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FISCAL IMPACT REPORT

SPONSOR HSVIC **ORIGINAL DATE** 1/31/17 **HB** 113/HSIVCS/aHLEDC
LAST UPDATED 3/3/17 **SB** /aSPAC

SHORT TITLE Statewide Broadband Network **SB** _____

ANALYST McIntyre

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY17	FY18	FY19	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total	Minimal	Minimal	Minimal	Minimal	Recurring	DoIT operating budget

Related to SB338

SOURCES OF INFORMATION

LFC Files

Responses Received From

Department of Information Technology (DoIT)
Department of Health (DOH)
Public Education Department (PED)
Public Schools Facility Authority (PSFA)
Central New Mexico Community College (CNM)
New Mexico Independent Community Colleges (NMICC)
The University of New Mexico (UNM)
New Mexico Economic Development Department (EDD)

SUMMARY

Synopsis of SPAC amendment to House Bill 113/HSVICS/aHLEDC

The SPAC amendment strikes the previous version of the bill and inserts provisions from it into the Department of Information Technology Act, NMSA 1978 Section 9-27. The amendment defines a “telecommunication network” and directs the state chief information officer (CIO) to develop a statewide broadband network plan in conjunction with public institutions and broadband service providers. The amendments allows DoIT to provide a broadband network to education institutions, apply for reimbursements from the Federal Telecommunications Act of 1996 (e-rate fund), and charge institutions for participating in the network. The amendment allows Indian nations, tribes, and pueblos to connect to the network in exchange for right of way.

The SPAC amendment differs from the previous version of the bill in the following ways:

- Replaces the requirement for the CIO to develop the network with a requirement that the CIO develop a network plan
- Removes funding from PSCOC for DoIT and universities to participate in planning, design, and implementation of the network
- Replaces that the CIO “shall” provide access to education institutions with the CIO “may” provide access
- Replaces that the CIO “shall” aggregate demand with the CIO “may” provide for the coordination and aggregation of services
- Removes the provision that the access may be provided through aggregation points
- Removes the deadline for when the development of the network shall be provided for

FISCAL IMPLICATIONS OF SPAC AMENDMENT

DoIT published a *Statewide Final Strategic Plan* for broadband availability and adoption in 2014 and the Governor has adopted several broadband initiatives in conjunction with the department, so the fiscal impact on continuing the development of a statewide broadband network plan is expected to be minimal. DoIT may reallocate resources to more fully incorporate developing a statewide broadband network into their strategic plan.

Synopsis of HLEDC amendment to House Bill 113/HSVICS

On page 2, line 25, after “agencies” add “political subdivisions, Indian nations, tribes, pueblos”

Synopsis of HSVICS for House Bill 113

Senate Bill 338 tasks the State Chief Information Officer (CIO) to coordinate the development of a statewide broadband network by aggregating demand among educational institutions that request to be included in the network. The network shall be developed and operated through contractual services with providers and funded by charging participant fees to recover costs as well as through the Federal Telecommunications Act of 1996 (e-rate fund). The network shall be developed in partnership with education institutions and the public schools facility authority, and partners who participate in planning and development pursuant to NMSA 1978 22-24-4 shall be allocated funding from the public school capital outlay fund. Education institutions at Indian nations, tribes, and pueblos may connect to the network in exchange for right of way.

FISCAL IMPLICATIONS

This bill can be widely interpreted as to which agencies are involved in broadband network development and which network models would be implemented, and so there is significant difference between agency responses on the fiscal impact of this bill depending on their assumptions. For instance, PSFA indicates that they have several staff that could be reassigned to network development under their current mandate, while DoIT points out that the provisions of this bill lie outside of their traditional mandate and will need additional staff to begin implementation. As such, the fiscal implication of this bill are too various to provide one estimate, and responses are summarized below.

Statewide network planning, design, and implementation (nonrecurring)

The bill identifies several institutions as potential partners in planning, design, and implementation, including DoIT, higher education, education institutions, and PSFA. The bill identifies use of the public school capital outlay fund to compensate contributing partners, presumably referencing Section 22-24-4 (F) (2) “the council may authorize payments directly to the contractor.”

DoIT anticipates a fiscal impact to their budget of \$200 thousand nonrecurring in FY17 to establish the program and the need for an additional 4-10 FTE for their Office of Broadband and Geospatial Initiatives. PSFA states that they currently have 4 FTE working on their Broadband Deficiencies Correction Program. Assuming PSFA redirects their broadband staff to work on the education network, and DoIT and higher education hire extra staff to contribute, approximately \$500 thousand per year will be allocated from the public schools capital outlay fund to DoIT and higher education, if approved by council, to meet the demand of 4-10 FTE for the planning, design, and implementation phase.

Statewide network operating costs (recurring)

Recurring costs will be borne by the operating budget of school districts, likely supplemented by federal e-rate dollars (an 80 percent match). If DoIT is solely responsible for developing and managing the network beyond FY17, DoIT estimates annual recurring costs for administrative services of \$320 thousand to \$1 million and costs of providing broadband services of \$5 million to \$10 million annually.

According to PSFA, public schools currently spend \$4.5 million on internet services annually (80 percent of which is typically reimbursed by e-rate) and obtain an average connection speed of 140 kbps per student. In order to reach the Governor’s Broadband for Education (BB4E) goal of 1Mbps per student by 2018, schools will need to purchase seven times faster internet services at a total cost of \$31.5 million at current rates. However, it is likely that the total cost at 1Mbps per student could be driven down by BB4E’s current efforts at cost containment. If total costs at 1Mbps per student are cut in half of the current rate, then schools would expect to pay \$16 million for 1Mbps per student internet access in 2018 without a broadband network.

With a broadband network, every student will likely have significantly more than 1Mbps connection speed available to them by leveraging standard network management practices. Therefore, the fiscal impact of a broadband network is up to \$6.5 million in additional costs on public schools’ operating budgets at current speeds or potential savings of up to \$11 million at the BB4E connection speed goal of 1Mbps per student (either of which will likely be matched 80 percent by e-rate).

Summary of agency responses

DoIT states that:

The business model selected for a statewide broadband network may significantly change the overall cost to the state. This analysis assumes the absolute minimum necessary for DoIT to provide additional broadband services, any actual operation or maintenance of additional state owned infrastructure would be a significantly larger fiscal impact.

PSFA states that:

At this time, PSFA has 1.0 permanent FTE and 3.0 term FTE dedicated to the PSCOC Broadband Deficiencies Correction Program, with a program sunset of FY19. As PSFA's partnership is not defined, staffing requirements to support this bill are indeterminate. Any FTEs needed to support this bill would require potential reclassification to a Permanent (Perm) FTE status and would have an impact to the operating budget beginning in FY20 and recurring thereafter.

PED states that “The provisions of this bill may require staffing at the PED that is not available at this time and that resources to support this effort should be considered and applicable funding should be appropriated.”

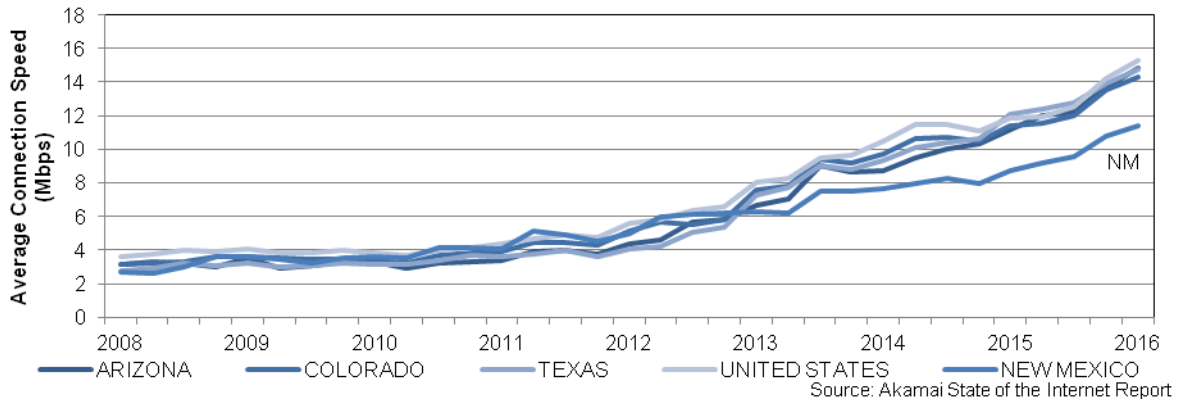
CNM states that “Due to unknowns surrounding associated costs and institutional participation in a statewide broadband network, it is difficult to accurately estimate fiscal implications. However, it can be assumed that the increased purchasing power of multiple state agencies and higher education institutions would result in lower overall costs of administration.”

UNM states that “UNM and the research partners are under-resourced to take on the additional network bandwidth capacity and technical management without additional funding to support the operation without negatively impacting the level of support to our primary mission.”

SIGNIFICANT ISSUES

A 2017 LFC program evaluation on broadband deployment finds that reliable, high speed internet (broadband) is linked to job creation and is the second biggest concern of New Mexico businesses, but the state ranks 48th in connection speed and is falling behind its neighbors and the nation as seen in Figure 1. There are two main components to broadband infrastructure: fiber that connects users (access) and electronics that drive content (connection speed). In New Mexico, over 90 percent of schools are connected to fiber, among the highest in the nation, but school connection speeds are among the lowest in the nation. This implies that the broadband infrastructure gap is in the electronics not the fiber. Providers can't afford to upgrade electronics profitably without enough user demand to see a return on investment, and in New Mexico, institutions purchase broadband independently, according to the LFC report. The report concludes by recommending that the state pool public users (government and education institutions) to increase the demand in a region to attract substantial provider investment in electronics infrastructure in that region. The report provides evidence that providers are likely to utilize their upgraded infrastructure to deliver faster service to homes and businesses in the region as well.

Figure 1. New Mexico Broadband Deployment Falling Behind



DoIT states that:

In addition to the staff and technical resources needed to plan, procure, and operate (oversee) such a network, the department would also need to allocate resources to managing any Federal Universal Service Funds appropriated. These resources would need to coordinate closely with other federal subsidies, such as E-Rate, which is currently managed by the Public Education Department. As the rules and requirements to apply for, receive, and administer Federal Universal Service and E-Rate funds are exceedingly complex, and require substantial accounting and auditability, DoIT would likely need additional administrative staff to operate this program.

PED states that:

As per [federal program] rules, the state educational agency, in this case, the Public Education Department, is the designated E-Rate lead for schools in the state. There is an increased level of complexity of this proposed legislation and the complexity is exacerbated when completing E-Rate applications when eligible entities (schools, libraries, and rural health clinics) are mixed with ineligible entities (state, county, and local governments). Another issue to consider is that if a state agency is providing eligible E-Rate services, the same agency cannot apply for E-Rate funding. This may put the State Chief Information Officer in a position where he or she may not be able to execute the provisions of this bill. In either case, this process will require strong collaboration between the agency charged with overseeing a statewide network and PED.

PSFA states that:

The Gap Analysis study completed in 2015 by the Broadband Deficiencies Correction Program (BDGP) concluded that achieving the FCC connectivity goal of 1 Mbps (megabit per second) per student under the existing approach would be unattainable, even with a significant portion of the cost being covered by E-rate.

HB113 is similar to legislation that created Network Nebraska in 2006. Network Nebraska was established through contractual agreements with private vendors, leveraging their existing broadband infrastructure and upgrading or expanding it where needed. Network Nebraska is a government-coordinated education network, funded by E-rate and nominal

membership fees. Network Nebraska did not require state appropriation to be established and has been operational for approximately ten years.

The voluntary participation in Network Nebraska by K-12 public schools is 100%. Network Nebraska accomplished one of the lowest Internet Access costs in the country, currently at \$0.79 per megabit per second per month. The low cost of Internet Access and the infrastructure to support it also benefits entities and organizations who are not eligible for E-rate funding.

CNM states that:

Participation in a centralized broadband network that is subsidized with federal funding would provide smaller institutions with more reliable and affordable WAN/Internet services. Additionally, the added benefit of centralized network management, 24/7 support, online resource sharing, and service redundancy with different ISPs, would be of increased value over current individual WAN/Internet services at most institutions.

However, participation in a statewide broadband network would result in some negative issues. These issues include loss of network security control, potential service disruptions during transitional phases, and an unknown quality of service which could potentially be worse than current service levels.

UNM states that:

State research institutions including the University of New Mexico, New Mexico State University (NMSU), and New Mexico Institute of Mining and Technology (NMT), known collectively as the research partners, are well experienced with the network aggregation model. If appropriate roles are defined and resources and funding are allocated as prescribed in the Bill, the research partners could be well suited to participate in the planning and execution of the statewide broadband network initiative, subject to alignment with institutional priorities for each research institution.

PERFORMANCE IMPLICATIONS

DoIT states that:

As stated above, DoIT rates would be affected. Additionally, DoIT would have a substantially increased customer-base, in many cases outside of its current geographic operational area. Additional performance metrics and other program considerations would be required.

DOH states that:

Because HB113 introduces the possibility of a more reliable and cost effective internet connectivity for healthcare settings, it is related to the NM Department of Health (NMDOH) 2017-1019 Strategic Plan:

- Result 2: An Engaged, Empowered, and High-performing Workforce that Supports Health Status Improvement
- Result 3: Simple and Effective Administrative Processes that Support Health Status Improvement

CNM states that “Increased access to distance education via a statewide broadband network could have a positive effect in increasing statewide college completions.”

ADMINISTRATIVE IMPLICATIONS

PSFA states that “The BDCP works with other state agencies (PED & DoIT) as well as many K-12 School Districts throughout the state to leverage funds allocated by the Public School Capital Outlay Council and maximize Federal Universal Service Funds to implement or expand broadband infrastructure.”

CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP

The following may relate to the implementation of the network described in this bill:

- Proposed HB60 allows localities to establish public-private partnerships in broadband telecommunications network facilities for purposes of economic development.
- Proposed SB24 amends the Infrastructure Development Zone Act to provide for broadband infrastructure development by a local government.

TECHNICAL ISSUES

DoIT recommends that following clarifications:

- Clarify this program as a state mandated program, per NMSA 9-27-13.
- Define Chief Information Officer as State Chief Information Officer.
- Define Educational Institutions as State K-12 public schools, libraries, charter schools, universities, and colleges that are located within the State of New Mexico.
- Define Statewide Broadband Network.

OTHER SUBSTANTIVE ISSUES

DoIT expresses concern about the effectiveness of aggregating demand on a voluntary basis and recommends requiring participation with some exceptions. DoIT also cautions about possible changes in Federal Communications Commission policy that may affect rules and funding because of the new federal administration.

PSFA expresses concern that, based on the current financial plan, PSFA is estimated to exceed the statutory operating budget cap in FY20; the cap is identified as five percent of the average annual grant assistance authorized from the fund during the three previous fiscal years.

CNM states that:

If HB113 is passed into law, it would be beneficial to create a shared governance council to assist in the oversight of the statewide broadband network. These representatives would include other state agency CIOs, a representative from the New Mexico Council for Higher Education Computing/Communication Services (CHECS), and representatives from local school districts. By insuring that the voices of these agencies are included in the oversight of the network, the state would likely see increased participation in the network.

UNM states that:

- Subscription to the network is voluntary. Handling of the financial burden needs to be determined if insufficient revenue is realized to run the operation.
- Unclear roles and accountability for implementation and operation of the network greatly increase the chances of failure.
- Right-of-way agreements may be difficult to obtain.

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

Status quo for broadband availability and connection speeds in New Mexico

TM/sb/jle/al