Nevada System of Higher Education

System Administration
5550 West Flamingo Road, Suite C-1
Las Vegas, NV 89103-0137
Phone: 702-889-8426
Fax: 702-889-8492

System Administration
2601 Enterprise Road
Reno, NV 89512-1666
Phone: 775-784-4901
Fax: 775-784-1127

Memorandum

Date: August 28, 2009

To: Cathy Gregg, Budget Analyst IV
State Budget Office, Department of Administration

Alex Haartz, Program Analyst
Fiscal Analysis Division, Legislative Counsel Bureau

From: Daniel J. Klaich, Chancellor
Nevada System of Higher Education

Regarding: Senate Bill 152, 90-Day Compliance Report
Weatherization and Energy Retrofit Projects

Senate Bill 152 as enacted by the 2009 Legislature requires the Board of Regents of the Nevada System of Higher Education to file with the State Budget Office and the Interim Finance Committee on or before September 9, 2009, a report of weatherization and energy retrofit projects that could be undertaken if funding is made available through federal sources distributed to Nevada. NSHE's report is attached for your consideration.

Please be aware, in order to comply with both the Board's deadlines for submitting agenda items and the State's SB 152 reporting requirement, the report is provided in accordance with the statutory timeline contingent upon approval by the Board of Regents' Investment and Property Committee at its September 17, 2009, meeting. NSHE understands that the report, along with the reports of other state agencies will, at a date determined by the Legislature be reviewed as Informational Items during an upcoming meeting of the Interim Finance Committee.

If you have questions concerning the projects identified in this report, don't hesitate to contact me directly.

ATTACHMENT

Cc: NSHE Business Officers
Hatice Gecol, Nevada State Office of Energy
Gustavo Nuñez, State Public Works Board
Jim Rodriguez, State Budget Office
Eric King, Legislative Counsel Bureau
Scott Young, Legislative Counsel Bureau

NEVADA SYSTEM OF HIGHER EDUCATON

90-day Compliance Report
Senate Bill 152, Section 10.3
(2009 Legislature)

Weatherization and Energy Retrofit Project Proposals:

University of Nevada Reno
University of Nevada Las Vegas
Desert Research Institute
Nevada State College
College of Southern Nevada
Truckee Meadows Community College
Western Nevada College
Great Basin College

Compiled by
System Administration Office
August 17, 2009

University of Nevada, Reno
Energy Retrofit and Renewable Energy Projects
SB 152

1. **Valley Road Greenhouses Solar Panels.**
   UNR proposes to install solar photovoltaic panels on the roof of the Valley Road greenhouses head house. This building was completed in 2008. The roof was designed to support future solar PV panels.

   Proposed Project:

   Install 30 kW of solar photovoltaic panels on the roof of the head house.

   (a) Length of Time necessary to Commence Project;

   This project could commence in 3-4 months once funding was approved.

   (b) Estimated Number of Workers Employed on the Project:

   We estimate that up to 8 workers would be employed during this project.

   (c) Resultant Energy Savings:

   This could provide over 75,000 kw-hr of renewable energy power annually.

   (d) Expected Project Cost:

   Estimated cost - $200,000 with rebate from NV Energy ($400,000 total)

   (e) Powered by or to otherwise use sources of renewable energy

   Yes, solar.

   (f) Has the Project qualified for participation in one or more of the following programs?

   No; however we will continue to inquire with the Nevada Energy Office to determine participation in other energy efficiency or energy conservation programs.

   (1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

   (2) The Renewable Energy School Pilot Program created by NRS 701B.350;

   (3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

   (4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

   (5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

2. **Retrofit Lighting in Sierra Street and Whalen Parking Garages.**
UNR proposes to replace the existing lighting with higher efficiency lighting.

Proposed Project:

Replace the existing parking garage lighting with higher efficiency lighting.

(a) Length of Time necessary to Commence Project;

Once funding is approved this project could commence in less than 3 months.

(b) Estimated Number of Workers Employed on the Project:

We estimate that up to 8 workers would be employed during this project.

(c) Resultant Energy Savings:

Estimated annual energy savings is approximately $60,000.

(d) Expected Project Cost:

Estimated cost $330,000.

(e) Powered by or to otherwise use sources of renewable energy

No.

(f) Has the Project qualified for participation in one or more of the following programs?

No; however we will continue to inquire with the Nevada Energy Office to determine participation in other energy efficiency or energy conservation programs.

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

(2) The Renewable Energy School Pilot Program created by NRS 701B.350;

(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

3. **Replace Lombardi Recreation Center Chiller, Cooling Tower and Controls.**
UNR proposes to replace the Lombardi Recreation Center centrifugal chiller, cooling tower and controls with newer, more efficient cooling equipment.

Proposed Project:

Replace the Lombardi Recreation Center chiller, cooling tower and controls with newer, more efficient cooling equipment. New chiller equipment has a significantly lower kilowatt per ton rating than the existing chiller.

(a) Length of Time necessary to Commence Project;

This project would commence in 4 to 6 months.

(b) Estimated Number of Workers Employed on the Project:

We estimate that up to 20 workers would be employed during this project.

(c) Resultant Energy Savings:

We estimate a possible 25 percent, or higher, reduction in annual cooling costs for the 4 buildings served by this chiller due to higher efficiency equipment.

(d) Expected Project Cost:

Estimated Cost - $500,000

(e) Powered by or to otherwise use sources of renewable energy.

No.

(f) Has the Project qualified for participation in one or more of the following programs?

No; however we will continue to inquire with the Nevada Energy Office to determine participation in other energy efficiency or energy conservation programs.

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

(2) The Renewable Energy School Pilot Program created by NRS 701B.350;

(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

4. **Install Solar Hot Water Heating for Lombardi Pools.**
UNR proposes to install solar hot water heating for the two existing Lombardi Pools. These pools are currently heated with natural gas fired boilers.

Proposed Project:

Install solar hot water heating for Lombardi Pools. This will eliminate the need to use gas fired boilers for pool water heating and reduce green house gas emissions.

(a) Length of Time necessary to Commence Project;

This project construction would commence in 6-10 months.

(b) Estimated Number of Workers Employed on the Project:

This project would employ up to 20 workers.

(c) Resultant Energy Savings:

We estimate a potential energy cost savings of $50,000 annually.

(d) Expected Project Cost:

Estimated cost - $1,000,000

(e) Powered by or to otherwise use sources of renewable energy

Yes, solar heating.

(f) Has the Project qualified for participation in one or more of the following programs?

No; however we will continue to inquire with the Nevada Energy Office to determine participation in other energy efficiency or energy conservation programs.

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

(2) The Renewable Energy School Pilot Program created by NRS 701B.350;

(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

5. **Replace Single Pane Windows in Mackay Mines, Thompson Hall and Clark Administration.** UNR proposes to replace the existing single pane windows with energy efficient double pane, low E windows to reduce annual energy consumption and eliminate drafts. Clark Hall was constructed in 1927, Thompson Hall in 1920 and Mackay Mines in 1907.

Proposed Project:

Replace the existing single pane windows with energy efficient double pane, low E windows to reduce annual energy consumption and eliminate drafts

(a) Length of Time necessary to Commence Project;

This project could commence in 3 months

(b) Estimated Number of Workers Employed on the Project:

Up to 10 workers would be employed.

(c) Resultant Energy Savings:

We expect a payback of approximately 10 years. This project would also reduce drafts and improve occupant comfort.

(d) Expected Project Cost:

Estimated cost - $550,000

(e) Powered by or to otherwise use sources of renewable energy

No.

(f) Has the Project qualified for participation in one or more of the following programs?

No; however we will continue to inquire with the Nevada Energy Office to determine participation in other energy efficiency or energy conservation programs.

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

(2) The Renewable Energy School Pilot Program created by NRS 701B.350;

(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

6. **Retrofit Lighting in O&M Warehouse.**
UNR proposes to replace existing interior in the Operations and Maintenance warehouse.

Background:

High pressure sodium lights cannot be turned on/off like traditional lights as they require a warm up period in which they draw an inordinate amount of power, plus they are inefficient under normal operation. These lights are usually turned on in the morning and run all day until the janitor finally leaves. Just replacing them with fluorescent lights would be a major improvement. The addition of occupancy controls will make them even more efficient.

Proposed Project:

Replace existing interior 400 watt high pressure sodium lights in building 144 North Storage Warehouse with T5 and occupancy controls

(a) Length of Time necessary to Commence Project;

This could commence in 2 months.

(b) Estimated Number of Workers Employed on the Project:

We estimate 4 workers.

(c) Resultant Energy Savings:

The estimated annual power and cost savings would be 18,000 kWh, and $2,200, respectively.

(d) Expected Project Cost:

Estimated cost - $7,500

(e) Powered by or to otherwise use sources of renewable energy

N/A

(f) Has the Project qualified for participation in one or more of the following programs?

No; however we will continue to inquire with the Nevada Energy Office to determine participation in other energy efficiency or energy conservation programs.

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

(2) The Renewable Energy School Pilot Program created by NRS 701B.350;

(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

University of Nevada Las Vegas
Weatherization/Energy Retrofit Projects
SB 152

1. UNLV Tropicana Parking Garage - Photovoltaic Addition.

(a) The length of time necessary to commence the project: The parking garage on which this project would be constructed is currently under construction and is anticipated to be substantially complete in Fall 2009. A change order to the parking garage project could be prepared for this photovoltaic array and could be issued within approximately 30-45 days (or a construction change directive could be issued earlier). This project could commence upon the issuance of this change order.

If this SB 152 proposed project is procured and delivered outside of the existing parking garage process, the project could commence within approximately 60-90 days based on consultant/vendor procurement.

(b) The number of workers estimated to be employed on the project: Twelve.

(c) The effectiveness of the project in reducing energy consumption: It is estimated that this project would produce approximately 30,000 sf of photovoltaic surface area, resulting in an estimated 1,343,000 kwh annual production array - this 1,343,000 kwh annual power creation from this array would serve as a direct offset of campus energy consumption from conventional and non-renewable sources. Estimated financial impact would be an offset to existing power costs of approximately $138,000 per year using a renewable source of energy.

(d) The estimated cost of the project: The estimated cost of this project is $4.1 million.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy: This project would use renewable sources of energy to generate electricity.

(f) Whether the project has qualified for participation in one or more of the following programs: No. However, discussions are being undertaken with NV Energy regarding the potential participation of this project in one of these programs.
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

2. UNLV McDermott Physical Education Building - Solar water heating at pool.

(a) The length of time necessary to commence the project: The pool replacement with which this project would be coordinated with is currently under construction and is anticipated to be substantially complete in Winter 2009. A change order to the pool replacement project could be prepared for this solar water heating improvement and could be issued within approximately 30-45 days (or a construction change directive could be issued earlier). This project could commence upon the issuance of this change order.

If this SB 152 proposed project is procured and delivered outside of the existing pool replacement process, the project could commence within approximately 60-90 days based on consultant/vendor procurement.

(b) The number of workers estimated to be employed on the project: Twelve.

(c) The effectiveness of the project in reducing energy consumption: There would be an estimated cost reduction of $70,000 a year from the total building operating budget at an estimated savings of 0.94 cents a therm.

(d) The estimated cost of the project: The estimated cost of this project is $565,000.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy: This project would use a renewable solar energy source to heat water for pool heating.

(f) Whether the project has qualified for participation in one or more of the following programs: No. However, discussions are being undertaken with NV Energy regarding the potential participation of this project in one of these programs.
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

3. UNLV Flora Duncan Humanities Building - Conversion to Direct Digital Controls for Air Handlers 4-15.

(a) The length of time necessary to commence the project: This project could commence within approximately 60 days based on consultant/vendor procurement.

(b) The number of workers estimated to be employed on the project: Nine.

(c) The effectiveness of the project in reducing energy consumption: 10% estimated reduction in yearly building energy consumption. Total energy cost of the building per year is estimated at approximately $255,000. It is estimated this project may result in a 10% energy savings of $25,500 a year, which would result in an energy savings of approximately 242,857 kwh a year.

(d) The estimated cost of the project: The estimated cost of this project is $150,000.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy: No.

(f) Whether the project has qualified for participation in one or more of the following programs: No.
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

4. UNLV Boyd School of Law Building - chiller plant improvements.

(a) The length of time necessary to commence the project: This project could commence within approximately 60-90 days based on consultant/vendor procurement.

(b) The number of workers estimated to be employed on the project: Eighteen.

(c) The effectiveness of the project in reducing energy consumption: There would be a cost reduction of approximately $36,000 a year from the total building operating budget at a savings of approximately 343,000 kwh a year.

(d) The estimated cost of the project: The estimated cost of this project is $2.5 million.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy: No.

(f) Whether the project has qualified for participation in one or more of the following programs: No.
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

5. UNLV Flora Duncan Humanities Building Weatherization- Envelope thermal and moisture improvements.

(a) The length of time necessary to commence the project: This project could commence within approximately 60-90 days based on consultant/vendor procurement.

(b) The number of workers estimated to be employed on the project: Thirty.

(c) The effectiveness of the project in reducing energy consumption: The building envelope currently loses building heating and cooling due to cracks in the exterior stucco and seals on the windows themselves. This project would currently reduce the loss heating and cooling, as well as protecting the building's interior from any infiltration. Total energy cost of the building per year is estimated at approximately $255,000. It is estimated this project may result in a 10% energy savings of $25,500 a year, which would result in an energy savings of approximately 242,857 kwh a year.

(d) The estimated cost of the project: The estimated cost of this project is $2 million.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy: No.

(f) Whether the project has qualified for participation in one or more of the following programs: No.
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

6. UNLV Bigelow Physics Building - Replace Roof.

(a) The length of time necessary to commence the project: This project could commence within approximately 60-90 days based on consultant/vendor procurement.

(b) The number of workers estimated to be employed on the project: Fourteen.

(c) The effectiveness of the project in reducing energy consumption: There would be a limited reduction in energy consumption with this project based on improved energy performance of the roofing membrane and substrate.

(d) The estimated cost of the project: The estimated cost of this project is $450,000.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy: No.

(f) Whether the project has qualified for participation in one or more of the following programs: No.
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

7. Traffic Control Signal at UNLV - Tropicana Avenue/Bock Street intersection.

(a) The length of time necessary to commence the project: Initial design is underway for this project. Design completion may occur within the next 30 days if approved, and construction could commence on this project 90-120 days after design is complete based on review, permitting and bidding processes.

(b) The number of workers estimated to be employed on the project: Eighteen.

(c) The effectiveness of the project in reducing energy consumption: Although the new traffic signal will result in additional energy consumption, the use of LED Signals will reduce the amount of additional energy consumed. Additionally, reduction in traffic delays due to improved traffic control will also be effective in reducing energy consumption. UNLV is also investigating renewable energy strategies for this project.

(d) The estimated cost of the project: The estimated cost of this project is $1.2 million.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy: UNLV is investigating solar options for temporary and permanent signage and other devices related to the project, subject to compliance with operational requirements.

(f) Whether the project has qualified for participation in one or more of the following programs: No. However, discussions are being undertaken with NV Energy regarding the potential participation of this project in one of these programs if renewable energy items are feasible for this project.
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

Desert Research Institute
Weatherization/Energy Retrofit Projects
SB 152

1. Window Improvement Project, SNSC PI, DRI Las Vegas Campus

DRI proposes to install the "Therm-O-Lite Insulating Window System" at its Southern Nevada Science Center (SNSCPI) building located on the Las Vegas DRI Campus.

Background:
The SNSC PI was constructed in 1991 with single pane windows. These windows are very energy inefficient - leading to uncomfortable office temperatures. In addition, the windows have very poor acoustical performance. Given the close proximity of the building to major streets, noise within the offices can be very distracting and a source of complaints as well.

Proposed Project:
DRI has identified a product that adds a second pane of glass to the each window, avoiding the major expense associated with a complete tear-out and replacement of the existing windows.

(a) Length of Time necessary to Commence Project;
Design and bid documents are complete. RFP could advertise in 2-4 weeks.

(b) Estimated Number of Workers Employed on the Project:
The number of workers employed will be at the discretion of the installing contractor, but may be estimated at five to eight workers.

(c) Resultant Energy Savings:
Annual energy cost savings in the approximate range of $10,000-15,000 may be attainable.

(d) Expected Project Cost:
The expected cost to install this system is currently estimated to be approximately $200,000.

(e) Powered by or to otherwise use sources of renewable energy
Yes. Power for the building is partially supplied by "Daystar 1", DRI's Las Vegas Campus 20kW photovoltaic power plant.

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.
No. However, discussions will be initiated with NV Energy to assess potential project qualification under (5) listed above.

2. Laboratory Ventilation Air Heat Recovery System, NNSC, DRI Reno Campus
DRI proposes to install heat exchange coils and piping at its Northern Nevada Science Center (NNSC) building located on the Reno DRI Campus.

Background:
The NNSC was constructed in 1999 with a laboratory ventilation system designed and prepared for a heat recovery system, but because of budget limitations, the system was not fully installed nor made functional.

Proposed Project:
DRI proposes to install heat exchange coils and piping as required to complete the system.

(a) Length of Time necessary to Commence Project;
Design and bid documents must be prepared. RFP could advertise in 6-8 weeks.

(b) Estimated Number of Workers Employed on the Project:
The number of workers employed will be at the discretion of the installing contractor, but may be estimated at four to eight workers.

(c) Resultant Energy Savings:
Annual energy cost savings in the approximate range $20,000-40,000 may be attainable.

(d) Expected Project Cost:
The expected cost to install this system is currently estimated to be approximately $145,000.

(e) Powered by or to otherwise use sources of renewable energy
No.

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.
No. However, discussions will be initiated with NV Energy to assess potential project qualification under (5) listed above.

3. **Weighing Laboratory Heating System, NNSC, DRI Reno Campus**
DRI proposes to add a small boiler to heat the Environmental Analysis Facility - Weighing Laboratory at its Northern Nevada Science Center (NNSC) building located on the Reno DRI Campus.

Background:
The NNSC was constructed in 1999 with a weighing laboratory that requires heat 365 days per year to maintain equipment calibration. The building boiler plant must remain in service all year, resulting in inefficient system operation.

Proposed Project:
DRI proposes to install a small separate boiler and/or solar thermal system for the laboratory, allowing the main boilers to be shut off during the summer.

(a) Length of Time necessary to Commence Project;
Design and bid documents must be prepared. RFP could advertise in 6-8 weeks.

(b) Estimated Number of Workers Employed on the Project:
The number of workers employed will be at the discretion of the installing contractor, but may be estimated at three to six workers.

(c) Resultant Energy Savings:
Annual energy cost savings in the approximate range $5,000-10,000 may be attainable.

(d) Expected Project Cost:
The expected cost to install this system is currently estimated to be approximately $75,000.

(e) Powered by or to otherwise use sources of renewable energy
Yes. Partial solar thermal power may be used to heat the lab.

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.
No. However, discussions will be initiated with NV Energy to assess potential project qualification under (5) listed above.

4. Air Side Economizer, Cord Computer Room, NNSC, DRI Reno Campus
DRI proposes to install a reduced energy use cooling system for the Cord Computer Room at its Northern Nevada Science Center (NNSC) building located on the Reno DRI Campus.

Background:
The Cord Computer Room uses conventional HVAC systems to air condition the Cord Computer Room.

Proposed Project:
DRI proposes to install fans to blow cold outside air (as conditions permit) in to cool the room – this type of system is know as an "air side economizer" and is a well proven technology to reduce energy consumption for cooling.

(a) Length of Time necessary to Commence Project;
Design and bid documents must be prepared. RFP could advertise in 6-8 weeks.

(b) Estimated Number of Workers Employed on the Project:
The number of workers employed will be at the discretion of the installing contractor, but may be estimated at three to six workers.

(c) Resultant Energy Savings:
Annual energy cost savings in the approximate range $10,000-20,000 may be attainable.

(d) Expected Project Cost:
The expected cost to install this system is currently estimated to be approximately $100,000.

(e) Powered by or to otherwise use sources of renewable energy
No.

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.
No. However, discussions will be initiated with NV Energy to assess potential project qualification under (5) listed above.

5. Lab Heat Recovery System, SNSC PI, DRI Las Vegas Campus

DRI proposes to install new controls, piping and valves to renovate an existing lab heat recovery system installed at its' Southern Nevada Science Center (SNSCPI) building located on the Las Vegas DRI Campus

Background:

The SNSC PI was constructed in 1991 with an innovative (for its time) system to recover energy used by the laboratory ventilation system.

Proposed Project:

DRI proposes to install new controls, pumps, valves and piping to optimize the system and return the system to functional status.

(a) Length of Time necessary to Commence Project;

Design and bid documents must be prepared. RFP could advertise in 6-8 weeks.

(b) Estimated Number of Workers Employed on the Project:

The number of workers employed will be at the discretion of the installing contractor, but may be estimated at two to three workers.

(c) Resultant Energy Savings:

Annual energy cost savings in the approximate range $2,000-7,000 may be attainable.

(d) Expected Project Cost:

The expected cost to install this system is currently estimated to be approximately $75,000.

(e) Powered by or to otherwise use sources of renewable energy

No.

(f) Has the Project qualified for participation in one or more of the following programs?

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

No. However, discussions will be initiated with NV Energy to assess potential project qualification under (5) listed above.

6. **High Efficiency Control Retrofit - Lab Fume Hoods, NNSC, DRI Reno Campus**
DRI proposes to install an advanced energy management controls for the laboratory fume hoods, located in its Northern Nevada Science Center (NNSC) building, DRI Reno Campus.

Background:
Advanced energy management systems and controls are available to reduce laboratory energy use.

Proposed Project:
DRI proposes to install advanced energy management controls for the laboratory fume hoods.

(a) Length of Time necessary to Commence Project;
Design and bid documents must be prepared. RFP could advertise in 10-12 weeks.

(b) Estimated Number of Workers Employed on the Project:
The number of workers employed will be at the discretion of the installing contractor, but may be estimated at three to six workers.

(c) Resultant Energy Savings:
Annual energy cost savings in the approximate range $5,000-10,000 per year may be attainable.

(d) Expected Project Cost:
The expected cost to install this system is currently estimated to be approximately $150,000.

(e) Powered by or to otherwise use sources of renewable energy
No.

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.
No. However, discussions will be initiated with NV Energy to assess potential project qualification under (5) listed above.

7. High Efficiency Control Retrofit - Lab Fume Hoods, SNSC PI, DRI Las Vegas Campus

DRI proposes to install advanced energy management controls for the laboratory fume hoods, located in its Southern Nevada Science Center (SNSC PI) building, DRI Las Vegas Campus.

Background:

Advanced energy management systems and controls are available to reduce laboratory energy use.

Proposed Project:

DRI proposes to install advanced energy management controls, fans and air valves for the laboratory fume hoods.

(a) Length of Time necessary to Commence Project;

Design and bid documents must be prepared. RFP could advertise in 10-12 weeks.

(b) Estimated Number of Workers Employed on the Project:

The number of workers employed will be at the discretion of the installing contractor, but may be estimated at ten to fifteen workers.

(c) Resultant Energy Savings:

Annual energy cost savings in the approximate range $20,000-40,000 per year may be attainable.

(d) Expected Project Cost:

The expected cost to install this system is currently estimated to be approximately $500,000.

(e) Powered by or to otherwise use sources of renewable energy

No.

(f) Has the Project qualified for participation in one or more of the following programs?

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

No. However, discussions will be initiated with NV Energy to assess potential project qualification under (5) listed above.

8. **High Efficiency Heat Pumps – Office HVAC system, SNSC PI, DRI Las Vegas Campus**

DRI proposes to replace 20 year old heat water source heat pumps with high efficiency R410 refrigerant heat pumps for the office HVAC system in its Southern Nevada Science Center (SNSC PI) building, DRI Las Vegas Campus.

Background:

The 20 year old heat pumps use refrigerant that is to be phased out and are low efficiency in comparison to new technologies available.

Proposed Project:

DRI proposes to replace 20 year old heat water source heat pumps with high efficiency R410 refrigerant heat pumps.

(a) Length of Time necessary to Commence Project;

Design and bid documents must be prepared. RFP could advertise in 6-8 weeks.

(b) Estimated Number of Workers Employed on the Project:

The number of workers employed will be at the discretion of the installing contractor, but may be estimated at ten to fifteen workers.

(c) Resultant Energy Savings:

Annual energy cost savings in the approximate range $4,000-8,000 per year may be attainable.

(d) Expected Project Cost:

The expected cost to install this system is currently estimated to be approximately $200,000.

(e) Powered by or to otherwise use sources of renewable energy

No.

(f) Has the Project qualified for participation in one or more of the following programs?

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

No. However, discussions will be initiated with NV Energy to assess potential project qualification under (5) listed above.

Nevada State College

Weatherization and Energy Retrofit Projects

SB 152

On August 19, 2008, Nevada State College opened its first permanent structure, the Liberal Arts and Sciences Building, constructed on its 500-acre master planned campus. Given the age of the building, the weatherization and energy retrofit projects are not contemplated for Nevada State College at this time.

College of Southern Nevada
Weatherization and Energy Retrofit Projects
SB 152

1. Cheyenne Campus, Main Building – Exterior Glazing Retrofit

The College recently completed an analysis of the exterior glazing at each campus. The report indicated that a majority of the glazing in the Cheyenne Main Building, Phases I, II and III consisted of single pane glass. CSN would like to complete the following project to provide a more energy efficient building and decrease utility costs.

Scope of work:

1. Replace the existing aluminum single glaze curtain walls with Arcadia's T500 Series Curtain Wall system or equal.
2. Replace the existing single pane glass with Guardian 68 Bronze 1" insulated glass or equal.
3. Replace curtain wall doors with Arcadia's Heavy Wall (wide stile) doors or equal.
4. Replace all hardware for the doors with heavy duty Rixon floor closers and pivots.

Length of time necessary to commence the project:

The project would take approximately 45 days to commence and 12 months to complete construction.

Number of workers estimated to be employed on the project:

It is estimated that this project will employ between 15 and 20 manufacture and construction workers. In addition, it will employ 5 to 8 designers, managers and supervisors.

Estimated Cost of Project:

$3,350,000

Whether the project is able to be powered by renewable energy:

Not Applicable

Whether the project has qualified for participation in one of following programs:

1. Solar Energy Systems Incentive Program created by NRS 701B.240
   Not Applicable
2. The Renewable Energy School Pilot Program created by NRS 701B.350
   Not Applicable
3. The Wind Energy Systems Demonstration Program created by NRSB.580
   Not Applicable
4. The Waterpower Energy Systems Demonstration Program created by NRS 701B.820
   Not Applicable
5. An energy efficiency or energy conservation program offered by a public utility as defined in NRS 704.020
   CSN is currently not aware of any programs at this point.

2. West Charleston Campus, Site – Solar Parking Lot Lighting

Scope of work:

CSN would like to install solar parking lot lighting in the southern parking area of the West Charleston campus. The project consists of installing approximately 18 Carmanah EverGen 1520 Solar Engine fixtures on 30' single arm poles (or approved equal) and will include light fixtures, concrete bases, and installation.

Length of time necessary to commence the project:

The project would take approximately 30 days to commence and 3.5 months to complete construction.

Number of workers estimated to be employed on the project:

It is estimated that this project will employ between 4 to 6 construction workers.

Estimated Cost of Project:

$350,000

Whether the project is able to be powered by renewable energy:

This project will be powered by solar energy.

Whether the project has qualified for participation in one of following programs:

6. Solar Energy Systems Incentive Program created by NRS 701B.240
   Not Applicable
7. The Renewable Energy School Pilot Program created by NRS 701B.350
   Not Applicable
8. The Wind Energy Systems Demonstration Program created by NRSB.580
   Not Applicable
9. The Waterpower Energy Systems Demonstration Program created by NRS 701B.820
   Not Applicable
10. An energy efficiency or energy conservation program offered by a public utility as defined in NRS 704.020
    CSN is currently not aware of any programs at this point.

Truckee Meadows Community College
Weatherization/Energy Retrofit Projects
SB 152

1. Red Mountain Building HVAC Renewal

Background:
The original phase of the Red Mountain building was completed in 1976, followed by Phase III in 1980. The existing systems are original and require frequent repairs. Replacement parts are increasingly difficult to locate and occupants frequently complain of comfort issues. Additionally, the existing equipment is inefficient.

Proposed Project:
Replace the cooling tower, boilers, the HVAC system and controls in the Red Mountain Building.

(a) Length of Time necessary to Commence Project;
Eight to ten weeks to prepare design and bid documents.

(b) Estimated Number of Workers Employed on the Project:
The number of workers shall be determined by the general contractor, however we estimate 15-20 workers.

(c) Resultant Energy Savings: Approximately $75,000 to $100,000 annual energy savings

(d) Expected Project Cost: $2.0 Million

(e) Powered by or to otherwise use sources of renewable energy: No

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

No, however we will inquire with NV Energy for potential participation in program #5 above.

2. Meadowood Center South HVAC Renewal

Background:
The HVAC system in this facility is over 24 years old and requires high levels of maintenance and repair. Replacement parts are difficult to find or are not available. Temperatures are difficult to regulate and building pressure cannot easily be regulated.

Proposed Project:
The project includes replacing all pneumatic controls with direct digital controls, replacing or adding several variable air volume (VAV) boxes and upgrading rooftop package units with more efficient equipment.

(a) Length of Time necessary to Commence Project;
Four to six weeks to prepare design and bid documents.

(b) Estimated Number of Workers Employed on the Project:
The number of workers shall be determined by the general contractor, however we estimate 10-15 workers.

(c) Resultant Energy Savings: Approximately $10,000-$15,000 annual energy saving

(d) Expected Project Cost: $750,000

(e) Powered by or to otherwise use sources of renewable energy: No

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

No, however we will inquire with NV Energy for potential participation in program #5 above.

3. Red mountain Building Partial Re-roof and Solar Power Panel Installation

Background:
A 29,000 S.F. section of roof covering phase IV of the Red Mountain Building is 22 years old and is at the end of its useful life. It is constructed of black rubber with a river rock ballast. During storms the building experiences water leak problems that cause repairs to ceilings, drywall and carpet to be needed.

Proposed Project:
The existing roof system would be replaced with a new solar reflective single-ply roof membrane over a significantly thicker insulation deck than is currently in place with new coping around the perimeter. Supports to hold solar panels would be installed with the new roof. In addition to the replacement of the roof it is proposed to install a solar electric generating system on the new roof area of the Red Mountain Building and a portion of the Sturm Library.

(a) Length of Time necessary to Commence Project;
Three to five weeks to prepare bid documents.

(b) Estimated Number of Workers Employed on the Project:
The number of workers shall be determined by the general contractor, however we estimate 15-20 workers.

(c) Resultant Energy Savings:
The replacement of the roof system would save the college money in material, labor, and energy costs by creating a more efficient building envelope.
Combined, the solar electric generating systems would produce approximately 108,000 kilowatt-hours of power per year which would equate to an estimated $15,000 - $20,000 annual savings in energy costs.

(d)Expected Project Cost:
Roofing $490,000
Solar Electricity Generating System - $480,000
Total Project Cost - $970,000

(e) Powered by or to otherwise use sources of renewable energy
The new solar electric system would incorporate two types of technologies that will best fit the types of roof systems that they are to be installed on. The Red Mountain Building would receive multi-crystalline photo voltaic panels. The existing Sturm Library roof is a standing seam metal roof and would best accommodate a thin film photovoltaic laminate designed for adhesion directly to the metal without the use of racking material.

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

It is anticipated this project would qualify for an approximate $225,000 rebate from NV Energy's solar for schools program. We will inquire with NV Energy for potential participation in any other possible programs listed above.

4. Red Mountain Building Window Replacement and Exterior Insulation Repair

Background:
The exterior walls of the Red Mountain Building are constructed using an exterior insulation and finish system (EIFS), a type of building product that provides exterior walls with an insulated finished surface and water proofing in an integrated composite material system. The ages of the building's walls range from 16 to 33 years. The walls on the West and South side of the building are in disrepair. During storms the building experiences water leaks that seep through the exterior walls causing constant maintenance and repairs to ceilings, drywall, and carpet.
In addition to the problems with the exterior walls numerous of the building's exterior windows are of single pane construction and are not tempered glass. The windows create a safety hazard for occupants as well as providing little thermal insulating value

Proposed Project:
The existing leaking wall system would be overlaid with a new EIFS with enhanced thermal insulating values. Repair of the walls would save the college money in material, labor, and energy costs by creating a more efficient building envelope.
It is proposed that the window replacement be completed in conjunction with the replacement of the EIFS because of the need for significant alterations to the EIFS materials around the window openings. The existing single pane windows would be removed and replaced with dual pane metal frame tinted low E windows. Replacement of the windows would create a safer environment and a more efficient building envelope saving the college energy costs.

(a) Length of Time necessary to Commence Project;
Four to six weeks to prepare bid documents.

(b) Estimated Number of Workers Employed on the Project:
The number of workers shall be determined by the general contractor, however we estimate 15-20 workers.

(c) Resultant Energy Savings: Approximately $30,000-$50,000 annual savings

(d) Expected Project Cost:
EIFS Replacement - $1,250.000
Window Replacement - $220,000
Total Project Cost - $1,470,000

(e) Powered by or to otherwise use sources of renewable energy: No

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.
No, however we will inquire with NV Energy for potential participation in program #5 above.

5. IGT Applied Technology Center HVAC Replacement / DDC Controls

Background:
Many of the major HVAC components in the IGT Applied Technology Center are over 33 years old and require constant maintenance and repair. Repair parts are difficult to find or not available.

Proposed Project:
The project proposes to replace the oldest components including a 20 ton multi-zone roof top unit and installing new direct digital controls to all major HVAC components. New equipment combined with the controls will be much more energy efficient.

(a) Length of Time necessary to Commence Project;
Three to five weeks to prepare bid documents.

(b) Estimated Number of Workers Employed on the Project:
The number of workers shall be determined by the general contractor, however we estimate 10-15 workers.

(c) Resultant Energy Savings: Approximately $7,000- $12,000 annual savings

(d) Expected Project Cost: $300,000

(e) Powered by or to otherwise use sources of renewable energy: No
Yes, power for this building is partially supplied by our 10 KW solar teaching lab.

(f) Has the Project qualified for participation in one or more of the following programs?
(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;
(2) The Renewable Energy School Pilot Program created by NRS 701B.350;
(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;
(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

No, however we will inquire with NV Energy for potential participation in program #5 above.

Western Nevada College
Weatherization/Energy Retrofit Projects
SB 152

1. **WNC HVAC ALC Energy Control Update**
   (a) The length of time necessary to commence project: Within 30 days
   (b) The number of workers estimated to be employed on the project: 12
   (c) The effectiveness of the project in reducing energy consumption: The replacement of existing Alerton controls in the Cedar, Bently Hall (Douglas Campus) and High Tech Center with energy efficient ALC controls that match an existing campus master control system will result in reduction in annual energy consumption
   (d) The estimated cost of the project: $225,000
   (e) Whether the project is able to be powered by, or to otherwise use sources of renewable energy: No
   (f) Whether the project has qualified for participation on one or more the following programs: No
      1. The Solar Energy Systems Incentive Program created by NRS 701B.240:
      2. The Renewable Energy School Pilot Program created by NRS 701B.350;
      3. The Wind Energy Systems Demonstration Program created by NRS 701B.580;
      4. The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
      5. An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

2. **WNC Window Replacements**
   (a) The length of time necessary to commence project: Within 60 days
   (b) The number of workers estimated to be employed on the project: 8
   (c) The effectiveness of the project in reducing energy consumption: The building envelope currently loses building heating and cooling due to single-pane windows. The window replacements will also protect the buildings' interiors from any infiltration. Window units will be replaced in the following campus facilities: Sage, Ghetto, and Pinion Halls (Fallon Campus); Child Development Center, Reynolds, Aspen, Cedar, and Bristlecone (Carson Campus)
   (d) The estimated cost of the project: $1,500,000
   (e) Whether the project is able to be powered by, or to otherwise use sources of renewable energy: No
   (f) Whether the project has qualified for participation on one or more the following programs: No
      1. The Solar Energy Systems Incentive Program created by NRS 701B.240:
      2. The Renewable Energy School Pilot Program created by NRS 701B.350;
      3. The Wind Energy Systems Demonstration Program created by NRS 701B.580;
      4. The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
      5. An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

3. **WNC Roof-top HVAC Unit Replacements**
   (a) The length of time necessary to commence project: Within 60-90 days
   (b) The number of workers estimated to be employed on the project: 10
   (c) The effectiveness of the project in reducing energy consumption: Replacement of existing, antiquated (10-plus year old units) with current technology. Energy efficient units will be replaced on Sage, Pinion, Ghetto, Child Development Center, Reynolds, and Aspen buildings.
   (d) The estimated cost of the project: $2,000,000

(e) Whether the project is able to be powered by, or to otherwise use sources of renewable energy: No

(f) Whether the project has qualified for participation on one or more the following programs: No

1. The Solar Energy Systems Incentive Program created by NRS 701B.240:
2. The Renewable Energy School Pilot Program created by NRS 701B.350;
3. The Wind Energy Systems Demonstration Program created by NRS 701B.580;
4. The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
5. An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

4. WNC Energy Efficient Blinds

(a) The length of time necessary to commence project: Within 30 days

(b) The number of workers estimated to be employed on the project: 3

(c) The effectiveness of the project in reducing energy consumption: Install heat and cooling loss prevention blinds in the following buildings: Aspen, Pinion, Ghetto, Reynolds, Cedar, Bristlecone, Child Development Center, and Dini Library/Student Center.

(d) The estimated cost of the project: $250,000

(e) Whether the project is able to be powered by, or to otherwise use sources of renewable energy: No

(f) Whether the project has qualified for participation on one or more the following programs: No

1. The Solar Energy Systems Incentive Program created by NRS 701B.240:
2. The Renewable Energy School Pilot Program created by NRS 701B.350;
3. The Wind Energy Systems Demonstration Program created by NRS 701B.580;
4. The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
5. An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

5. WNC Roof Replacements

(a) The length of time necessary to commence project: Within 60 days

(b) The number of workers estimated to be employed on the project: 15

(c) The effectiveness of the project in reducing energy consumption: Design and replace roofs in the following campus facilities: Aspen, Bristlecone, Pinion, and Ghetto. There would be a limited reduction in energy consumption based on improved energy performance of the roofing membrane, insulation, and substrate.

(d) The estimated cost of the project: $600,000

(e) Whether the project is able to be powered by, or to otherwise use sources of renewable energy: No

(f) Whether the project has qualified for participation on one or more the following programs: No

1. The Solar Energy Systems Incentive Program created by NRS 701B.240:
2. The Renewable Energy School Pilot Program created by NRS 701B.350;
3. The Wind Energy Systems Demonstration Program created by NRS 701B.580;
4. The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or
5. An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

Great Basin College
Weatherization and Energy Retrofit Projects
SB 152

Building	Project Description	Length of time to commence project	Number of workers estimated to be employed on the project	Effectiveness of Reducing Energy Consumption	Estimated Cost	Powered by or use sources of renewable energy	Qualified to participate in one or more programs
1. Dorms & Student Housing	Install solar lighting poles in parking lots at housing	As soon as bidding and contract process is completed	4	Unknown, due to the fact that there is currently no lighting currently, which is a safety concern	40,000.00	Yes, solar	No, discussions being undertaken to determine the potential participation of this project
2. Dorms & Student Housing (College Parkway & Walnut)	Blankets for water heaters, weatherstripping, caulking around windows, door seals, outlet packing, dryer vents, sealing around A/C units and A/C unit covers (estimated cost only includes materials)	As soon as bidding and contract process is completed	4	10% reduction of current energy costs	7,500.00	No	No, discussions being undertaken to determine the potential participation of this project
3. Elko Campus Buildings	Inspect all campus buildings and replace door seals, and caulking	As soon as bidding and contract process is completed	4	10% reduction of current energy costs	25,000.00	No	No, discussions being undertaken to determine the potential participation of this project
4. Winnemucca Building	Replace controls for HVAC system with a computerized system	As soon as existing bid is approved	3	35% reduction of current energy costs	82,000.00	No	No, discussions being undertaken to determine the potential participation of this project
5. Elko Community Center	Replace boilers	At least 90 days out, waiting on bidding process and adequate progress on community center remodel project which is currently underway	6	30% reduction of current energy costs	100,000.00	No	No, discussions being undertaken to determine the potential participation of this project
6. Griswold Residence Hall	Replace roof, roof insulation, and HVAC units	As soon as bidding and contract process is completed	12	25% reduction of existing energy consumption due to existing HVAC units being at least 20 years old and at the end of their life span, and increase of Rvalue of the new insulation	175,000.00	No	No, discussions being undertaken to determine the potential participation of this project

Senate Bill No. 152–Senators Horsford, Schneider, Carlton, Breeden, Wiener; Copening and Woodhouse

Joint Sponsors: Assemblymen Buckley, Oceguera, Conklin, Kirkpatrick, Bobzien; and Leslie

CHAPTER.....

AN ACT relating to energy; providing for the training of persons to perform jobs which promote energy efficiency; requiring governmental entities to perform certain functions to promote energy efficiency; and providing other matters properly relating thereto.

Legislative Counsel's Digest:

This bill provides for the use of the incentives contained in the recently signed federal American Recovery and Reinvestment Act of 2009 to provide job training, the promotion of energy efficiency and the promotion of the use of renewable energy in Nevada. **Sections 9 and 10** of this bill seek to take advantage of those incentives by providing specific training to persons in this State, establishing projects that will require the skills for which those persons are trained and providing for the employment of those persons. **Section 9** requires the Department of Employment, Training and Rehabilitation and the Housing Division of the Department of Business and Industry to establish contractual relationships with nonprofit collaboratives to provide training in the fields of energy efficiency and renewable energy, including training in the areas of weatherization, energy retrofit applications and performing energy audits. Within the limits of available money, the collaboratives will carry out programs for job training and provide apprenticeship programs in specific energy-related fields. Within the limits of money available, the Housing Division is required to contract with the nonprofit collaboratives, governmental entities, community action agencies and other nonprofit corporations to identify neighborhoods that will qualify for funding for residential weatherization projects and award contracts for projects to promote energy efficiency through residential weatherization. Such contracts awarded must provide for employing the persons trained by the nonprofit collaborative for this purpose, paying those employees prevailing wages and offering the employees and their dependents health care insurance.

Section 10 of this bill requires the State Public Works Board, the board of trustees of each school district and the Board of Regents of the University of Nevada, within 90 days after the effective date of this bill, to each establish projects to weatherize and retrofit public buildings, facilities and structures in this State, including without limitation, traffic-control systems, and to otherwise use sources of renewable energy to serve those buildings, facilities and structures. **Section 10** further sets forth criteria for prioritizing those projects. Those entities are further required to enter into contracts for the projects as soon as practicable. Such contracts are required to provide that employees of the contractors and subcontractors on the project be paid prevailing wages, that the contractor or subcontractor employ a certain number of employees trained by a nonprofit cooperative and pay them prevailing wages and that the contractor offer employees on the project and their dependents health care insurance.

Section 11 of this bill provides that within the limits of money available, the State Public Works Board and the Division of State Parks of the State Department

of Conservation and Natural Resources shall conduct studies to determine the feasibility of carrying out certain projects for providing alternative sources of energy in this State.

Section 12 of this bill requires the Labor Commissioner to adopt the job classifications and wage rates established by the Federal Government for certain jobs relating to residential weatherization and to enforce those job classifications and wage rates in the same manner that he enforces the labor laws and regulations of this State generally.

Section 13 of this bill requires the Office of Energy within the Office of the Governor, the Department of Employment, Training and Rehabilitation and the Housing Division of the Department of Business and Industry to report to the Interim Finance Committee concerning the application for and acceptance and expenditure of any money available to the State to carry out the purposes of this bill pursuant to the American Recovery and Reinvestment Act of 2009, Public Law 111-5.

WHEREAS, The unemployment rate in the State of Nevada is currently 9.1 percent and is expected to reach 11.4 percent sometime during 2009; and

WHEREAS, Many of Nevada's 128,000 unemployed residents have lost jobs in the construction and service sectors as the construction industry has faltered as a result of the mortgage foreclosure crisis and as the service industry, including gaming and tourism, has faltered as a result of the curtailment of discretionary spending on a national level; and

WHEREAS, One of the most effective methods of returning unemployed Nevadans to work is to create "green jobs" by developing new industries in this State in a manner that takes advantage of incentives offered by the Federal Government for job training, the promotion of energy efficiency and the promotion of the use of renewable energy; and

WHEREAS, An immediate step which may be taken to put Nevadans back to work is to coordinate job training with programs for weatherization and energy efficiency that are part of the recently enacted federal economic stimulus package; and

WHEREAS, In such a manner, unemployed Nevadans may learn new skills in fields such as energy auditing and the installation of energy efficient equipment and improvements, and then go to work performing such tasks as performing energy audits, weatherizing homes, retrofitting public buildings, helping lower-income Nevadans to save on their utility bills, and reducing energy costs for schools, government buildings and other public facilities; and

WHEREAS, The performance of energy audits is a critical component of ensuring that the weatherization of homes results in meaningful reductions in energy costs to Nevadans; and

WHEREAS, The average energy auditor can perform 500 energy audits of residences per year; and

WHEREAS, The money available through the recently enacted federal economic stimulus package can be used to ensure that many Nevadans are trained in the skills necessary to perform energy audits thereby resulting in the performance of many thousands of energy audits of residences in Nevada; and

WHEREAS, The Green Jobs Initiative can be accomplished through a public-private partnership that combines the resources of state agencies, local housing authorities, institutions of higher education, joint labor-management partnerships, apprenticeship programs and private contractors under the "umbrella" of a nonprofit collaborative; and

WHEREAS, The Green Jobs Initiative would function to establish programs to provide job training and outreach for the weatherization and retrofitting of buildings and facilities in northern Nevada, southern Nevada and rural Nevada; now, therefore,

THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. Chapter 701B of NRS is hereby amended by adding thereto the provisions set forth as sections 2 to 10, inclusive, of this act.

Sec. 2. ***Sections 2 to 10, inclusive, of this act may be cited as the Green Jobs Initiative.***

Sec. 3. ***As used in sections 2 to 10, inclusive, of this act, unless the context otherwise requires, the words and terms defined in sections 4 to 8, inclusive, of this act have the meanings ascribed to them in those sections.***

Sec. 4. ***"Department" means the Department of Employment, Training and Rehabilitation.***

Sec. 5. ***"Division" means the Housing Division of the Department of Business and Industry.***

Sec. 6. ***1. "Renewable energy" means a source of energy that occurs naturally or is regenerated naturally, including, without limitation:***

(a) Biomass;
(b) Fuel cells;
(c) Geothermal energy;
(d) Solar energy;
(e) Waste heat;
(f) Waterpower; and
(g) Wind.

2. The term does not include coal, natural gas, oil, propane or any other fossil fuel, or nuclear energy.

Sec. 7. *"Retrofitting" means the alteration, improvement, modification, remodeling or renovation of a building, facility, residence or structure to make that building, facility, residence or structure more energy efficient.*

Sec. 8. *"Weatherization" means materials or measures, and their installation, that are used to improve the thermal efficiency of a building, facility, residence or structure.*

Sec. 9. *1. The Department of Employment, Training and Rehabilitation and the Housing Division of the Department of Business and Industry shall establish contractual relationships with one or more nonprofit collaboratives to carry out the State's mission of creating new jobs in the fields of energy efficiency and renewable energy by combining job training with weatherization, energy retrofit applications or the development of renewable energy plants.*

2. To qualify as a nonprofit collaborative for the purposes of this section, a nonprofit entity:

(a) Must enter into a written agreement relating to job training and career development activities with:

(1) A labor management agency or other affiliated agency which has established an apprenticeship program that is registered and approved by the State Apprenticeship Council pursuant to chapter 610 of NRS; and

(2) A community college or another institution of higher education; and

(b) Must conduct or have the ability to conduct training programs in at least one of the three geographic regions of this State, including southern Nevada, northern Nevada and rural Nevada.

➥ Such a nonprofit entity may also enter into a written agreement relating to job training and career development activities with a trade association which has an accredited job skills training program.

3. Within the limits of money available to the Department for this purpose, the Department shall contract with one or more qualified nonprofit collaboratives to:

(a) Carry out programs for job training in fields relating to energy efficiency and the use of renewable energy.

(b) In concert with a labor management agency or other affiliated agency which has established an apprenticeship program that is registered and approved by the State

Apprenticeship Council pursuant to chapter 610 of NRS, develop apprenticeship programs to train laborers in skills related to:

(1) The implementation of energy efficiency measures.

(2) The use of renewable energy.

(3) Performing audits of the energy efficiency of buildings, facilities, residences and structures.

(4) The weatherization of buildings, facilities, residences and structures.

(5) The retrofitting of buildings, facilities, residences and structures.

(6) The construction and operation of centralized renewable energy plants.

(7) The manufacturing of components relating to work performed pursuant to subparagraphs (1) to (6), inclusive.

4. The job training described in subsection 3 must be sufficiently detailed to allow workers, as applicable, to perform:

(a) The services set forth in NRS 702.270.

(b) The services set forth in NRS 618.910 to 618.936, inclusive.

(c) Such other vocational or professional services, or both, as the Department deems appropriate.

5. Funding provided for the job training described in subsection 3:

(a) Must, to the extent money is available for the purpose, include the cost of tuition and supplies.

(b) May include a cost-of-living stipend which may or may not be in addition to any available unemployment compensation.

6. Within the limits of money available to the Division for the purpose, the Division shall contract with one or more governmental entities, community action agencies or nonprofit organizations, including, without limitation, qualified nonprofit collaboratives, to:

(a) Identify, in different regions of the State, neighborhoods that will qualify for funding for residential weatherization projects pursuant to federal programs focusing on residential weatherization; and

(b) Issue requests for proposals for contractors and award contracts for projects to promote energy efficiency through weatherization. Any such requests for proposals and contracts must include, without limitation:

(1) Provisions stipulating that all employees of the outside contractors who work on the project must be paid prevailing wages;

(2) Provisions requiring that each outside contractor:

(I) Employ on each such project a number of persons trained as described in paragraph (b) of subsection 3 that is equal to or greater than 50 percent of the total workforce the contractor employs on the project; or

(II) If the Director of the Department determines in writing, pursuant to a request submitted by the contractor, that the contractor cannot reasonably comply with the provisions of sub-subparagraph (I) because there are not available a sufficient number of such trained persons, employ a number of persons trained as described in paragraph (b) of subsection 3 or trained through any apprenticeship program that is registered and approved by the State Apprenticeship Council pursuant to chapter 610 of NRS that is equal to or greater than 50 percent of the total workforce the contractor employs on the project;

(3) A component pursuant to which persons trained as described in paragraph (b) of subsection 3 must be classified and paid prevailing wages depending upon the classification of the skill in which they are trained; and

(4) A component that requires each contractor to offer to employees working on the project, and to their dependents, health care in the same manner as a policy of insurance pursuant to chapters 689A and 689B of NRS or the Employee Retirement Income Security Act of 1974.

7. The Department and the Division:

(a) Shall apply for and accept any grant, appropriation, allocation or other money available pursuant to:

(1) The Green Jobs Act of 2007, 29 U.S.C. § 2916(e); and

(2) The American Recovery and Reinvestment Act of 2009, Public Law 111-5; and

(b) May apply for and accept any other available gift, grant, appropriation or donation from any public or private source,

➥ to assist the Department and the Division in carrying out the provisions of this section.

8. The Department and the Division shall each report to the Interim Finance Committee at each meeting held by the Interim Finance Committee with respect to the activities in which they have engaged pursuant to this section.

9. As used in this section, "community action agencies" means private corporations or public agencies established pursuant to the Economic Opportunity Act of 1964, Public Law 88-452, which are authorized to administer money received from federal, state, local or private funding entities to assess, design, operate, finance and oversee antipoverty programs.

Sec. 10. *1. The State Public Works Board shall, within 90 days after the effective date of this act, determine the specific projects to weatherize and retrofit public buildings, facilities and structures, including, without limitation, traffic-control systems, and to otherwise use sources of renewable energy to serve those buildings, facilities and structures pursuant to the provisions of this section and section 9 of this act. The projects must be prioritized and selected on the basis of the following criteria:*

(a) The length of time necessary to commence the project.

(b) The number of workers estimated to be employed on the project.

(c) The effectiveness of the project in reducing energy consumption.

(d) The estimated cost of the project.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy.

(f) Whether the project has qualified for participation in one or more of the following programs:

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

(2) The Renewable Energy School Pilot Program created by NRS 701B.350;

(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

2. The board of trustees of each school district shall, within 90 days after the effective date of this act, determine the specific projects to weatherize and retrofit public buildings, facilities and structures, including, without limitation, traffic-control systems, and to otherwise use sources of renewable energy to serve those buildings, facilities and structures pursuant to the provisions of this section and section 9 of this act. The projects must be prioritized and selected on the basis of the following criteria:

(a) The length of time necessary to commence the project.

(b) The number of workers estimated to be employed on the project.

(c) The effectiveness of the project in reducing energy consumption.

(d) The estimated cost of the project.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy.

(f) Whether the project has qualified for participation in one or more of the following programs:

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

(2) The Renewable Energy School Pilot Program created by NRS 701B.350;

(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

3. The Board of Regents of the University of Nevada shall, within 90 days after the effective date of this act, determine the specific projects to weatherize and retrofit public buildings, facilities and structures, including, without limitation, traffic-control systems, and to otherwise use sources of renewable energy to serve those buildings, facilities and structures pursuant to the provisions of this section and section 9 of this act. The projects must be prioritized and selected on the basis of the following criteria:

(a) The length of time necessary to commence the project.

(b) The number of workers estimated to be employed on the project.

(c) The effectiveness of the project in reducing energy consumption.

(d) The estimated cost of the project.

(e) Whether the project is able to be powered by or to otherwise use sources of renewable energy.

(f) Whether the project has qualified for participation in one or more of the following programs:

(1) The Solar Energy Systems Incentive Program created by NRS 701B.240;

(2) The Renewable Energy School Pilot Program created by NRS 701B.350;

(3) The Wind Energy Systems Demonstration Program created by NRS 701B.580;

(4) The Waterpower Energy Systems Demonstration Program created by NRS 701B.820; or

(5) An energy efficiency or energy conservation program offered by a public utility, as defined in NRS 704.020, pursuant to a plan approved by the Public Utilities Commission of Nevada pursuant to NRS 704.741.

4. As soon as practicable after an entity described in subsections 1, 2 and 3 selects a project, the entity shall proceed to enter into a contract with one or more contractors to perform the work on the project. The request for proposals and all contracts for each project must include, without limitation:

(a) Provisions stipulating that all employees of the contractors and subcontractors who work on the project must be paid prevailing wages pursuant to the requirements of chapter 338 of NRS;

(b) Provisions requiring that each contractor and subcontractor employed on each such project:

(1) Employ a number of persons trained as described in paragraph (b) of subsection 3 of section 9 of this act that is equal to or greater than 50 percent of the total workforce the contractor or subcontractor employs on the project; or

(2) If the Director of the Department determines in writing, pursuant to a request submitted by the contractor or subcontractor, that the contractor or subcontractor cannot reasonably comply with the provisions of subparagraph (1) because there are not available a sufficient number of such trained persons, employ a number of persons trained as described in paragraph (b) of subsection 3 of section 9 of this act or trained through any apprenticeship program that is registered and approved by the State Apprenticeship Council pursuant to chapter 610 of NRS that is equal to or greater than 50 percent of the total workforce the contractor or subcontractor employs on the project;

(c) A component pursuant to which persons trained as described in paragraph (b) of subsection 3 of section 9 of this act must be classified and paid prevailing wages depending upon the classification of the skill in which they are trained; and

(d) A component that requires each contractor or subcontractor to offer to employees working on the project, and to their dependents, health care in the same manner as a policy of insurance pursuant to chapters 689A and 689B of NRS or the Employee Retirement Income Security Act of 1974.

5. The State Public Works Board, each of the school districts and the Board of Regents of the University of Nevada shall each

provide a report to the Interim Finance Committee which describes the projects selected pursuant to this section and a report of the dates on which those projects are scheduled to be completed.

Sec. 11. Within limits of money available for the purpose:

1. The State Public Works Board shall conduct a study to determine the feasibility of using geothermal resources to provide heating to all or a portion of the Lovelock Correctional Center.

2. The Division of State Parks of the State Department of Conservation and Natural Resources shall conduct a study to determine the feasibility of:

(a) Constructing a hydroelectric generation unit at the existing dam on the South Fork Reservoir near Elko, Nevada.

(b) Constructing wind turbines in the vicinity of the South Fork Reservoir near Elko, Nevada.

Sec. 11.5. Upon the approval of any contract entered into by the Housing Division of the Department of Business and Industry pursuant to section 9 of this act, the State Board of Examiners shall immediately transmit a copy of the contract to the Director of the Legislative Counsel Bureau for transmittal to the Legislative Commission.

Sec. 12. For the purposes of the State in carrying out the provisions of section 9 of this act governing residential weatherization in compliance with section 1606 of the American Recovery and Reinvestment Act of 2009, Public Law 111-5, and notwithstanding any other provision of state law:

1. The Labor Commissioner shall, on the effective date of this act, for each locality in this State for which the Labor Commissioner has not already established job classifications and wage rates pursuant to state law, adopt the job classifications and wage rates relating to residential weatherization established for that locality pursuant to the most current provisions of federal law or, if such job classifications and wage rates have not been established for that locality, the job classifications and wage rates for the closest locality, whether or not in Nevada, for which such job classifications and wage rates have been established, which are necessary to carry out the provisions of section 9 of this act;

2. The Labor Commissioner shall enforce the job classifications and wage rates adopted pursuant to subsection 1 in the same manner as the Labor Commissioner is authorized to enforce the labor laws and regulations of this State generally; and

3. The provisions of NRS 233B.040 to 233B.120, inclusive, do not apply to the adoption by the Labor Commissioner of the job classifications and wage rates required pursuant to subsection 1.

Sec. 13. 1. The Office of Energy within the Office of the Governor, the Department of Employment, Training and Rehabilitation and the Housing Division of the Department of Business and Industry shall report to the Interim Finance Committee as required by the Committee concerning the application for and acceptance and expenditure of any money available to the State to carry out the purposes of this act pursuant to the American Recovery and Reinvestment Act of 2009, Public Law 111-5.

2. As part of each report required pursuant to subsection 1, the Housing Division of the Department of Business and Industry shall provide a written statement to the Interim Finance Committee concerning:

(a) The number of energy audits of residences performed pursuant to section 9 of this act for the period since the previous such report;

(b) The energy savings for residences resulting from the weatherization projects carried out pursuant to section 9 of this act; and

(c) Any other information required by the Interim Finance Committee.

Sec. 14. This act becomes effective upon passage and approval.