



Summary Results and Analysis of the 2016 Nevada School E-rate Survey

J. Brent Legg
Vice President, Education Programs
Connected Nation
blegg@connectednation.org
202.340.6446

Introduction

In 2015, Nevada schools, including public school districts, private schools, and charter schools, collected \$14 million in Internet, broadband, WAN, and telephone discounts from the federal Schools and Libraries Universal Service Fund (commonly known as “E-rate”). These discounts for Nevada schools are smaller than the discounts received by neighboring jurisdictions, particularly Utah, which received \$30.8 million from the E-rate fund in 2015, and Arizona, which received \$83.1 million.¹

To better understand and explore these differences, the Nevada Department of Education engaged Connected Nation in June 2016 to survey public school districts and charter schools in Nevada. Connected Nation prepared an online survey questionnaire, and, with the assistance of the Department of Education and the Nevada State Public Charter School Authority, circulated that survey to all K-12 public school districts and 41 state charter schools. The purpose of the survey was to explore the extent to which public school districts and charter schools in Nevada were using the E-rate Program, how schools in Nevada applied for E-rate funds and managed the complexity of those applications, the cost and time spent complying with E-rate Program rules, and the attitudes of Nevada school districts and charters toward various proposals that could lower these costs and administrative burdens.

All 17 public school districts and 18 of the 41 state charter schools responded to the survey. These responses demonstrate that, while most Nevada districts and schools have applied for E-rate funding, Nevada schools believe that the process is complicated, and many schools spend considerable sums of money on consultants to assist them with the process. In addition, a majority of Nevada districts report that they have not received competitive bids for Internet connectivity, a situation which indicates a lack of choice in connectivity in rural areas of the state and the likelihood that higher prices are being paid due to a lack of competition.

This report summarizes the key findings and data points of the survey. In particular, this report studies:

- Participation in the E-rate Program by public school districts and charters;
- E-rate administration and use of E-rate consultants;
- Attitudes about E-rate Program complexity;
- Connectivity options and policy choices to lower E-rate administration and service cost; and
- Expiration dates of current contracts for E-rate services.

The survey uncovered widespread interest in pursuing statewide or regional K-12 education networks and E-rate purchasing consortia as policy solutions to these challenges. Many charter schools signaled their receptivity to such approaches as well. With a significant number of

¹ The companion report to this document, *A Comparison of School Connectivity and E-rate Utilization in Nevada and Utah*, explores these comparisons in greater detail.

network access contracts coming up for expiration between now and 2019, now is an appropriate time for Nevada to consider these statewide solutions.

Participation in the E-rate Program

The E-rate Program funds school connectivity via two separate program categories. Category 1 services (called “Priority 1” prior to the E-rate modernization orders of 2014) are external connections, such as Internet and WAN services that connect school buildings to the Internet and to one another, as well as telephone services. Category 2 services (formerly called “Priority 2”) are internal connections, such as in-building Wi-Fi, cabling, switches, routers, etc., and are funded differently than external connections. Until 2015, Priority 2 connections were funded only after all school and library “Priority 1” funding requests. Because the E-rate Program is capped, most funding requests for Wi-Fi prior to 2015 were rejected except for the neediest school districts.

Table 1 below indicates the percentage (and number) of districts and charter schools that applied for funding support from the E-rate Program during the three most recent funding years.

Table 1. E-rate Program Participation Among Nevada School Districts and Charter Schools

Funding Year	Public School Districts (17)	Charter Schools (of 18 respondents)
Category 1		
2014	17 (100%)	6 (33%)
2015	17 (100%)	6 (33%)
2016	17 (100%)	7 (39%)
Category 2		
2014	3 (18%)	1 (6%)
2015	10 (59%)	1 (6%)
2016	10 (59%)	3 (17%)

Category 2 funding requests in 2015 and 2016 include participation from Nevada’s largest districts—Clark County, Washoe County, and Carson City. In those districts alone, Category 2 funding will improve on-campus connections for 95% of the students in Nevada public school districts.

Beginning in 2015, every school building was given a fixed allocation of assured funding for Wi-Fi and other internal connections. The FCC allocated \$150 of Category 2 E-rate funds for each student and staff member of every K-12 school, which E-rate applicants could draw on over the next five years. For nearly all school districts, this dedicated funding represented the first time in several years in which E-rate support for Wi-Fi and LAN wiring could realistically be expected.

As a result, most Nevada schools have responded to this opportunity. In both 2015 and 2016, a majority of the public school districts have applied for Category 2 funding. Moreover, nearly all public schools expect to exhaust the funding allocated to them by the FCC by FY2018, before the dedicated funding for

Category 2 expires. However, the majority of respondents (71%) said that the \$150 per student/staff allocation is still insufficient to meet classroom Wi-Fi needs.

Of public school districts, only Lincoln County responded that it did not intend to seek any of its allocated Category 2 funding, and only Pershing County said that it did not expect to utilize the full \$150 per student-staff allocation. Both of those districts report that their current Wi-Fi equipment is 1-3 years old and that they have approximately 1 Wi-Fi access point for every two classrooms or instructional spaces.

E-rate Administration and Use of E-rate Consultants

Schools report that filing for E-rate funding is complicated, and 88% of public school districts and 71% of responding charter schools that applied for E-rate funds retain a private E-rate consultant to assist with this process.

Table 2. E-rate Administration

	Public School Districts (n=17)	Non-Metro Public School Districts (n=14)	Responding Charter Schools That Applied for E-rate in 2016 (n=7)
Used E-rate Consultant	15	13	5
Number of staff trained in E-rate rules and procedures			
1	8 (47%)	7 (50%)	3
2-5	9 (53%)	7 (50%)	2

Of the 17 public school districts, only Clark and Elko do not use E-rate consultants, and Clark and Washoe are the only districts that reported having staff dedicated to the pursuit of E-rate funding support. Applying for E-rate necessitates the involvement of many levels of administration—from technology support staff up to district chief technology officers and even superintendents.

The amount paid by districts and charters to E-rate consultants varies widely, but can be considerable. Some consultants are paid on a flat-fee basis, while others are paid based on the size of a contract—as much as 15%. These costs are paid entirely out of pocket by the schools, as the FCC E-rate Program does not consider an E-rate consultant’s fee as part of the cost of an E-rate service. Fees for consultants and the cost of internal support needed to prepare and make E-rate filings also vary widely, especially based on the types of services that a district might put out for bid in any particular year. The following table lists the amounts paid to E-rate consultants for the FY2016 E-rate filing period, as reported by respondents to the survey. The table also indicates the relative cost of a consultant on a per-student basis.

Table 3. E-rate Consultant Fees and Per Student Cost.

Public School District	E-rate Consultant Fees	Internal Administrative Fees (Est.)	Total E-rate Administrative Cost per Student
Carson City School District	\$8,000	Not reported	\$1.03
Churchill County School District	Not reported	Not reported	Not reported
Clark County School District	\$0	\$75,000	\$0.23
Douglas County School District	\$5,800	\$20,000	\$4.21
Elko County School District	Not reported	Not reported	Not reported
Esmeralda County School District	\$6,660	\$5,950	\$161.67
Eureka County School District	\$1,000	\$0	\$4.07
Humboldt County School District	\$8,000	\$0	\$2.27
Lander County School District	\$2,535	Not reported	\$2.26
Lincoln County School District	\$6,000	Not reported	\$6.17
Lyon County School District	\$9,500	\$5,900	\$1.90
Mineral County School District	\$6,696	\$4,200-\$8,400	\$23.53-\$32.60
Nye County School District	\$8,500	\$9,000	\$3.36
Pershing County School District	\$2,000	\$0	\$2.82
Storey County School District	\$10,000	Not reported	\$25.13
Washoe County School District	\$48,000	\$80,000	\$1.95
White Pine County School District	\$4,500	\$5,000	\$7.04

There are clear benefits to having an E-rate administrative system that covers a larger number of schools. Clark County, for example, handles E-rate applications and filings in-house and has the lowest per-student costs in Nevada. Esmeralda, the state’s smallest district, has by far the highest per-student cost.

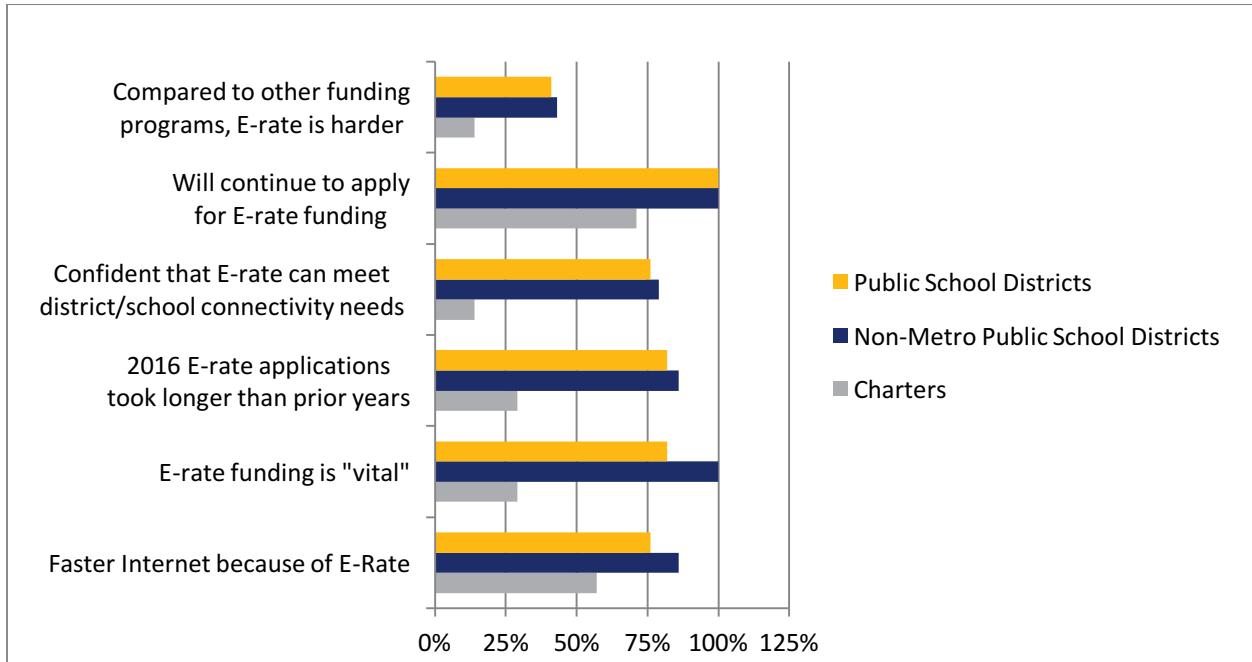
Attitudes Toward the E-rate Program

The FCC made several important revisions to the E-rate Program in 2014, including opening up new funding opportunities. However, schools responded that the E-rate application process has become more complicated as a result of these changes. Ultimately, these barriers could impact whether Nevada schools can take advantage of the new E-rate funding opportunities.

For example, while the FCC in 2014 opened up the possibility for school districts to construct and self-provision fiber connections directly to schools, not a single district or charter school in Nevada has taken advantage of this opportunity to date. While there are several reasons why a district might want to take its time in considering this option, particularly due to its cost, the complexity of the E-rate process and requirements likely play a role in these decisions.

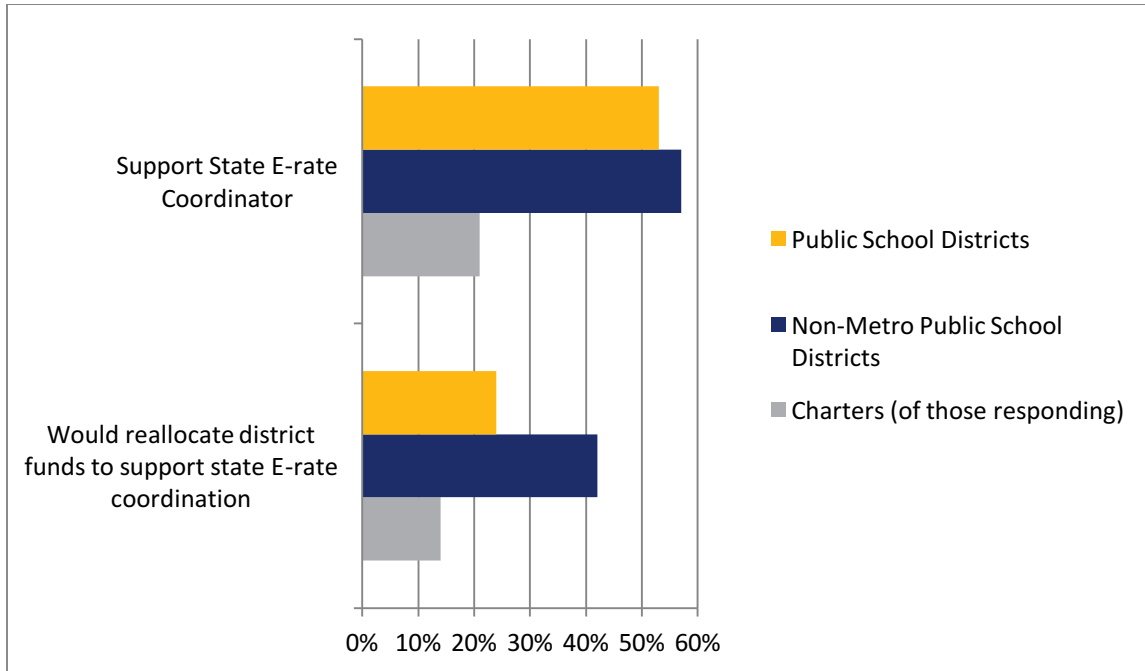
In general, attitudes toward the E-rate Program indicate that the program is an important and necessary headache for school system staff, but one that does not necessarily result in improved connectivity for Nevada students. See Chart 1 below. This is likely due to the lack of available connectivity options in some Nevada communities, or a lack of understanding of how the new E-rate Program rules can be leveraged to pay for alternative approaches, such as leased dark fiber or self-provisioned service.

Chart 1. Attitudes Toward the E-rate Program



In survey responses, most districts and many charters supported proposals to create a statewide E-rate coordinator position, and several even supported redirecting local money to help pay for that state function—indicating that Nevada schools are eager to explore new approaches to better capitalize on the new E-rate Program rules. Chart 2 below indicates district and charter school support for an E-rate coordinator position.

Chart 2. Support for a Statewide E-rate Coordinator Position



Connectivity Options and Competition for E-rate Services

The E-rate survey also asked districts and charters about the extent of choice they feel they have in securing Internet and broadband service. FCC E-rate rules require that prior to receiving E-rate funding, E-rate applicants must put out a connectivity contract for competitive bidding. **Many rural districts have reported that they frequently receive one or zero bids in response to such RFPs.** A lack of competition and choice can ultimately result in higher costs paid for connectivity.

In particular, a substantial number of public school districts and charters responded that they did not receive multiple bids for E-rate Internet and WAN services from 2014-2016. One-half of the 14 non-metro public school districts (i.e., districts other than Clark, Carson City, and Washoe) did not receive competitive bids in 2016.

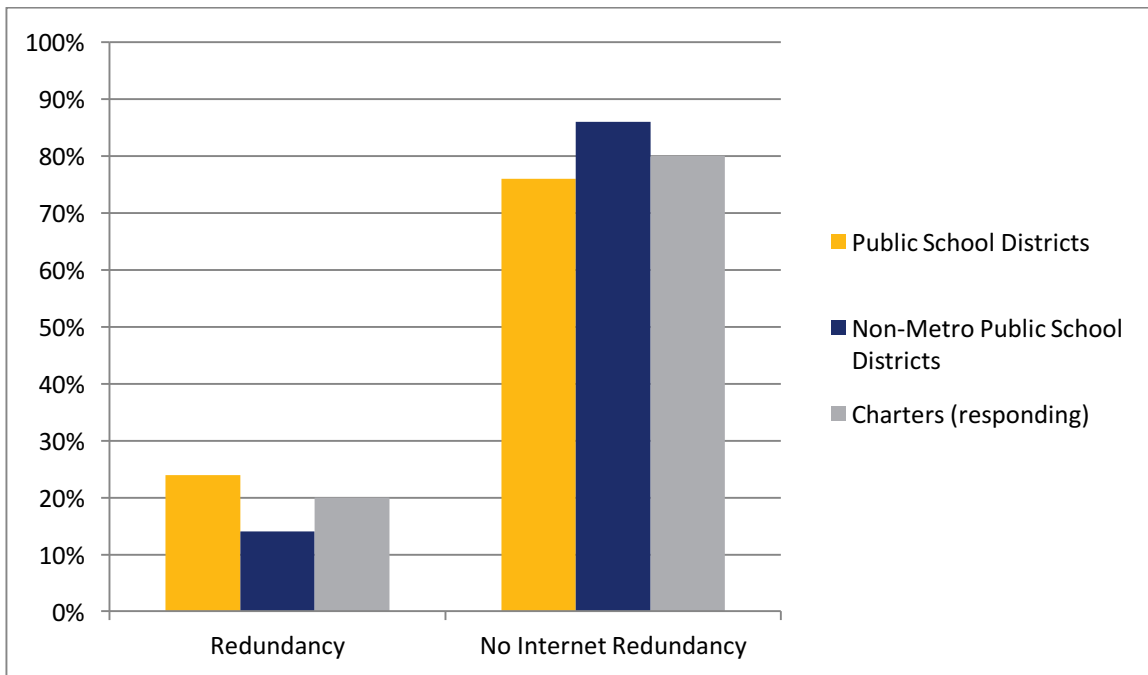
Table 4. Districts/Charters that Received Multiple Competitive Bids for Category 1 Internet Services

	Public School Districts	Non-Metro Public School Districts	Charter Schools (of responding E-rate applicants)
2014	10 (59%)	7 (50%)	5 of 6 (83%)
2015	10 (59%)	8 (57%)	5 of 6 (83%)
2016	9 (43%)	7 (50%)	6 of 7 (87%)

Indeed, 35% of the public school district survey respondents reported that they “rarely” received multiple bids for E-rate services they put up for bidding.

Schools report that their needs for Internet connectivity will expand significantly in the near future. The majority of districts see their needs increasing by at least 100% over the next three years. Importantly, the vast majority of Nevada public school districts report that they do not have redundant/backup Internet connectivity. This potentially exposes students to connectivity failures and service outages—which is of particular concern as more and more schools move to online testing.

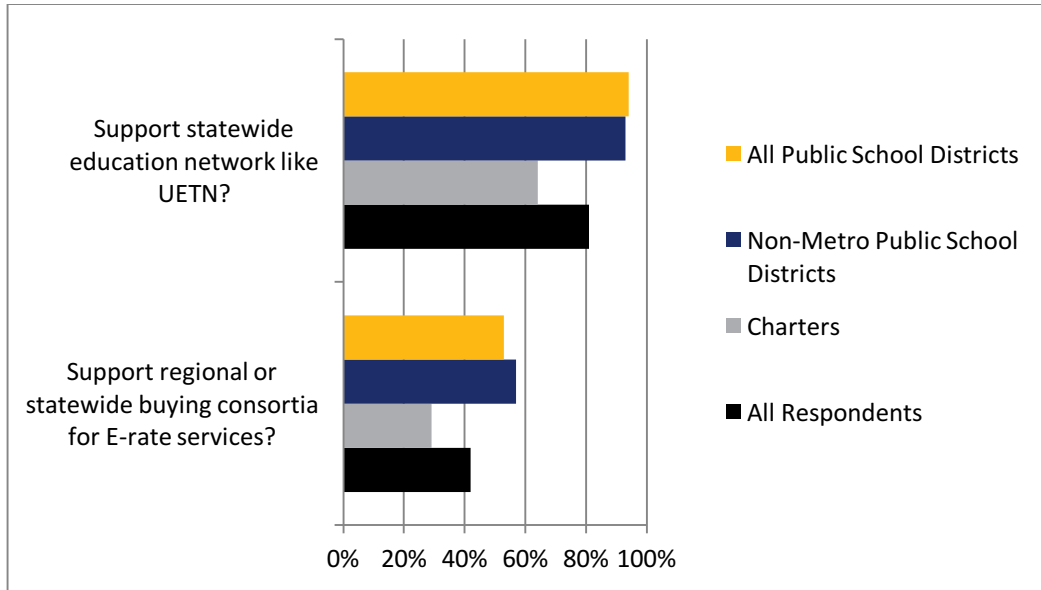
Chart 3. Redundancy of Internet Connections



To overcome these challenges, many states have created school connectivity purchasing consortia or have built statewide networks to support more robust school connectivity. In its June 2016 report to the Nevada Department of Education entitled *Options for Statewide School Connectivity Governance: Reviews and Recommendations*, Connected Nation conducted a review of successful governance structures for school connectivity and purchasing in other states. In that report, several states—particularly Utah, Kentucky, North Carolina, and New Jersey—have developed initiatives to form larger, statewide or regional markets for school connectivity, which would take advantage of economies of scale in network construction, service procurement, and equipment acquisition. Connected Nation believes that Nevada would benefit significantly from launching a similar initiative, provided that significant input is sought from the districts and charter schools.

The survey specifically asked them about their interest in purchasing consortia and statewide education networks. A majority of schools expressed support for such initiatives, particularly if they could result in cost savings and faster speeds. Indeed, there is significantly stronger support for a statewide education network similar to the Utah Education and Telehealth Network (UETN) than for only a statewide E-rate purchasing consortia. See Chart 4 below.

Chart 4. Support for Statewide Education Network or Buying Consortium



The survey also asked schools about their receptivity to statewide or regional consolidated data center operations. Response to this idea was mixed, though since it is an emerging concept nationally, further education and introduction to this idea should be explored since it could drive down connectivity costs and increase available options as well.

Table 5. Interest in Consolidated Data Operations

	Public School Districts (n=17)	Non-Metro Public School Districts (n=14)	Charter Schools (of responding E-rate applicants) (n=18)
<i>Would your organization be interested in a consolidated datacenter operations/colocation strategy for Nevada schools if it could reduce your costs? (Respondents were able to choose more than one response.)</i>			
Yes, if it would save us money	10 (59%)	8 (57%)	5 (28%)
Yes, if it would create greater operational efficiencies	8 (47%)	8 (50%)	5 (28%)
Yes, if doing so would allow for the deployment of new enterprise applications	4 (24%)	4 (29%)	4 (22%)
Yes, for other reasons	3 (18%)	3 (21%)	1 (6%)
Maybe, but we have student data privacy concerns	5 (29%)	4 (29%)	2 (11%)
No, we prefer to retain local control of data center operations	6 (35%)	5 (36%)	10 (56%)
No, for other reasons	1 (6%)	1 (7%)	0 (0%)

Finally, the survey gave respondents the ability to rank their preferences for a variety of potential policy solutions to help them overcome gaps in connectivity, cost, and E-rate administrative complexity. The policy solutions choices offered to survey respondents were:

- Build statewide network for K-12 connectivity
- Build regional networks for K-12 connectivity
- Create statewide buying consortium for E-rate services
- Create regional buying consortia for E-rate services
- Create statewide E-rate coordination agency
- Pursue consolidated data center/collocation strategy for K-12 connectivity

Respondents were asked to rank these solutions by preference. The following table represents results from that exercise based on an index created by assigning points for higher-ranked choices (6 points for 1st priority, 5 points for 2nd priority, etc.). The index is expressed separately for all respondents, all public school districts, all non-metro public school districts, and all charter school respondents.

Table 6. Potential Policy Solutions – Choice Ranking

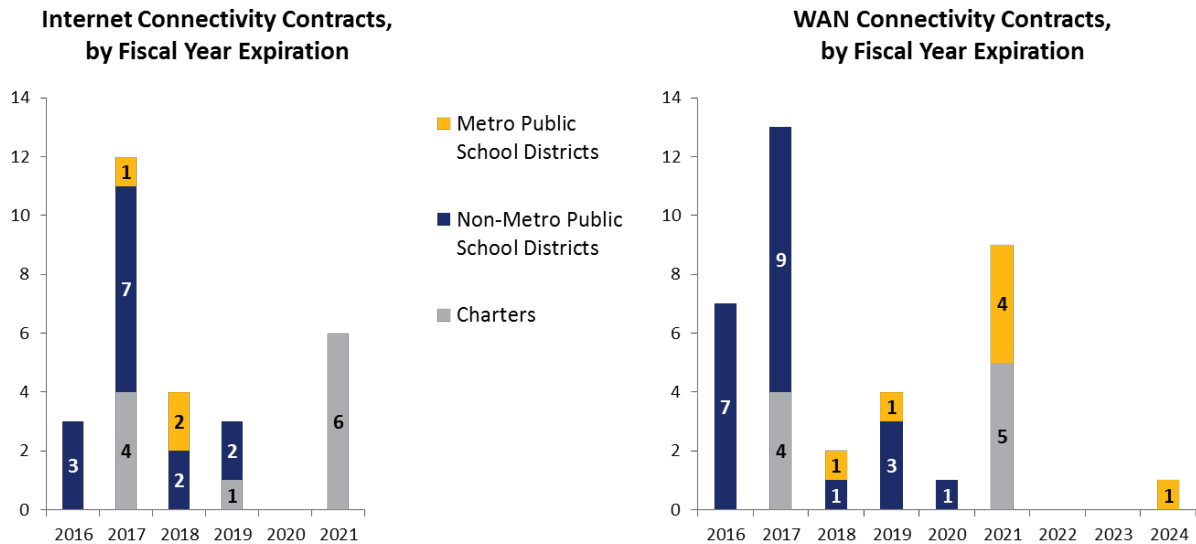
Policy Option	All Respondents	All Public School Districts	Non-Metro Public School Districts	Charter School Respondents
Build statewide network for K-12 connectivity	137	93	78	44
Build regional networks for K-12 connectivity	116	65	55	51
Create statewide buying consortium for E-rate services	98	49	38	49
Create regional buying consortia for E-rate services	102	50	40	52
Create statewide E-rate coordination agency	89	52	63	37
Pursue consolidated data center/collocation strategy for K-12 connectivity	58	31	24	27

Analyzed in this manner, there is broad support for establishing a statewide K-12 network across public school districts. Charter schools would prefer an E-rate purchasing consortia, albeit only slightly more than the creation of state or regional education networks. Policy responses such as creating a statewide E-rate coordination agency and consolidated data operations received lower support from survey respondents when ranked against building statewide or regional networks.

Opportunities for Savings: Expiration of Current Connectivity Contracts

In order to understand the opportunity for cost savings that could result from dedicated education networks and E-rate purchasing consortia, the survey also asked districts and schools to report on the expiration date of their Internet access and WAN connectivity contracts. This indicates that many contracts serving the vast majority of Nevada K-12 students and districts will expire or come up for renegotiation within the next two E-rate funding years.

Among the county school districts, all reported contracts for Internet services were due to expire by Funding Year (FY) 2019. Contracts for WAN services in metro districts tend to have longer terms, including a contract running through 2024 between Clark County Schools and Cox Communications for WAN services. However, 16 of the 21 reported WAN contracts for non-metro public school districts expire by the end of FY2017. Indeed, the vast majority of all Internet and WAN contracts for public school districts and responding charters are due for expiration or renegotiation between now and the end of FY2018.



In general, these results show that if the state were to take action to lower Internet connectivity and WAN costs, most Nevada schools, especially those in non-metro districts, would be in a position to take advantage of those savings by the FY2019, if not sooner. All reported public school Internet connectivity contracts can be renegotiated by the close of FY2019, and only 11 of 37 reported WAN contracts have expiration dates beyond the close of FY2019. Specific district-by-district contract expiration dates and types collected via the survey have been retained and can be used to inform future decision-making.

Conclusion

While the E-rate Program remains an incredibly important mechanism for supporting school connectivity statewide, districts and charter schools seem to agree that there is significant room for improvement—and that the state could be doing more to improve available options, especially in rural Nevada. With contracts for Internet and WAN services up for rebid or renewal in the next two years, policymakers have a unique opportunity to create a new environment in Nevada that encourages increased competition, improves available service options, promotes fiber deployment in rural areas, and lowers bandwidth costs in rural and urban areas alike.