and the price volatility has been defused; however, there are more peaks in southern Nevada. Mr. McGinley described the dynamic pricing program and the areas that were selected for the dynamic pricing pilot and offered to share a map with the Committee that shows the specific locations in southern Nevada.

- Senator Townsend noted that he had observed an energy audit and it was extremely educational; however, the document is very technical and there should be a one-page cover sheet that is user friendly.
- Mr. McGinley continued the presentation with a discussion of NV Energy's commitment to renewable energy; NV Energy's One Nevada transmission line, and efficient clean generation.

In response to a question from Assemblywoman Gansert about whether NV Energy would be able to sell any excess capacity when the transmission line is completed, Mr. McGinley stated that NV Energy still needs all the renewable energy credits for its own compliance. He further stated that they would be selling only renewable energy power into the market.

## **PRESENTATION ON SOLAR THERMAL HEATING**

- Susan Fisher, Fisher Consulting, representing Valley Electric Association, introduced Thomas Husted, Chief Executive Officer of Valley Electric Association.
- Mr. Husted provided a Microsoft PowerPoint presentation on Valley Electric Association, Inc. ([Exhibit F-1](#)) and a packet of information on Valley Electric Association's solar water heating program ([Exhibit F-2](#)). Highlights of Mr. Husted's presentation included the following:
  1. Valley Electric Association, Inc. is a member-owned cooperative, incorporated in 1965, with 16,800 member owners, 24,132 services, 80 employees, and their service area covers 6,500 square miles;
  2. The company launched the largest domestic solar water heating program in the U.S. in September 2009;

3. Valley Electric Association, Inc.'s business plan is to install 5,000 units, and sell the units at cost, providing 0 percent financing for up to 14 years, saving ratepayers \$34 million over the next 20 years; and
4. Beginning in the third quarter of 2010, Valley Electric Association will offer Google PowerMeters at no cost to its members.

Discussion ensued regarding Valley Electric Association, Inc.'s Board, and the status of the installations. Mr. Husted reported that approximately 175 units have been installed and there is a backlog of approximately 500 units.

#### **UPDATE ON PROGRESS OF REGULATIONS IMPLEMENTING SOLAR THERMAL INSTALLATIONS PURSUANT TO SENATE BILL 188 (CHAPTER 414, *STATUTES OF NEVADA 2009*)**

- Rebecca Wagner, Commissioner, Public Utilities Commission of Nevada (PUCN), reported that the regulations adopted by the PUCN to implement the program to promote the use of solar thermal to offset the use of natural gas were approved by the Legislative Commission's Subcommittee to Review Regulations (*Nevada Revised Statutes* [NRS] 233B.067 and NRS 233B.0675) on April 19, 2010. The regulations require that to be an eligible contractor, companies must apply to the utility, provide proof of licensure and insurance, complete a one-day training, and the utility will verify that the contractor is licensed and is in good standing with the State Contractors' Board.

Ms. Wagner further reported that the goal of 3,000 solar thermal systems by 2019 was divided between NV Energy and Southwest Gas, with Southwest Gas given the majority since they are the major gas provider in the State. Ms. Wagner stated that the next step will be for the utilities to file plans with the Commission laying out how they will implement the program. Then the PUCN has 150 days to approve the plans.

#### **PRESENTATION ON LEGISLATIVE COUNSEL BUREAU ENERGY CONSERVATION MEASURES**

- Lorne J. Malkiewich, Director, Legislative Counsel Bureau, referred to a Proclamation, along with a rebate of \$19,351, presented to the Legislative Counsel Bureau by Sierra Pacific Power Company in 1994 for an energy efficient lighting installation at the State Legislature Building, to illustrate that staff has not just recently started looking at conserving energy. Mr. Malkiewich described the following energy efficiency measures that were added to the Legislative Building:
  1. The building control systems (lighting and HVAC) are a computer-controlled system which allows outside air to be mixed in at night in the summer, reducing the HVAC load;

2. Hall lighting is controlled to minimum levels during low occupancy and is scheduled to turn off when the janitors are done cleaning;
3. The HVAC can be run in committee rooms only during meetings and only on the floors that are occupied;
4. In the newer part of the Legislative Building, the lighting system allows offices to be on low, medium, or full lights;
5. Motion sensors are used where possible;
6. Outside lighting is controlled by actual sunrise and sunset so lights are not on any longer than needed;
7. Lighting has been upgraded to electronic ballasts and the more efficient T5 and T8 fluorescent lamps are used;
8. Compact fluorescents have been utilized where possible and lighting has been reduced in hallways and restrooms;
9. Lighting above the dais areas has been changed from halogens to compact fluorescents; and
10. Energy efficient motors have been installed in all fan rooms and most HVAC units.

Mr. Malkiewich also reported that when the State Printing Office was remodeled and the warehouse added, a 30 kilowatt (KW) photovoltaic system was installed on the roof of the building; the HVAC package units at the Sedway Office Building were replaced with higher efficiency models; low pressure steam boilers were replaced with high efficiency hot water boilers in the Legislative Building; a single-stage absorption chiller was replaced with two high-efficiency chillers in the Legislative Building; and staff is currently involved in a stimulus-funded project to install another 30 KW photovoltaic system on the parking garage.

Mr. Malkiewich reported that upcoming projects include the following: (1) new fluorescent lights will be installed in the hallways on the first, second, and third floors of the old part of the Legislative Building; (2) boilers will be upgraded to more energy efficient technology; (3) staff is researching LED technology for use in the parking garage area and stimulus funding is being sought for that retrofit; and (4) halogen lights in the Chambers in Room 1214 will be retrofitted to compact fluorescent floodlights by 2011.

Mr. Malkiewich further reported that energy usage is being monitored and recorded monthly and, overall, for the three buildings combined, in comparing 2006-2007 to 2008-2009, the consumption of natural gas has decreased by 21.18 percent and



electrical usage has decreased by 13.04 percent. He stated that staff will continue to monitor and look for new ways to save, in hopes of increasing these numbers in the future.

- Senator Townsend asked that Mr. Malkiewich pass on to his staff on behalf of the Legislators their compliments for the work staff has done and for the suggestions and issues they have brought to the Legislature. Senator Townsend stated that, when possible, one of the first things he would recommend be done to the Legislative Building is make sure it is a healthy place during legislative sessions when it is fully occupied.

In response to questions from Chair Schneider about future plans for the building, Mr. Malkiewich stated that even the minor issues he had previously mentioned such as replacing boilers with energy efficient boilers and changing lighting cost money that is not available, and some of the other items they are looking at include changing people's habits on how they are using power, such as turning off copiers, printers, and computers; eliminating space heaters and changing to shared printers.

## **PUBLIC COMMENT**

- Suzanne Johnson, private citizen, Gardnerville, Nevada, described the difficulties she encountered with providing the calculations required by Douglas County for energy efficiency when she designed and built a home that is near net zero energy and mainly solar powered. She suggested that each county be surveyed regarding their requirements for energy calculations.
- Robert Tretiak, Ph.D., Business Development Officer, International Energy Conservation, Las Vegas, discussed the experimental residential time-of-use metering program in which he and his family are participating. Dr. Tretiak further discussed the importance of technology and thanked the legislators for changing the laws that move the new technology forward.
- Don Reid, Las Vegas, representing Solar Millennium, LLC, commented on Valley Electric Association's presentation. He noted that when a utility can figure out a system that benefits both the consumer and the utility, it is a major step forward for renewable energy.

## **ADJOURNMENT**

There being no further business to come before the Committee, the meeting was adjourned at 2:06 p.m.

Respectfully submitted,

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Anne Vorderbruggen  
Senior Research Secretary

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Scott Young  
Committee Policy Analyst

APPROVED BY:

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Senator Michael A. Schneider, Chair

Date: \_\_\_\_\_

## **LIST OF EXHIBITS**

[Exhibit A](#) is the “Meeting Notice and Agenda” provided by Scott Young, Committee Policy Analyst, Research Division, Legislative Counsel Bureau.

[Exhibit B](#) is a Microsoft PowerPoint presentation titled “K2 Energy Solutions Overview for the LCB,” provided by Johnnie Stoker, Ph.D., Chief Executive Officer, K2 Energy Solutions, dated April 2010.

[Exhibit C-1](#) is a Microsoft PowerPoint presentation titled “Nevada Energy Star Partners Green Alliance,” provided by Annette Bubak, CMP, CSP, Director of Marketing and Business Development, Distinct ENERGY Performance, dated April 20, 2010.

[Exhibit C-2](#) is a packet of information submitted by Annette Bubak, CMP, CSP, Director of Marketing and Business Development, Distinct ENERGY Performance, which consists of:

- A four-page pamphlet on Nevada Energy Star Partners Green Alliance;
- A brochure titled “Seal and Insulate with ENERGY STAR”;
- A brochure titled “ENERGY STAR Qualified New Homes”;
- A brochure titled “Heating and Cooling”;
- A booklet titled “A Do-It-Yourself Guide to Sealing and Insulating With Energy Star”;
- A news release titled “EPA Announces New Guidelines for Energy Star Homes,” dated April 19, 2010; and
- A one-page document regarding Annette Bubak, Co-founder/Director of Business Development, Distinct ENERGY Performance.

[Exhibit D](#) is a Microsoft PowerPoint presentation prepared by Hervé Mazzocco, Ph.D., President, RA Energie, Inc., titled “Energy Efficiency and Distributed Generation in Commercial Buildings, An immediate solution to Green House Gases emissions reductions,” dated April 20, 2010.

[Exhibit E](#) is a Microsoft PowerPoint presentation provided by Judy Stokey, Director, Government Affairs, NV Energy, titled “Integrated Resource Planning,” dated April 20, 2010.

[Exhibit F-1](#) is a Microsoft PowerPoint presentation titled “SCR 19 Production & Use of Energy Committee Presentation,” submitted by Thomas Husted, Chief Executive Officer, Valley Electric Association, dated April 20, 2010.

[Exhibit F-2](#) is a packet of information provided by Thomas Husted, Chief Executive Officer, Valley Electric Association, which consists of:

- A brochure titled “Solar Solutions from Valley Electric Association and Rheem Active Solar Water Heating Systems”;
- An article from *The Wall Street Journal* titled “Cheap Hot Water? Just Add Sunshine,” dated January 28, 2010;
- An article from *Solar Today* titled “Solar Water Heating Made Easy, One co-op’s innovative plan will benefit the organization’s members and bank statement, as well as the planet,” by David Sweetman, dated March 25, 2010;
- Documents from Valley Electric Association, Inc., describing its domestic solar water heating program and the estimated costs.

This set of “Summary Minutes and Action Report” is supplied as an informational service. Exhibits in electronic format may not be complete. Copies of the complete exhibits, other materials distributed at the meeting, and the audio record are on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. You may contact the Library online at [www.leg.state.nv.us/lcb/research/library/feedbackmail.cfm](http://www.leg.state.nv.us/lcb/research/library/feedbackmail.cfm) or telephone: 775/684-6827.