

**MINUTES
of the
SECOND MEETING
of the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

**July 16-17, 2009
Ernie Blake Room, Hotel Don Fernando de Taos
Taos**

The second meeting of the Science, Technology and Telecommunications Committee was called to order at 10:05 a.m. on Thursday, July 16, 2009, by Representative Roberto "Bobby" J. Gonzales, chair, in the Ernie Blake Room of the Hotel Don Fernando de Taos in Taos.

Present

Rep. Roberto "Bobby" J. Gonzales, Chair
Sen. Stephen H. Fischmann, Vice Chair
Rep. Janice E. Arnold-Jones (by telephone)
Sen. Linda M. Lopez (July 16)
Rep. Jane E. Powdrell-Culbert
Rep. Debbie A. Rodella
Rep. Nick L. Salazar
Rep. Luciano "Lucky" Varela
Rep. Richard D. Vigil

Absent

Sen. Vernon D. Asbill
Sen. Kent L. Cravens
Sen. Dede Feldman
Sen. Phil A. Griego

Advisory Members

Sen. Carlos R. Cisneros
Rep. Karen E. Giannini (July 16)
Sen. Richard C. Martinez (July 16)
Rep. Danice Picraux
Rep. Jeannette O. Wallace

Sen. Mark Boitano
Rep. Ben Lujan
Rep. Kathy A. McCoy
Sen. William H. Payne
Sen. John M. Sapien

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

Staff

Gordon Meeks
Ralph Vincent
Jeret Fleetwood

Guests

Rep. Nathan P. Cote

Thursday, July 16

The chair welcomed the committee members to Taos and thanked them for coming. He then had members of the committee introduce themselves to the audience.

Telecommunications Competition

Leo Baca of Qwest Telecommunications provided the committee with testimony regarding telecommunications competition and regulation in New Mexico. He began by providing the committee with a brief overview of Qwest's operations in New Mexico, pointing out that the company employs more than 700 people, pays approximately \$9.4 million in taxes and has spent more than \$76 million with New Mexico suppliers in 2008.

Mr. Baca went on to explain that as a provider of residential phone service, Qwest is heavily regulated. Mr. Baca said that as new technologies emerge, it is becoming increasingly difficult for the company to remain competitive in a mostly unregulated market. For example, Mr. Baca pointed out that while Qwest is regulated by the Public Regulation Commission (PRC), mostly under the New Mexico Telecommunications Act, competition from unregulated phone service providers, such as wireless phone companies and voice over internet protocol (VOIP) makes it almost impossible for Qwest to attract and retain customers. Mr. Baca indicated that Qwest is losing roughly 5,000 residential lines per month.

To help remedy this situation, Mr. Baca explained that legislation was introduced during the last session that would have allowed phone rate deregulation for intrastate services while retaining PRC authority to regulate many aspects of the industry. He noted that the bill, Senate Bill 445, was endorsed by several PRC commissioners and several telecommunications companies. However, Mr. Baca noted that the bill failed to pass.

Mr. Baca went on to explain that Qwest filed its Alternative Form of Regulation III (AFOR III) proposal with the PRC in late May as a means of remedying some of the issues addressed by SB 445. For example, he noted that the AFOR III proposal provided for rate deregulation; promotions for services, packages and bundles; increased pricing flexibility; and a more reasonable service quality compliance mechanism.

Mr. Baca then contrasted the regulation Qwest faces with the relatively unregulated environment enjoyed by many of the company's direct competitors. For example, he noted that many customers are opting to use wireless providers, which are unregulated, as their sole telephone service instead of land lines. Mr. Baca also indicated that other companies, such as cable and VOIP providers, are actively marketing their services in New Mexico in competition with Qwest.

Next, Mr. Baca went into some detail about the regulation that Qwest faces in New Mexico. For example, he stated that the statute that governs telecommunications regulation in New Mexico was enacted in 1985, well before the advent of wireless and VOIP technologies. Mr. Baca also pointed out that Qwest has been waiting for over a year on an order from the PRC regarding a promotional tariff, while unregulated companies are able to adjust their prices in response to changes in the market and technological advances. He also indicated that Qwest is afforded less retail pricing flexibility in New Mexico than in any of the other 13 states in which it does business.

Finally, Mr. Baca emphasized that Qwest is not seeking total deregulation but rather better, fairer regulation for all telecommunications companies. He noted that SB 445 attempted to update outdated language and that any further legislative proposals depend on the PRC's ruling on the AFOR III proposal, which could be as early as October 2009.

Bill Garcia, vice president of government affairs for Windstream Communications, also discussed telecommunications regulation. He began by providing the committee with an overview of Windstream's operations in New Mexico, noting that it serves three distinct areas of the state. Mr. Garcia went on to discuss how Windstream is regulated by the state, indicating that the company is classified as a mid-size carrier, which makes it somewhat different from Qwest but still subject to price caps, pricing regulations and quality-of-service requirements. Mr. Garcia went on to explain that the combination of regulation and rapidly evolving technology makes Windstream vulnerable to the same dangers faced by Qwest: a customer base that is migrating to other technologies and regulations that makes it difficult to adapt and remain competitive.

Mr. Garcia concluded by noting that if carriers like Windstream and Qwest are to remain competitive, the rules regarding regulation must be changed to allow for parity. He echoed Mr. Baca's recommendation that regulation be made fairer, rather than done away with completely.

Charles Ferrell, executive director of the New Mexico Exchange Carrier Group (NMECG), also provided the committee with testimony regarding telecommunications regulation. He began by explaining that the NMECG is an industry company made up of 13 smaller, rural telecommunications companies. Mr. Ferrell pointed out that while the NMECG serves mostly rural customers, its combined service area covers roughly two-thirds of the state. He added that rural carriers face similar challenges to those faced by Qwest and Windstream: decreasing reliance by customers on land lines in favor of service through wireless and VOIP companies.

Mr. Ferrell went on to explain that companies such as Qwest, Windstream and the smaller providers he represents form the complex network of interexchange telecommunications facilities that enables retail and business customers across New Mexico to complete phone calls. He added that rural companies must rely heavily on the infrastructure and facilities maintained by Qwest to conduct their business, and he questioned how Qwest can be expected to maintain its network in the face of declining revenues caused by a dwindling customer base that Qwest is unable to try to win over because of the regulations with which it must comply.

Questions and comments addressed:

- the role of Congress and federal law in regulating telecommunications;
- the legislative history of SB 445;
- the PRC commissioners who opposed SB 445;
- details of the PRC for a new regulatory order;
- the status of stimulus money for telecommunications;
- the property tax liability of Comcast to level the playing field;

- how bundling or packaging of services affects competition;
- the percentage of service area that has high speed internet;
- the decline of long-distance revenue, which is Qwest's largest revenue source;
- how many companies are unregulated;
- the effect of satellite service;
- how competitiveness is the issue now, not quality of service, which was the issue 30 years ago;
- why commissioners are opposed;
- politics;
- the nature of franchise agreements;
- how long SB 445's effectiveness will extend into the future with more technological changes coming;
- the extent of federal law as it affects land lines;
- the effect on political polling of new telecommunications technologies and business realities;
- the percentage of decline in Qwest's business;
- proposed additional regulations on Qwest recommended by PRC staff; and
- promotions of wireless technology.

The committee approved a motion to send the PRC a letter requesting that the PRC consider the provisions of SB 445 and to act on Qwest's request for regulatory reform in a timely manner. There was no opposition.

The committee approved the minutes of the June 2009 meeting.

New Mexico Renewable Energy Transmission Authority Status

Jeremy Turner, director of the New Mexico Renewable Energy Transmission Authority (RETA), provided the committee with an update on the status of the authority. He began by reviewing the history and mission of the authority, noting that it is the nation's first state-level financing authority focused on developing renewable energy-related transmission and infrastructure storage projects. Mr. Turner went on to explain that the RETA has the ability to: finance energy transmission and storage projects through the issuance of bonds; assist with siting issues for projects; and help fund technologies that convert, store and return power to help address supply and demand issues.

Mr. Turner discussed the RETA's budget, the high demand for renewable energy across the western U.S. and potential projects in New Mexico. He noted that the authority's first project is a 100 megawatt wind farm in Torrance County and discussed the project's scope, financing, funding and expenses. Mr. Turner then outlined some of the current RETA projects, such as establishing policies, exploring involvement in emerging initiatives such as the Green Grid project and developing collector systems in conjunction with companies that include Public Service Company of New Mexico, SunZia and Integrated Transmission Solutions.

Questions and comments addressed:

- potential legislation to add to the RETA's authority, bonding authority, tax exemption for transmission lines and independence from the state treasurer;
- oversight issues;
- the relationship with the New Mexico Finance Authority;
- pre-qualification of transmission corridors for environmental assessments;
- eminent domain issues; and
- connections between the eastern and the western grid systems.

Renewable Energy Development in New Mexico

Craig O'Hare of the Energy, Minerals and Natural Resources Department also provided the committee with testimony regarding development of renewable energy and energy efficiency technologies and projects in New Mexico. He outlined the steps New Mexico has taken to attract clean energy industries, the economic development potential of establishing clean energy industries in the state and federal stimulus funds that are available for clean energy-related projects.

Mr. O'Hare explained that clean energy industries New Mexico hopes to attract include utility-scale renewable energy, distributed generation scale renewable energy and energy efficiency in building construction. He explained that utility-scale energy consists of projects that generate 10 to 100 megawatts and include large wind farms, deep-source geothermal power plants and large-scale solar energy projects. Mr. O'Hare pointed out that one of the obstacles facing utility-scale industries is the lack of transmission lines for energy generated from such large projects and exportation of that energy.

Mr. O'Hare then explained that distributed generation scale renewable energy industries consist of much smaller power generation efforts, such as water harvesting, home rooftop photovoltaic solar panels and increased energy efficiency. He pointed out that while these projects are much smaller and generate less energy per project, they have the potential to collectively generate 40 percent of the state's total electrical needs. Mr. O'Hare noted that some of the legislature's efforts to encourage distributed energy generation development in New Mexico, such as the Solar Rights Act, which helps protect rooftop solar panels from development that might hinder their capability, and tax credits for solar development.

Next, Mr. O'Hare discussed additional efforts to establish clean energy industries in New Mexico. He noted that some of the keys to attracting such industries are a trained, ready work force and investors interested in funding "new" energy development.

Finally, Mr. O'Hare explained that energy efficiency is another key to the emerging energy economy. He noted that increasing energy efficiency provides a way to reduce and manage energy budgets in the face of rising costs. Mr. O'Hare reviewed some of the legislative initiatives passed to help encourage building energy efficiency, such as requiring utilities to offer efficiency services to their customers and tax credits for constructing more energy efficient commercial and residential buildings.

Questions and discussion included:

- stimulus money for the weatherization assistance program;
- deep geothermal energy resources;
- sustainable forestry for woody biomass energy;
- the eligibility of dairy biomass waste for energy tax credits;
- a list of energy efficiency and clean energy stimulus projects;
- the potential for retrofitting earlier generation radiant heat systems with new geothermal technology;
- conservation compared to alternative energy generation economics;
- rate structure disincentives to customers to conserve;
- de-coupling sales from profits; and
- making the PRC process more nimble or flexible.

Roy E. Stephenson, Utility Division director of the PRC, provided the committee with an overview of renewable energy development. He began by reviewing the history of renewable energy development, starting with the establishment of renewable portfolio standards in 2004. Mr. Stephenson also reviewed the 2005 Energy Efficiency Act and subsequent revisions to the act.

Next, Mr. Stephenson discussed the energy efficiency rules passed by the legislature in 2005 and amended in 2007, which mandate cost-effective energy efficiency and load management rules and provide some financial incentives for achieving them. He also discussed several of the other efforts by the PRC to address renewable energy issues, such as promulgation of the integrated resource planning and net metering rules.

Mr. Stephenson went on to discuss current and proposed renewable energy projects, including solar projects in Santa Teresa, Cimarron and Taos and wind energy projects in Fort Sumner, San Juan and Texico.

Questions and discussion topics included:

- incentivizing energy efficiency and lower energy sales;
- integrated resource planning;
- inverted or block-design rates;
- distributed generation;
- compliance with renewable portfolio standards;
- energy efficiency programs targeted to low-income households; and
- energy efficiency in government buildings and Procurement Code obstacles.

Luis Reyes, chief operating officer of Kit Carson Electric Cooperative, provided the committee with an overview of the efforts his company has made to encourage renewable energy development. He began by reviewing the company's history in northern New Mexico and showing the area served by the co-op. Mr. Reyes also discussed the co-op's renewable energy goals and programs it has enacted to help achieve those goals.

Questions and comments included:

- Kit Carson Electric Cooperative's distributed energy purchasing program;
- ownership of the distributed energy systems;
- distant medical diagnostic technology;
- compliments to Kit Carson Electric Cooperative;
- the cost of solar systems;
- "smart meters";
- system response and reliability;
- "intelligent" appliances; and
- energy efficiency curriculum in Taos public schools.

Wind Energy Farm Regulation

Francis Pavich of the Legacy project and Ellen Drew of New Mexico Cares, as well as several other individuals, testified before the committee about their concerns regarding development of wind energy and siting of windmills for wind energy projects. They explained that while they are very much in favor of developing renewable energy technologies, there is a considerable amount of research that indicates that considerations such as damage to property and scenery, deployment of unproven technology and long-term exposure to the low-frequency sounds generated by windmills located too close to homes and animals raise serious concerns about the rush to develop wind energy in New Mexico.

The group cited problems encountered by other states, such as Michigan, which have employed wind farms too close to homes and animals and cautioned the committee to further investigate the siting of wind farms.

Questions and comments included:

- the effects of wind farms on migratory birds and bats;
- sources of low-frequency sounds;
- the number of turbines in an industrial wind farm;
- the amount of space needed for a solar concentration system to power the whole country (10 square miles);
- the efficiency of wind energy compared to ground source and solar;
- the position of the New Mexico Association of Counties;
- the Santa Rosa wind farm; and
- land use and set back issues.

Friday, July 17

Integrated Strategic Broadband Initiative

Marlin Mackey, secretary of information technology, provided the committee with testimony regarding attempts to extend broadband internet access to rural areas of the state. He explained that the department is attempting to leverage federal stimulus funding by contracting with private companies to extend the state's ability to provide broadband service to all areas of the state. Secretary Mackey explained that there are two primary federal funding sources for the

project and that both have specific priorities, application and reporting requirements. He also noted that there are specific eligibility factors for communities seeking to take advantage of available funds.

Secretary Mackey then discussed legislation passed during the 2009 legislative session that reorganized the Information Technology Commission. He explained that the bill revised the membership and duties of the commission, but noted that it took effect at the beginning of July, so the commission had not had time to begin meeting in earnest.

Questions and comments included:

- the total allocation of stimulus money to New Mexico;
- deadlines for applications for competitive grants;
- assistance by the Department of Information Technology (DOIT) to the Office of the Secretary of State to solve its computer problem;
- results of security audit;
- the confidence level for the Office of the Secretary of State's information technology system;
- membership of the Information Technology Commission;
- certification committee membership;
- public hearings on procedural rules adopted by the DOIT;
- background security checks on IT personnel;
- breaches in security;
- authority of the DOIT over the Office of the Secretary of State's information technology system (budgetary);
- DOIT oversight;
- the number of cyberattacks on the state system;
- the need for statutory change in the DOIT's authority to improve security;
- the need for higher level of security;
- costs for implementing; and
- potential cooperation with Los Alamos National Laboratory or Sandia National Laboratories on information technology security for the state.

Stimulus Funding Energy Initiative

Tom Bowles, science advisor to Governor Richardson, went on to provide the committee with an update on federal funding for energy and technology projects in New Mexico. He explained that there are several block grants available to states, noting that the state energy program expects to receive about \$31.8 million in energy block grants and plans to announce the recipients of the grants soon.

Mr. Bowles then explained that a number of city, county and Native American block grants have already been given and provided the committee with a list of entities and amounts that have already been announced.

Mr. Bowles also discussed federal mega-grants for projects such as broadband, smart

grid, biofuel and health information technologies.

Questions and comments included:

- eligibility criteria for research and development projects;
- that stimulus projects must be sustainable without more federal funding;
- amount of money available in New Mexico for mega projects (\$100 million or more);
- universal deployment of broadband capacity;
- health information technology to reach out to rural areas;
- what do green grid and smart grid mean;
- state match requirements;
- that biofuels equal green algae;
- New Mexico as the algae capitol of the nation;
- how biofuels and smart grid projects are separate sources of funding; and
- training for green jobs.

New Mexico Research Application Act Status of Implementation

Mr. Bowles provided the committee with testimony regarding the status of the Research Application Act. He began by providing the committee with a short overview of the Research Application Act, which he explained seeks to increase the number of high-paying jobs, particularly in rural areas, in the state. Mr. Bowles explained that one of the keys to the program is to use federal funds and the presence of two national laboratories and several universities to help stimulate the development of such jobs. He also noted that it would be important to develop a model for private investment in research and development projects originating at the research clusters within the state that are ready for late-stage development.

Mr. Bowles identified several core areas that New Mexico could take advantage of in pursuit of the development of industries that will provide higher paying jobs for citizens, such as aerospace; biotechnology; energy and water; information technology; and nanotechnology.

Mr. Bowles went on to discuss the foundation of the New Mexico Research Applications Center (NMRAC), a nonprofit organization created to partner with businesses to help encourage opportunities in high-tech development. He explained that the center is able to:

- enter into memoranda of understanding, joint powers agreements and contracts;
- enter into business arrangements;
- incur liabilities;
- hold, sell and transfer assets; and
- solicit, receive and administer grants.

Mr. Bowles also discussed the administration of the center, providing the committee with an overview of the center's managing structure and the makeup of the public and private board overseeing the center. He also updated the committee on the status of the center, noting that it had completed its articles of incorporation and bylaws and had moved into office space.

Mr. Bowles concluded by emphasizing that New Mexico is very well suited to take

advantage of federal investment in high-technology research and development and that the NMRAC will provide an important mechanism in coordinating those efforts.

Questions and discussion topics included:

- sources of private funding;
- universities paying for service;
- stimulus funding for the NMRAC;
- the secretary of higher education;
- the membership of the board;
- bylaws;
- the location of offices;
- the capacity of the supercomputer;
- the organizational chart; and
- legal aspects of the center.

Supercomputing Facility Status and Smart-Grid Initiative

Mr. Bowles also provided the committee with an update on the status of the New Mexico Computing Applications Center, located in Rio Rancho, which he noted is currently the fastest nonfederal computer in the world and the seventeenth fastest overall. He explained that the facility is primarily focused on technology-based economic development and support, education and work force development and assistance to New Mexico communities with problem solving. Mr. Bowles provided the committee with an overview of the center's board of directors and showed the digital gateways located across the state that enable electronic access to the facility. He also discussed some of the budget issues associated with the center, including staff and office operations, and listed several of the business projects with which the facility is involved. He pointed out that several of the businesses taking advantage of the supercomputer's processing capabilities are movie studios with projects in New Mexico. Finally, Mr. Bowles discussed the overall economic impact of the supercomputer facility, noting that while income from agreements with the facility in 2010 is about \$13.6 million, the facility expects to expand its business agreements to about \$600 million by 2014, mostly through film initiatives and smart-grid technology.

Stephan Helgesen, director of the Office of Science and Technology for the New Mexico Economic Development Department, provided the committee with an overview of the New Mexico Green Grid Initiative.

Secretary of State Information Technology System Status

Francisco Trujillo and A.J. Salazar from the Secretary of State's Office described employee skills, budget constraints and personnel issues with the committee.

The committee members held a give-and-take dialogue with the presenters concerning the recent information technology system failure and needs for improvement. The discussion touched on:

- similar vulnerabilities in other state agencies;

- the pooling of small agency resources to address the vulnerabilities;
- the cybersecurity issues and lack of funding to correct problems;
- the elimination of the cybersecurity office;
- extensive assistance from Secretary Mackey and the DOIT;

The committee approved a motion to send a letter to Secretary Mackey asking that the position of Cybersecurity Officer be re-established.

- examples of information technology failures throughout state government;
- the federal Help America Vote Act;
- a list of tenured, classified employees in the Secretary of State's Office;
- the Secretary of State's Office disaster recovery plan;
- the importance of the Information Technology Commission;
- the strategic plan for the DOIT;
- the reliability of Oso Grande's system;
- the need for rebuilding a secure network;
- integration of the different data systems;
- "architectural" security of information technology systems;
- reliable backup systems;
- the advisability of off-the-shelf software compared to proprietary or custom designed software;
- a list of agencies that are outsourcing information technology services;
- reasons for outsourcing;
- the interoperability of all systems;
- use of the Washington state model;
- use of New Mexico Tech's resources and skills; and
- the riskiness of in-house development.

The committee adjourned at 2:40 p.m.