

**MINUTES  
for the  
SECOND MEETING  
of the  
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE**

**August 6-7, 2009  
National Museum of Nuclear Science and History  
601 Eubank SE  
Albuquerque**

The second meeting of the Radioactive and Hazardous Materials Committee for 2009 was called to order by Senator Richard C. Martinez, chair, on August 6, 2009 at 9:17 a.m. in the National Museum of Nuclear Science and History in Albuquerque.

**Present**

Sen. Richard C. Martinez, Chair  
Rep. John A. Heaton, Vice Chair  
Sen. Vernon D. Asbill  
Sen. Stephen H. Fischmann  
Rep. William J. Gray  
Sen. Carroll H. Leavell  
Rep. Jim R. Trujillo  
Sen. David Ulibarri  
Rep. Jeannette O. Wallace

**Absent**

Rep. Antonio Lujan  
Sen. John Pinto  
Rep. Jeff Steinborn

**Advisory Members**

Sen. Rod Adair  
Rep. Thomas A. Anderson  
Rep. Donald E. Bratton  
Sen. Dianna J. Duran  
Sen. Lynda M. Lovejoy (8/6)  
Rep. Nick Salazar

Rep. Eliseo Lee Alcon  
Sen. Gay G. Kernan  
Rep. Rodolpho "Rudy" S. Martinez  
Sen. William H. Payne

**Guest Legislator**

Rep. Miguel P. Garcia (8/6)

(Attendance dates are noted for those members not present for the entire meeting.)

**Staff**

Gordon Meeks  
Mark Harben

## **Thursday, August 6**

### **Call to Order**

Senator Martinez welcomed the committee and audience and thanked the museum for holding the meeting. The committee members introduced themselves.

Senator Timothy M. Keller was recognized by Senator Martinez. Senator Keller provided a background and history of his district, which is where the museum is located. He said that there has been a concerted effort to create more business and improve the infrastructure of this area. He discussed the refugee housing, which has 9,000 refugees from Africa and around the world, along with the revitalization of what was once known as the "war zone" and is now the "international district".

### **Climate Change**

Dave Kessel, senior manager at Sandia National Laboratories (SNL), Carlsbad Program Group, provided the committee with a brief background and history of SNL. He said the core purpose of SNL today is to help the nation secure a peaceful world utilizing technology. There are five areas that SNL focuses on: protecting infrastructure; limiting nuclear proliferation and protecting nuclear stockpiles; developing technological advancements; helping defend the nation against terrorism; and ensuring the stability of the nation's water and energy supplies. Mr. Kessel said that SNL has a presence in many places other than the main location in Albuquerque, including: Carlsbad, New Mexico; Livermore, California; and Las Vegas, Nevada. Mr. Kessel provided information about budgets for SNL and told the committee about the many programs SNL participates in to help the community.

Rush D. Robinett, SNL, discussed energy issues with the committee. He discussed the problems of not having sufficient storage and transmission of renewable energy in New Mexico. He said that the optimal storage structure for energy is fuel; renewable energy will, as a result of poor storage, lead to an increase in cost of 20% to 80%.

### **Climate Change Impacts**

Dr. David Raymond, New Mexico Institute of Mining and Technology, discussed the impacts of climate change. He said that there has been an increase of atmospheric carbon dioxide, and he discussed global warming. Dr. Raymond said that in the last 100 years, global land surface temperatures increased by about 1.2 degrees Celsius, with higher increases at higher northern latitudes, and .7 degree Celsius increases of global sea surfaces. He explained that atmospheric water vapor is also increasing, along with carbon dioxide, and is the most important greenhouse gas. According to Dr. Raymond, there have been earlier global thaws and later frosts; arctic sea ice is thinning and covering less area; and ice loss in Greenland has been significant over the last 15 years. He asserted that the balance of evidence, which includes physics, observations and models, indicates that human-generated global warming is real and significant. Dr. Raymond also discussed the impacts on global rainfalls. Regarding New Mexico, he said the most important direct effect on the state is likely on the average to be less

winter snowpack and a less reliable water supply; uncertainty of summer rains; and expected drought.

Dr. Tom McGuckin, New Mexico State University (NMSU), told the committee that becoming more environmentally efficient and friendly is very costly. Changing systems and people's behaviors will be extremely expensive and hard to "sell". Without a change, however, the results may be disastrous, but the extent of the disaster is unknown. Dr. McGuckin said there are options to reduce greenhouse gases, which include cap and trade, carbon taxes and regulatory control. Dr. McGuckin discussed the plans and progress of NMSU's carbon footprint program.

### **Added to the Agenda: Energy Demand and State Energy Policy**

Glen Anderson, National Conference of State Legislatures, provided an overview of the energy demands of states until 2030. He said that the "business as usual" model is changing. As examples, he cited Xcel Energy closing coal plants in Denver and Grand Junction, Colorado, because it is the first time a voluntary closure for emissions has taken place. He gave figures for energy demand projections from 2007 to 2030, illustrating a decrease of energy demand. Mr. Anderson said that renewable energy demand and consumption will increase, with an anticipated decrease in fossil fuels. He did remind the committee that these projections do not take into account any future policy changes that would affect demand and consumption. According to Mr. Anderson, residential electricity use will increase by 24% by 2030, and he provided statistics of energy consumption increases for industries as well. He discussed energy demand projections and the effects they have on climate change.

### **New Mexico Renewable Energy Transmission Authority Status Report**

Jeremy Turner, director of the New Mexico Renewable Energy Transmission Authority (RETA), discussed the RETA. He said that it is the nation's first state-level financing authority whose primary focus is developing renewable energy-related transmission infrastructure and storage projects. Mr. Turner discussed the RETA's role in financing transmission and storage projects, which include revenue bonds payable from the revenues generated by the development; assisting with issues of sites through eminent domain power; and funding technologies that convert, store and return electricity to help alleviate disparities between electric supply and demand. According to Mr. Turner, the RETA's first project is a 100 megawatt (MW) wind farm in Torrance County known as High Lonesome Wind Ranch, LLC, which has a total projected revenue of approximately \$580 million over the life of the farm, compared to \$219 million of operating expenses. He said that the estimated financing from the RETA is \$34 million. Mr. Turner also explored the green grid initiative and the collector systems of Public Service Company of New Mexico (PNM), SunZia and Integrated Transmission Solutions.

### **Electricity Demand Expectations and Integrated Resource Planning**

Michael D'Antonio, PNM, introduced Jim Ferland, who gave a presentation to the committee.

Mr. Ferland, senior vice president of utility operations of PNM, said that it takes a long time to build a new power plant. He said there are issues that must be evaluated such as the cost

of fuel, new renewable energies and unknown factors such as policy changes. The integrated resource planning (IRP) process was completed recently, which utilized the concerns and needs of customers, the company and other groups. The IRP four-year action plan seeks to promote demand of side resources; add natural gas resources (added Luna County and Lordsburg this year); monitor opportunities for Palo Verde leases; expand distributed generation; and add renewable resources. Mr. Ferland discussed near-term proposed renewable energies, including: utility scale renewables (70 MWs or more of solar and wind); distributed renewables (small on-site, individual solar devices within the system); biogas; and wind purchase.

### **Transmission Challenges**

Teresa Mogensen, director of transmission business relations for Xcel Energy, provided a background of Xcel's perspective on transmission. She said Xcel wants a transmission system that is adequate and reliable; aligns with regulators and policymakers; and integrates intermittent renewable energy sources into the grid. Ms. Mogensen highlighted key issues, including: what transmission is needed; renewable resource/climate drivers; who should plan and who should pay; and jurisdictions, such as state, regional and federal areas. She explained the SPS transmission system, Xcel's territory and the different grids within the United States. According to Ms. Mogensen, transmission planning drivers include load growth rate; regional economic conditions; systems interconnections; regulatory and environmental considerations; and stakeholder concerns.

She examined cost recovery issues such as regulatory lag where there is a cost difference between the time period when cost occurred and the time period when rates are implemented to recover those costs. Ms. Mogensen remarked that there is a need for supportive regulation to encourage ongoing investment in transmission infrastructure and that regulatory lag increases investment risk. She also explored stakeholder concerns, saying customers and regulators are concerned about impacts on rates, along with the transmission access of new energy resources such as new wind energy developers. Ms. Mogensen discussed what should be done to gain acceptance of renewable energy, including: establishing a clear need; aligning public policy objectives and public utility obligations; building an investment-enabling environment; focusing on high returns with low risks; presenting a clear path to cost recovery; and establishing collaborative planning and project development.

The committee recessed at 4:09.

### **Friday, August 7**

The committee was called to order at 9:03 a.m. by Senator Martinez. Senator Ulibarri wanted the record to show an amendment, and Senator Duran seconded the amendment. Senator Leavell made a motion to approve the minutes; after Representative Bratton seconded the motion, the committee approved the minutes.

### **Global Energy Security: Dynamic Modeling**

Arnold Baker, SNL, discussed global energy security. He explained an energy futures model that illustrates a sharp rise in global demand for oil, natural gas, coal and other energy sources. Mr. Baker also told the committee that world carbon emissions will rise extremely high. He described a scenario in which increasing the United States' use of nuclear power will decrease demand of natural gas and coal, but not necessarily oil (it is not often used for electricity). Not only will demand for other energies drop, so too would carbon emissions. Mr. Baker said that if the global carbon emissions problem is going to be solved, there must be technologies and programs to ensure the rest of the world, including the developing world and China, will adopt those technologies and programs.

He also explored costs of various alternative energy sources such as solar and wind energy. Mr. Baker examined alternative liquid fuels such as corn and ethanol, including their costs and efficiency. He said that corn ethanol, which takes up a lot of arable land to produce, could dominate the corn production of the United States, thus threatening corn production of corn for food. If corn ethanol made up 25% of U.S. oil consumption, it would take up 37% of the country's arable land and would dominate 93% of corn production, leaving only 7% for food and other uses. Mr. Baker said there are many options for liquid fuel for transportation and coal to liquid should be examined — the United States is to coal what Saudi Arabia is to petroleum — and what subsidies are given out for different alternative fuel programs should be considered carefully.

### **Federal Stimulus-Funded Clean Energy Initiatives**

Fernando Martinez, Energy, Minerals and Natural Resources Department (EMNRD), discussed the federal stimulus package and how it relates to New Mexico energy. He said that New Mexico will have federal grants to achieve increases in energy efficiency to reduce energy costs and consumption for consumers, businesses and government; to reduce reliance on imported energy; to improve the reliability of electricity and fuel supply and the delivery of energy services; and to reduce the impact of energy production and use on the environment. Mr. Martinez explored the status and distribution of the stimulus funds. He said New Mexico's American Recovery and Reinvestment Act of 2009 (ARRA) State Energy Plan (SEP) was approved by the Department of Energy (DOE) on July 10 with special conditions for NEPA compliance for certain activities. The total ARRA SEP award for New Mexico is \$31,821,000, but it is being disbursed in several allocations; to date, the total awarded is \$15,910,000. According to Mr. Martinez, funding opportunities will be available in both the public and private sectors, but information on jobs created or saved will not be known until the GSAs and PSAs for selected projects are complete or further federal guidance is received.

Mr. Martinez discussed the energy efficiency and conservation block grant program. He said that the program will work to create and retain jobs; save energy; reduce emissions of greenhouse gases; increase renewable energy production; and save money while leveraging private and other public funds. ARRA totals \$20.6 million, with \$11.4 million available directly to eligible local governments of the 10 most populous cities and the 10 most populated counties; \$5.8 million in competitive grants to smaller municipalities and counties; and \$3.8 million in competitive grants. Mr. Martinez said that through projects conducted by EMNRD-ECMD,

local governments and all citizens of New Mexico will benefit from the cost savings associated with reduced energy use, with the larger benefit of reducing the contribution to global warming and increased energy security. He also discussed the energy efficient appliance rebate program, which has a total funding of \$1.9 million.

Questions:

What is the level of cooperation with cities, municipalities, counties and local governments?

How are the tribes affected by the stimulus; what is their eligibility?

Deadlines of applications, allocations and completion of projects were discussed.

Tom Bowles, the governor's science advisor, discussed the New Mexico green grid initiative. The green grid is intended to utilize smart-grid technologies, basically making the grid more intelligent. He said the goal is to build out a smart micro grid with secure controls integrated with distributed energy generation and storage tied to a grid with utility-scale renewables. The intention also includes: building out a community of substation level (five MWs) with smart energy management substation storage with storage; smart two-way metering of buildings; distributed energy generation (rooftop solar photovoltaic) with storage; time-of-day pricing; energy efficient buildings and appliances; full monitoring and control with simulation and modeling; and integration with renewable energy sources on the New Mexico grid. Dr. Bowles said that the DOE has announced it will provide \$4.2 billion in smart grid funding. New Mexico's strategy includes engaging utilities and communities across New Mexico in demonstration projects, along with holding discussion meetings in various communities for better education on the subject.

Dr. Bowles said that New Mexico is the only state that has signed a memorandum of understanding with Japan to collaborate on joint economic development, which has allowed for mutual benefit from applying the best technologies from both countries to develop the smart grid. This could lead to long-term benefits for New Mexico, such as the ability to grow joint ventures in clean energy manufacturing in New Mexico. Dr. Bowles stated that the New Mexico green grid initiative has the stimulus smart grid demonstrations project integrated into the state's longer-term strategy to make New Mexico the first state to implement a full statewide green grid system.

### **Renewable Energy Finance Programs**

Paul Gutierrez, New Mexico Association of Counties, discussed financing renewable energy projects through special assessments. He said programs have been implemented across the nation that allow local governments to facilitate funding to homeowners who wish to install renewable energy systems. Mr. Gutierrez said the legislature passed two bills in 2009 dealing with this, including SB 647 (which allows for the creation of a district for the purpose of encouraging and financing renewable energy projects) and HB 572 (which helps to facilitate financing arrangements for solar energy improvements).

Brian Cassutt, Renewable Energy Industries Association, discussed financing renewable energy. He said the traditional challenge to renewable energy procurement has been the large

up-front costs coupled with a lack of financing tools that sufficiently spread out the cost over the useful life of the energy generating asset. He said that both bills do not create a general tax, but involvement in the programs is completely voluntary. Santa Fe County has been the leader in the state to push the programs from both bills. Mr. Cassutt discussed the allowances and possibilities under SB 647. The bill calls for district formation development; of guidelines for property owners to join a district; development of guidelines for district implementation; and adoption of intent resolution and ordinance ordering the formation of the district. He said that a district can issue bonds to pay for renewable energy projects; he discussed the way bonds can be structured and issued. According to Mr. Cassutt, special assessment may be imposed by resolution on participating property or properties and assessments may pay for improvements, costs of bond issuance, debt service and administration costs of the county/municipality. SB 647 allows for special assessments to be collected in the same time and manner as property taxes unless the district provides otherwise. Special assessment constitutes a lien on the property and shall have priority over all other liens except liens for ad valorem property taxes.

Under HB 572, a commission may enact an ordinance imposing a special assessment on real property within the county if the owner requests the assessment. It also allows for a financing arrangement between a certified lender and property owner. Mr. Cassutt said the assessing ordinance directs the county treasurer to include the assessment in the property tax bill for the property and the amount of assessment on a property shall be the amount necessary to finance the eligible solar improvement. The Financial Institutions Division of the Regulation and Licensing Department is charged with promulgating rules for the certification of lenders, according to Mr. Cassutt. He continued to say that written documentation of the proposed financing agreement must be approved by the county treasurer and funds are transferred from the certified lender to the homeowner's contractor for the installed product. Mr. Cassutt discussed the upcoming next steps for the programs.

#### Questions:

Can organizations and agencies such as the RETA and New Mexico Finance Authority help with the programs, especially the bonding procedure?

Issues about the conflicts between bonds and property taxes were brought up.