

Monterey County Office of Education

March 7th, 2014

Letter – Expression of Interest VIA ECFS

Chairman Thomas Wheeler
Commissioner Mignon Clyburn
Commissioner Jessica Rosenworcel
Commissioner Ajit Pai
Commissioner Michael O’Rielly
Jonathan Chambers
Federal Communications Commission
445 12th Street, SW 20024
Washington, DC

Re: Expression of Interest – Rural Broadband Trials Connect America Fund, WC Docket No. 10-90

Dear Chairman Wheeler, Commissioners, and Mr. Chambers,

This letter is to express Monterey County Office of Education’s interest in receiving funding from the Rural Broadband Trials announced at the January 30th FCC Open Meeting.

Background

Monterey County Office of Education, 901 Blanco Circle, Salinas, CA 93901. MCOE runs a digital media lab, educational television studio which offers streaming educational programming and distance learning as well as internet to small schools in disadvantaged areas of rural Monterey California with (90 to 95%) Spanish speaking children. The microwave / Fiber backbone is antiquated and overwhelmed. This is due in large part to the number of new subscribers whom have come to MCOE for services to meet the digital broadband needs of these rural and poorer portions of Monterey County which doesn’t have the wealth that the Carmel Monterey Peninsula has.

MCOE under the auspices of the MCAET (Media Center for Arts, Education, & Technology) has built a new digital studio. However MCAET / MCOE has recently had to upgrade our television LPTV equipment to meet HD requirements for the communities whom we serve with public interest broadcasting and educational programming.

MCAET / MCOE, has an educational partnership with Hartnell College, CSUMB. We also carry the earthquake network on our microwave system with the USGS for their earthquake monitoring network. The microwave network which carries between 50 to 150Mbps has the following subscribers on the system. Cal-Fire for the Tri-county area, San Benito County Sheriff, Santa Cruz County Sheriff and Fire., Monterey county school

bus 2 way net, internet for a number of smaller schools that only have access to DSSL for testing and student records, video conferencing, and tri-county medical alert and ambulance services. The microwave network in the south county region has a more critical role for the small schools and has been approached to provide on-going educational programming through our collegiate partners to the service men and women of Fort Hunter Liggett. Finally we are the prime network for the Monterey County Office of Emergency services.

The number of students that are supported by the Title 1 lunch program is a more accurate reflection of disadvantaged families than the US Census which current RUS grants support. This predominately Latino population doesn't have access to internet because a large portion of these families and students which we are trying to serve are transit. They represent the farm working labor force in the greater Salinas valley. Because we are an educational entity we have access to the families that take advantage of the lunch program and currently we have a target internet population of 16,496 students not counting family members and siblings. This target audience of subscribers covers the greater portion of the Salinas Valley and pockets along the northwest coast away from the Monterey Peninsula.

Our microwave network including fiber connectivity is 400 miles long and 100 miles at its widest point. We have 3 mountain sites and have plans to build 2 more to meet the demands of our subscribers and meet the school / student needs. Those 2 new sites are secured leases on mountain tops.

Our goals for the future are to provide Wi-Fi to the south county rural community areas where internet is particularly nonexistent. In order to meet this challenge we have come to the realization that a hybrid system is the best approach where distance and rugged terrain makes fiber costly. We have designed a network to carry 3 to 6 Giga byte microwave network using new technology 80 MHz bandwidth microwave radios via the mountain tops to our last mile locations into designated school and community centers for Wi-Fi. In addition, we need funding to meet the expenses (teaching staff, qualified drivers) as well as fuel and computer support for our 18 wheeler computer truck which has met with great acceptance. The success has spilled over to adjacent counties where we have new demand.

List of Anchor Institutions

Schools: Chular schools, Soledad area schools, Greenfield schools, San Lucas schools, San Ardo schools, Bradley schools, San Antonio schools, La Gunita, Graves.

Libraries: Monterey County library system in the south county region.

Healthcare: Healthcare outreach centers at the community centers where the south county school needs are.

Community center locations: Chular, Gonzales, Soledad, Greenfield, Bradley, San Lucas, San Ardo, San Antonio, including selected fire stations in these communities.

Proposed technology

The network budget and design calls for new state of the art 80 MHz bandwidth radios capable of emulating fiber like speeds over carrier class radios. Updating microwave sites to utilize R-56 standards sites with solar supported back-up power with earthquake seismic standards construction methodology.

State and/or Local or Tribal Government Participation in and/or Support for Project

We have federal support as well as other county agencies support from Santa Cruz, San Benito, South Santa Clara and Monterey Counties. Federal support comes from Fort Hunter Liggett and the USGS. The USGS has been given notice to migrate from 2 GHz to 7GHz on their backbone and wants to partner with our 2 new undeveloped sites. We have lease and lease option on both these sites.

Providers

Presently the only provider that we are looking at for service and support is Quantum Wireless Technologies.

Project Timeline

Because of our MCOE/MCAET supported Millennium Charter school for digital technology we have an immediate need (in the next 3-6 months) to commence expending our digital microwave backbone now due to fiber constraints.

Scalability

The product we are looking at has the ability to go from 752Mbps to 6Gbps. The Wi-Fi panels we are looking at have the ability to cover 3,000 subscribers per panel and have a dual input per switch allowing for public and restricted internet for school purposes.

Total Business Investment

\$600,000.00

Investment Needed

The hybrid microwave backbone and last mile deployment including Wi-Fi will be a one-time cost of \$3,000,000.00.

Total Project Cost

\$3,600,000.00

Thank you for considering our Expression of Interest in your decisions about the amount of funding that will be allocated in the Rural Broadband Trials. We commend you in this effort to connect rural communities and are ready to help you close the digital divide.

Sincerely,

James Newsom, BSCS

jnewsom@monterey.k12.ca.us

Office 1-831-755-0300

MCAET Special Operations Project Engineer

Monterey County Office of Education