CETF COMMENTS TO THE FCC
FOR COMMISSION'S BROADBAND CONSULTATIVE ROLE

GN Docket No. 09-40

April 13, 2009

Background

The definitions supplied within this document are modified versions of California Emerging Technology Fund (CETF) comments submitted March 25, 2009 to the FCC and USDA for Docket No. 09-29.

CETF Comments to the FCC on Docket No. 09-40

While most individuals may envision Hollywood or Silicon Valley when they consider how "wired" California must be, the truth is far from that.

California is home to:

- 44,000 square miles of "unserved" land mass—the size of Kentucky.
- 1.4 million rural residents without broadband Internet access—the population of Maine.
- 15.6 million residents in urban disadvantaged neighborhoods not using broadband—the population of Illinois.
- 2.4 million people with disabilities not using broadband—the population of New Mexico.
- 680,000 Native Americans (mostly not connected)—the population of Alaska.

Each of these population segments are in dire need of broadband deployment and adoption program funding. Without proper definitions of "unserved", "underserved" and "broadband", the individuals within these segments will continue to be excluded from the Internet, and remain on the wrong side of the Digital Divide.

Re-evaluating the definition of "unserved" is fundamental to a successful broadband deployment strategy that benefits the nation from the largest agricultural producer in the world: California. The definition of unserved will allow Californians to:

- Telecommute from home.
- Perform basic telemedicine applications.
- Engage in video relay conversations – sign language for the deaf.

Today, the ability to be "connected" instantly through the Internet to information, services and digital tools is increasingly critical for access to and success in education, jobs and economic opportunity. High-speed Internet networks are essential 21st Century infrastructure—as vital to commerce, economic competitiveness and quality of life as the transportation system was to the last century. In addition, broadband is a "green technology" that can significantly reduce impacts on the environment by offsetting vehicle trips, decreasing the use of resources, and saving energy. The magnitude of California's Digital Divide is unacceptable for global competitiveness.

The California Emerging Technology Fund (CETF) is providing recommendations on the following portions of the "Commission's Consultative Role in the Broadband Provisions of the Recovery Act" public notice, to ensure that unserved and underserved areas in California qualify for RUS and BTOP programs:

1. The definition of "unserved area".
2. The definition of "underserved area".
3. The definition of "broadband".

For **"unserved"** CETF recommends the following definition:

- An area with no facilities-based broadband Internet provider; and/or
- An Area with facilities-based broadband Internet service at sustained transmission rates less than three (3) Mbps downstream (Internet to user) and one (1) Mbps upstream (user to Internet); and/or
- An area with insufficient backhaul and backbone service availability that inhibits at least three (3) Mbps downstream and one (1) Mbps upstream broadband Internet deployment and/or adoption.

Within **"unserved"** areas, sub-areas without any broadband service ("severely unserved") should be considered the highest priority for deployment. However, deployment into "severely unserved" sub-areas should strive to achieve the practical requirements of at least three (3) Mbps downstream and one (1) Mbps upstream transmission rates for relevant consumer uses today.

For **"underserved"** CETF recommends the following definition:

- An area with only one (1) broadband Internet provider offering services at sustained transmission rates equal to, or greater than, three (3) Mbps downstream and one (1) Mbps upstream; and/or
- An area currently with broadband Internet service that is cost prohibitive for the end user or is not market comparable.

For "**broadband"** CETF recommends the following definition:

- High-speed Internet access using any medium or technology providing two hundred (200) Kbps or greater sustained upstream and downstream transmission rates; and
- High-speed Internet access service with sufficient transmission rates to support applications relevant to, or commonly used by, end users. For most applications relevant today to residential consumers, the practical required transmission rates is in the range of at least three (3) Mbps downstream and one (1) Mbps upstream.

For **"rural"** CETF recommends the following definition:

- The community does not have a city larger than twenty thousand (20,000) residents within five (5) miles and the area's economy is, or was in the last ten years, natural-resource based with at least 15% of the non-government workforce employed in a natural resource industry (agriculture and farming, forestry, fishing, mining, hydro-electric or other renewable energy central generation, eco- or ag-tourism); and/or

- The community does not have a city larger than twenty thousand (20,000) residents within five (5) miles and is defined by the USDA as "farming dependent" or "mining dependent" ; and/or
- The community does not have a city larger than twenty thousand (20,000) residents within five (5) miles and the area is isolated as evidenced by limited scheduled public transit, no government services or educational facilities, or is medically underserved.

An alternative approach to the definition of "rural" for ARRA funding of broadband through RUS is to simply define any unserved area today as "rural" because a combination of economic and terrain factors have obviously converged to hinder deployment to date. And, by definition, these factors are all facets of rural characteristics.

The FCC must consider transmission rates and application specific requirements when finalizing the definitions. Grantors such as Department of Commerce (DOC) and United Stated Department of Agriculture (USDA) must consider these same issues prior to awarding broadband grants. Some applications require real-time and interactive audio, video, peer to peer (P2P), and Virtual Private Network (VPN) communication or a certain amount of available sustained transmission rates. Without broadband Internet access supporting these parameters or applications, end users may not be able to fully leverage the service.

Transmission rate comparisons should be from the user perspective that can be measured at median peak use and not the theoretical service maximums. Application requirements may include packet loss, latency, jitter, transmission rates and overall service availability. Application requirements will evolve over time as new applications or features are utilized and should be periodically monitored and reviewed.

Lastly, it is critical that all programs be technology neutral. Wireless and wireline solutions each have strengths and weaknesses, and when deployed in a hybrid fashion the end result can be a shorter time to market, more cost-effective, highly scalable and feature rich solution.

Respectfully submitted,

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