

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

**October 7, 2019
New Mexico School for the Blind and Visually Impaired
801 Stephen Moody St. SE
Albuquerque**

The fifth meeting of the Science, Technology and Telecommunications Committee (STTC) was called to order by Representative Debra M. Sariñana, chair, on October 7, 2019 at 10:24 a.m. at the New Mexico School for the Blind and Visually Impaired (NMSBVI) in Albuquerque.

Present

Rep. Debra M. Sariñana, Chair
Sen. Michael Padilla, Vice Chair
Rep. Kelly K. Fajardo
Rep. Melanie A. Stansbury

Absent

Sen. William F. Burt
Rep. Christine Chandler
Rep. Daymon Ely
Rep. Jason C. Harper
Sen. Mark Moores
Sen. Bill B. O'Neill
Sen. William P. Soules
Rep. Linda M. Trujillo

Advisory Members

Rep. Abbas Akhil
Sen. Ron Griggs
Sen. Nancy Rodriguez
Sen. Bill Tallman

Sen. Craig W. Brandt
Sen. Jacob R. Candelaria
Sen. Richard C. Martinez
Sen. Mary Kay Papen
Sen. William H. Payne
Rep. Joseph L. Sanchez
Sen. Peter Wirth

Staff

Mark Edwards, Legislative Council Service (LCS)
Sara Wiedmaier, LCS
Tabitha Enriquez, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file and on the legislature's website at www.nmlegis.gov.

Monday, October 7

Welcome and Introductions

Representative Sariñana welcomed the committee and invited members of the committee and staff to introduce themselves.

NMSBVI Welcome and Overview

Patricia Beecher, superintendent, NMSBVI, welcomed the committee and discussed the history and mission of the NMSBVI. She highlighted the differences between the NMSBVI branches in Albuquerque and Alamogordo, stating that the Alamogordo campus provides residential, academic and support services for school-age students, whereas the Albuquerque campus focuses on early childhood development and provides statewide services. She noted that NMSBVI staff conduct home and hospital visits and travel to other school districts to provide services, including an assisted technology program, for which staff members travel statewide to loan equipment to students and train teachers how to utilize the technology. She described different methods of engaging and educating students, with an emphasis on science, technology, engineering and mathematics (STEM) and daily life activities.

Responding to questions from committee members, Ms. Beecher stated that:

- the NMSBVI has a partnership with New Mexico State University to expand outreach and services to rural areas by training teachers in rural school districts or providing direct services if only one student in the school requires services;
- the NMSBVI serves students with various neurological vision impairments and a full spectrum of needs;
- the NMSBVI's five-year plan includes expanding the Albuquerque facility through second grade and exploring at the possibility of satellite programs in other areas; and
- the NMSBVI hires special education and general subject matter teachers and trains the teachers in necessary specialties.

Sandia National Laboratories (SNL) Status Update

Stephen Younger, laboratories director, SNL, discussed the mission, history, scope and achievements of SNL. Mr. Younger said that SNL has facilities across the nation, with a purpose of developing advanced technologies to ensure global peace. He discussed the evolution of SNL over past decades to become a multi-mission national security laboratory with a particular focus on nuclear weapons deterrence. He emphasized the need for SNL to consider the future of global security and to be prepared to respond to new technological threats.

Highlighting the beneficial relationship between New Mexico and SNL, Mr. Younger discussed SNL expenditures for fiscal year 2018, which include over \$1 billion for New Mexico labor, small businesses and gross receipts taxes; participation in various programs and events to promote small business success, economic development and technology transfer to the private sector; collaboration with New Mexico schools and universities; and investment in community initiatives that focus on educational success, economic development and family stability. He spoke about a new partnership with the Albuquerque Police Department to help with crime

reduction information technology (IT) systems. Mr. Younger provided a breakdown of employee demographics and education level at SNL and stressed the importance of diversity and inclusion at the laboratories, noting that minority representation continues to increase. He noted that SNL has seen a lot of growth in the last decade and is continuing to grow. He emphasized the high number of employees and student interns that have come from New Mexico schools. He discussed the collaboration with New Mexico universities that is critical to SNL's success in bringing research and technology to market.

Responding to a question, Mr. Younger stated that New Mexico is unique because of the presence of multiple national research laboratories as well as the only nuclear waste repository in the country. He believes that it is in the best interest of the federal Department of Energy (DOE) to support New Mexico for the long-term stability of SNL. He added that SNL is successful at getting funding, but the DOE needs to allow SNL to use this funding on programs to deal with some of state's problems, such as childhood poverty and education. He said that the lack of a STEM pipeline is a systemic problem that requires a holistic approach, which is why SNL has made family stability a priority among its community initiatives.

Responding to further questions, Mr. Younger stated that SNL provides a better workplace balance than many private sector companies and allows former employees to return from private sector jobs. He said that SNL offers pension plans for long-term employees and 401(k) plans for more recent employees and is looking to have a hybrid system of benefits and retirement packages to compensate employees if salaries are not competitive enough to attract talent.

Opportunities in Science and Technology: Addressing the Gaps

Stuart Rose, founder, The BioScience Center, and founder, FatPipe New Mexico; Matthew Ennis, chief executive officer, NTxBio, LLC; and Murat Okandan, founder and chief technology officer, mPower Technology, Inc., discussed their entrepreneurial experiences and initiatives to address the gaps in STEM industries in New Mexico.

Mr. Rose shared the vision of FatPipe New Mexico, a statewide network of co-working spaces that provides start-up companies with everything from furniture and IT infrastructure to mentoring opportunities and investor connections. He remarked that the future of New Mexico's economy is not to attract large companies from out of state, but to grow companies within the state. He said that New Mexico has many advantages in technology development but that the state should continue efforts to improve commercialization capability. He mentioned examples of successful New Mexico start-ups and said that companies will leave the state if they do not receive support for growth and that New Mexico graduates are leaving the state because start-ups do not have the funds to keep talent here. He cited the state's angel investment credit and the Economic Development Department's Catalyst Fund as great sources of funding for start-ups but said that the state needs to expand these programs.

Mr. Ennis said that NtxBio, a research and development start-up company located in Santa Fe, is a product of research conducted at Los Alamos National Laboratory (LANL). He discussed the work of the company in the biomanufacturing of vaccines and antibiotics, drug

discovery and improving the purity of vaccines. He said that the company has been approached by pharmaceutical companies interested in potential partnerships because of its strong technology base; however, NxtBio needs to mature its products to find buyers. He suggested that the state could provide maturation funds to help bring NxtBio's research to market.

Mr. Okandan discussed new design options for solar energy systems being commercialized by mPower Technology, Inc., which resulted from research and development efforts at SNL. He noted the national transition around energy protection and the decreased cost of solar panels due to overseas production that has incentivized growth of the solar industry. He said that local companies cannot compete with manufacturing companies in Asia; therefore, local solar companies will need to streamline the production process to be competitive.

Responding to questions from committee members, the panelists stated that:

- there is a lot of incentive for investors through the angel investment credit but start-up companies will need additional investors;
- to attract and retain talent in the state, New Mexico needs to emphasize the quality of life, low cost of living and other benefits of residing here;
- typically, wealth managers and financial advisors are not aware of investment opportunities in New Mexico because the state's successes and companies are not yet large enough to attract outside investors; and
- New Mexico crime and education statistics affect outside perception of the state, and within the state, there is a lack of consistency in economic vision.

Possible Technology Readiness Gross Receipts Tax (TRGRT) Legislation

Jackie Kerby Moore, manager, Technology and Economic Development, SNL, and Mariann Johnston, team lead, Technology Engagement and Entrepreneurship, LANL, discussed their proposal for TRGRT legislation, a pilot program that will enable New Mexico to leverage research and development at the national laboratories for economic growth throughout the state, which will enable the laboratories to provide New Mexico businesses with technical expertise and funding to develop their products toward commercialization.

Ms. Moore said that technology developed by the national laboratories is often too immature to take to market without additional investment by companies. The TRGRT pilot program will facilitate investment by the state to bring technology developed at the laboratories to a level that a business can use to demonstrate product opportunity to customers or investors. Ms. Johnston said that the TRGRT legislation would be administered as a tax credit for the laboratories for a five-year pilot program to provide New Mexico businesses with funding for technology readiness assistance. Ms. Johnston explained the requirements for the laboratories and businesses to be eligible for the program.

Responding to questions from the committee, Ms. Moore and Ms. Johnston stated that:

- businesses will be eligible to receive \$250,000 per year from the laboratories;
- the presenters hope to have the TRGRT legislation introduced in the next session; and

- the TRGRT program will focus on innovation, commercialization and marketing of laboratory research and development.

Proposals for State Action to Mitigate Climate Change

Emese Nagy, student, Amy Biehl High School; Olivia Gonzales, student, Public Academy for Performing Arts; Mariluz Lebkuechner, student, Public Academy for Performing Arts; Andre Miller, student, Central New Mexico Community College; Ruby Lopez, student, Youth United for Climate Crisis Action (YUCCA) Steering Committee, Santa Fe Community College; Veronica "Yang" Toledo, student, YUCCA Steering Committee, New Mexico School for the Arts; and Felina Romero, student, Donnelly College, Kansas City, Kansas, discussed the impacts of climate change and their experiences as New Mexico student climate strike organizers and provided proposals for state action to mitigate climate change, which include the following:

- to create a just transition fund from oil and gas revenues to build a sustainable carbon-neutral economy for all New Mexicans;
- to convert New Mexico to 100% renewable energy use by 2030;
- to impose a moratorium on hydraulic fracturing;
- to pass community solar legislation in 2020; and
- to declare a climate emergency.

The students each provided personal testimony as to their reasons for becoming student climate strike organizers and expressed concern that, as youth, their future is more at risk and that impacted communities have been left without a voice in these matters. They expressed other concerns, including: the impact of oil and gas, nuclear and mining operations on Native American communities; food insecurity and water contamination, ecological collapse and other impacts of climate change; and a lack of support for frontline and low-income communities impacted by climate change. The students expressed frustration that action must come from youth, who are scared for their future and fed up with the inaction of adults and policymakers unwilling to listen to climate scientists. They shared that on September 20, 2019, over 7.5 million young people sent a message to the world during the Global Climate Strike that business-as-usual will no longer be accepted, time is running out and urgent action must be taken. They called on the legislature to make New Mexico a leader in climate change action and further discussed the proposals for a just transition plan, a moratorium on hydraulic fracturing and community solar legislation.

Responding to questions from committee members, the panelists stated that:

- over 3,000 people came to the State Capitol to join the Global Climate Strike;
- although oil and gas revenues account for a large percentage of state revenue, young people are demanding a just transition plan and alternative energy sources;
- the proposal to move to 100% renewable energy by 2030, rather than the current state benchmark of 2045, is because scientists are predicting that between 2036 and 2045, the world will already see devastating effects;
- the expertise is already out there to advise the state on a just transition plan;

- New Mexico must diversify its economy and needs to invest in communities by planting trees and supporting local produce growers and community farms; and
- oil and gas reserves will eventually run out, so the just transition plan must include renewable energy as a funding source for education.

Adjournment

There being no further business before the committee, Representative Sariñana thanked everyone and adjourned the fifth meeting of the STTC for the 2019 interim at 1:35 p.m. for a tour of SNL.