

March 4, 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 Eastern Shore of Virginia Broadband Authority????s interest in receiving funding from the Rural Broadband Trials announced at the January 30th FCC Open Meeting.

#### Background

The ESVBA was formed in April 2008 by joint resolution of the counties of Accomack and Northampton and charged with providing the citizens and businesses of the Eastern Shore of Virginia with the broadband telecommunications infrastructure they require to be successful and productive in the twenty-first century. By charter, ESVBA is an open access network. Open access means that all qualified telecommunications providers have equal rights to use the network to offer services on the Shore. The ESVBA is directed by a five-member board of directors consisting of public officials and citizens of the two counties. An executive director and a small professional staff operate the ESVBA.

After years of study and evaluation, and the continued decision of the incumbent telecommunications & CATV providers not to allocate capital for significant expansion on the Eastern Shore the citizens and Boards of Supervisors acted to provide the means to improve telecommunications service themselves. Network construction began with an eighty-mile build (backbone) from Virginia Beach, across the Chesapeake Bay Bridge Tunnel, thence north along US 13 and the railroad to Wallops Research Facility. At the southern end it connects with major national carriers. At the northern end it meets Maryland Broadband Cooperative and thence again to national carriers. The ESVBA has also constructed fiber networks in several Eastern Shore Communities including, Cape Charles, Nassawadox, Eastville, Exmore, Belle Haven, Onancock, Parksley, and Chincoteague.

The backbone build was funded through a combination of grants and appropriation. These include an appropriation delivered via NASA, grants from the Federal Economic Development Administration and the Virginia Department of Housing and Community Development. Additional, Accomack and Northampton Counties contributed over three hundred thousand dollars in start-up capital for planning and to form the Authority and begin operations.

While all the grants have been expended and closed, the ESVBA continues to expand its network using its free cash flow from broadband revenues. The ESVBA continues to seek grants and long-term loans to enable it to complete a network that serves the entire Shore.

In order to provide broadband services to unserved and under-served areas on the Eastern Shore of Virginia, the ESVBA is looking to expand its network into these areas using a combination of fiber optic cable and fixed wireless technologies.

#### Services

The ESVBA operates an ???Open Access??? network and provides transport and internet services to all customers on a non-discriminatory basis. The ESVBA has one standard

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price list for all of its customers. While the ESVBA encourages and promotes service providers to use the network, it also provides all potential customers the option to contract with ESVBA directly for Internet and transport services.

The ESVBA provides the following services:

- ??? Dedicated Internet
- ??? Ethernet Services (E-Line & E-WAN)
- ??? SONET Services

#### Geographic Territory

The ESVBA provides broadband services to Northampton & Accomack Counties on the Eastern Shore of Virginia

#### List of Current Anchor Institutions

1. Eastern Shore 911 Commission
2. Accomack & Northampton Schools except Tangier Island
3. All of the libraries in Accomack and Northampton County
4. Riverside Shore Memorial Hospital, Eastern Shore Rural Health, and Peninsula Regional Health in Chincoteague
5. Accomack and Northampton Governments
6. NASA, Navy, & NOAA at Wallops Island, VA
7. US Fish & Wildlife & US Coast Guard

#### List of Service Providers

1. Level 3 Communications
2. Cox Communications
3. Windstream Communications
4. Maryland Broadband Cooperative
5. Cogent Communications
6. Baycreek Communications
7. Eastern Shore Communications
8. OnCall Telecom

#### Network Architecture

The ESVBA network architecture is designed to allow the provision of highly reliable and scalable services to the Eastern Shore. ESVBA network infrastructure is currently designed at a level of performance to generally achieve a ???four nines??? (99.99%) availability. Four nines is less than one hour of down time per year. Specific performance levels will be established by customer contract. However, the network elements are ???five nines??? (99.999%) capable and the ESVBA can provide network services to any customers or service providers requiring this level of service. ESVBA will generally seek to provide the physical infrastructure and to operate the network at Level 2 or 3 on the OSI Model, depending upon the customers we are serving and the needs of the service provider. Both standards based SONET and Ethernet network elements are utilized to allow for the provisioning of all types of circuits. The network is designed to meet or exceed industry standards to provide carrier class services. All backbone network elements NEBS Level 3 compliant and are in hardened facilities with dual HVAC, AC power back-up generation, eight hour battery DC Power back up, and all networks elements are monitored by the ESVBA to ensure that any potential problems are detected proactively to minimize any service performance or service interruptions.

Some of the network elements which will be employed are:

1. Cisco ONS15454 and ONS15310 Multi-Service Transport Platform
2. Cisco ASR 1002 Series Router
3. Cisco 4507E Catalyst Switches
4. Cisco 3750 Catalyst Switches
5. Cisco 3560 Catalyst Switches
6. Cisco ME3400 Switches

The network traffic and system health is monitored on a continuous basis. While the ESVBA currently does not have a 24x7x365 Network Operations Center (NOC), the goal is to establish one and possibly partnering with other similar companies, as well as the local electric cooperative, to provide a cost effective and reliable method of providing NOC services.

In order to provide long-term positive benefit to the Shore, the ESVBA operates a

highly scalable network enabling customers to receive service ranging from 1Mb/s to 10,000 Mb/s and even 100,000 Mb/s if required.

If 100,000 Mb/s services are required, the network will require upgrades. While there have only been a few inquiries for 100,000 Mb/s service, it will be required soon and the ESVBA will need to install new backbone electronics to meet this demand.

The ESVBA's network design, construction and operation always seeks to provide the highest standard of good practices available in the industry with regard to efficient, reliable service, consistent with cost justifiable construction and operating methods. These standards include diverse redundant data paths wherever practical, high quality redundant equipment and power sources, secure, protected primary equipment locations, and Telcordia quality backbone and major distribution installations.

#### State and/or Local or Tribal Government Participation

As previously stated, the ESVBA was originally started through funding from the Federal Government (EDA & NASA), Commonwealth of Virginia, & both Northampton & Accomack Counties. All grants have been closed out, and the ESVBA operates and expands its current network utilizing its free cash flow generated from broadband operations. However, the resources required to further expand broadband services to underserved areas greatly exceeds the ability for ESVBA to fund itself.

#### Scalability

While most of the anchor institutions are currently being served by the ESVBA, there are many areas where residential customers have no broadband service. Additionally, the incumbent ILEC, Verizon, is not adding any additional equipment to provide DSL and in many instances, these services are not available to new subscribers. This has an economic impact on the business districts in the small town. Also, there is a demand for people to be able to telecommute and be able to have home businesses. These areas, which are mostly on the necks of the Eastern Shore are sparsely populated.

Some anchor institutions that are not currently served are:

#### Emergency Services

- ??? New Church Volunteer Fire and Rescue Company
- ??? Greenbackville Volunteer Fire Department
- ??? Atlantic Volunteer Fire and Rescue Company
- ??? Saxis Volunteer Fire Department
- ??? Bloxom Volunteer Fire Department
- ??? Tasley Volunteer Fire Company
- ??? Melfa Volunteer Fire & Rescue Company
- ??? Wachapreague Volunteer Fire Company
- ??? Painter Volunteer Fire Company
- ??? Exmore Volunteer Fire Company
- ??? Cheriton Volunteer Fire Company
- ??? Northampton Volunteer Fire & Rescue Company
- ??? Oak Hall Rescue
- ??? Tangier Volunteer Fire Company

#### Education Facilities

- ??? Virginia Institute of Marine Science-Wachapreague
- ??? Eastern Shore Agricultural Research and Extension Center- Painter
- ??? Anheuser-Busch Coastal Research Center of the University of Virginia-Oyster
- ??? Tangier Public Schools

#### Investment Needed

Since the ESVBA is already an operating entity, only the one time capital costs of approximately \$55,000,000 is required.

#### Total Project Cost

Based on a March 2009 report by Design Nine, the total project cost is approximately \$55,000,000.

Thank you for considering our Expression of Interest in your decisions about the

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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,

Nicholas Pascaretti  
Executive Director  
Eastern Shore of Virginia Broadband

Authority