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Closing the Digital Divide is an Imperative

Imagine if you were not able to communicate instantaneously with others using your smart phone, digital tablet, or computer. That is the reality for more than 9 million Californians who live in remote rural communities, on tribal lands, in low-income neighborhoods, or who have a disability. Those of us who have the benefit of a personal computing device coupled with high-speed connections to the Internet—referred to generically as "broadband" that includes both wireline and wireless technologies—have come to depend on this connectivity for our work, staying in touch with family and friends, and making our daily lives easier.

Broadband is essential 21st Century infrastructure for global competiveness. It is a key factor in attracting capital investment to generate jobs. Communities without broadband are being left behind in the Digital Age—remote rural areas, poor urban neighborhoods, and people with disabilities are even more disadvantaged without broadband availability and computing devices to access the Internet. Closing the Digital Divide with public policies and strategies to achieve ubiquitous broadband deployment and to accelerate broadband adoption is an imperative for economic prosperity, quality of life, and family self-sufficiency. Fortunately, it is a goal that can be achieved with inspired vision, focused leadership, alignment of existing resources, and enlightened investment of a modest amount of additional public funding to encourage partnerships—federal-state, public-private, and provider-community. There is ample research and empirical evidence about what it takes to get the job done.

The California Experience and Progress in Closing the Digital Divide

California has some of the most challenging terrain in the nation for broadband deployment and the largest populations of disadvantaged residents as priority communities for broadband adoption. When California began to focus on closing the Digital Divide, the number of "unconnected" residents was the equivalent of having 5 other states within our boundaries. Approximately 94% of all residents had broadband access—however the 6% of residents totally unserved represented 768,000 households (about 2 million residents), more than the population of the State of Nebraska spread out over more than 44,000 square miles of inhabited area, the size of the State of Kentucky. Almost 13 million residents (largely urban poor) were not connected, more population than the State of Illinois.

In addition, 1.9 million people with disabilities were off-line, the population of the State of New Mexico. And, 680,000 Native Americans were not connected, larger than the population of the State of Alaska. It should be noted that California has the largest population of Native Americans than any other state with 111 federally-recognized tribes. Most of the tribal lands lack broadband connectivity and want broadband access according to recent consultations of Tribal Leaders being convened by Judge Cynthia Gomez, the Governor's Liaison to Tribal Governments and the Executive Secretary of the California Native American Heritage Commission in collaboration with the California Emerging Technology Fund and the Corporation for Education Network Initiatives in California (CENIC).

The California Emerging Technology Fund (CETF) was established at the direction of the California Public Utilities Commission (CPUC) in the orders approving the 2005 mergers of SBC-AT&T and Verizon-MCI. The successor companies agreed to provide a public benefit by contributing a total of $60 million into this new non-profit with the mission to close the Digital Divide in California. CETF became operational in 2007, working in partnership with the Governor and State Administration, Legislature, CPUC, local governments, and a network of more than 80 community-based organizations (CBOs) to systematically implement a Strategic Action Plan to close the Digital Divide in California, tackling both broadband deployment and adoption challenges. CETF reports to the Legislature through the CPUC.

In addition to establishing CETF, California policymakers have taken other key steps to close the Digital Divide, including:
- In 2007 the Governor with the support of the Legislature convened the California Broadband Task Force which produced the base report to focus attention on the issues.
- In 2008 the CPUC and the Legislature established the California Advanced Services Fund (CSAF) to subsidize broadband deployment to unserved and underserved areas by converting a high-cost fund for telephone service to support broadband infrastructure while also significantly reducing the annual amount collected from consumers. Through subsequent legislation the total amount authorized to be collected for CASF has been increased to $315 million.
- In 2009 the Governor issued an Executive Order to advance digital literacy that sets forth official State policy and requires agencies to develop and implement an action plan.
- In 2010 the Legislature and Governor established the California Broadband Council in statute to sustain State attention and leadership to close the Digital Divide.
- In 2013 the Legislature and Governor authorized CASF funds to be used for broadband connectivity in publicly-subsidized multi-unit affordable housing.

The sum total of this collective effort is significant progress in the last 6 years. In 2008, California's statewide adoption rate for Internet use was 70% with 55% having broadband use at home—the same as the national average. Today, 86% of Californians use the Internet and 75% access the Internet at home with a high speed connection (including 6% that access the Internet only by a mobile "smart phone"). Also, there have been significant increases in broadband adoption by priority consumer populations:
— Low-income households up 20 percentage points (from 33% in 2008 to 53% in 2013).
— Latino households up 18 percentage points (from 34% in 2008 to 52% in 2013).
— People with disabilities up 20 percentage points (from 36% in 2008 to 56% in 2013).

The Role of the California Emerging Technology Fund

The California Emerging Technology Fund (CETF) has been a pivotal partner in driving this progress on closing the Digital Divide, serving as a catalyst for focus, action and results by: (a) setting the goals for broadband deployment and adoption; (b) delineating the strategic framework to achieve the goals with regular reports on progress to foster accountability; and (c) making targeted and leveraged investments in public policy initiatives and grants to CBOs. CETF is performance-driven and outcomes-focused. The CETF Strategic Action Plan is based on research and fact finding about "what works" and sets forth the overall approach and strategies to close the Digital Divide, including the metrics for accountability that provide the disciplined focus on results. CETF set the following goals for achieving success by 2017—10 years after CETF began operations—which have been embraced widely by policymakers and stakeholders.

Broadband Supply – 98% Deployment
- Access for At Least 98% of All Households
- Robust Rural-Urban California Telehealth Network (CTN)
- All Tribal Lands Connected and Part of CTN

Broadband Demand – 80% Adoption
- Overall Statewide Adoption At Least 80% by 2015 and 90% by 2020
- All Regions and Socioeconomic Groups within 10 Percentage Points of Overall Adoption (At Least 70%)
- Increased Overall Accessibility and Universal Design

Broadband Global Leadership – Within Top 3 Rankings
- Appropriate and Sufficient Speeds for Consumer Applications that Drive Adoption
- Increased Economic Productivity
- Reduced Environmental Impacts

There is not a "silver bullet" to closing the Digital Divide—no one strategy or action will get the job done. However, there is "silver buckshot"—a "critical mass" of inter-related and mutually-reinforcing strategies and actions that do succeed. To achieve the optimal impact and a higher return on investment of the original seed capital, CETF employs 5 overarching strategies to drive progress on the broadband deployment and adoption goals:

1. Civic Leader Engagement
2. Venture Philanthropy Grantmaking
3. Public Policy Initiatives
4. Public Awareness and Education
5. Strategic Partnerships

Successful implementation of these strategies requires engaging and partnering with "trusted messengers" and "honest brokers" who know their local communities and target neighborhoods, including local government officials, regional civic organizations, and successful CBOs. CETF has focused on 3 priorities for grantmaking: rural and remote areas; urban disadvantaged neighborhoods; and people with disabilities. CETF has awarded more than $31 million in grants to community-based organizations (CBOs) and public agencies as "partners" in achieving the broadband deployment and adoption goals.

Leadership and Strategic Investments by the Federal Government

California's progress in closing the Digital Divide has been significantly advanced by the leadership of the California Congressional Delegation and strategic investments by the federal government. The Federal Communications Commission (FCC) awarded $22.1 million from the Rural Health Care Pilot Program (matched by $3.6 million from CETF) to connect a network of more than 800 facilities in rural and urban medically-underserved communities that comprise the California Telehealth Network (CTN). Telehealth is a major public policy initiative in California to drive both broadband deployment and adoption. Thus, the FCC Healthcare Connect Fund is a vital resource for the future, although the program needs some refinement. In addition, California has benefited greatly from partnerships with the U.S. Department of Commerce National Telecommunications and Information Agency (NTIA) under the American Recovery and Reinvestment Act (ARRA) Broadband Technology Opportunities Program (BTOP).

NTIA awarded 13 ARRA BTOP grants for broadband infrastructure deployment exceeding $428 million and 17 grants for broadband adoption totaling almost $122 million, including support for CTN operations and development of services. NTIA provided 2 grants to CETF for a total of $14,359,476 (matched by CETF $2,551,796) to support 19 CBOs (sub-awardees) resulting in more than 200,000 broadband adoptions and more than 2,700 jobs, which met and exceeded the contractual performance objectives. These grants were concluded as of June 2013 and are summarized below.

Broadband Awareness and Adoption

The Broadband Awareness and Adoption (BAA) project mobilized the expertise and resources of 8 partners (sub-awardees) to reach communities most impacted by the Digital Divide: low-income families, limited English-speaking Latinos, rural residents and people with disabilities. BAA partners worked with schools, churches, health clinics, job training programs, and social service providers to develop model "service ecosystems" which included technical support, low-price computers, and affordable broadband connections. Key accomplishments include:

- Increased awareness about the benefits of broadband among 13,296,068 low-income residents (266%).
- Provided 719,255 low-income individuals with basic Digital Literacy skills to use broadband technology (106% goal).
- Achieved 198,714 new broadband subscriptions by low-income households (149% goal) and distributed 6,866 computers to low-income households (172% goal).

Total BAA Budget	$9,360,672
NTIA Grant	$7,251,295
CETF Match Funds	$ 979,476
Partner Cash Match	$ 882,667
Partner In-Kind Match	$ 247,234

<u>Access to Careers in Technology</u>

The Access to Careers in Technology (ACT) project engaged 11 partners (sub-awardees) to establish scalable workforce development programs while expanding access to broadband and 21st Century jobs in low-income communities throughout the state. Individuals with multiple barriers to employment--ranging from the homeless to former drug addicts— completed Information and Communications Technology (ICT) training to obtain jobs in a spectrum of major industries from engineering to entertainment with pathways to living-wage careers in high demand. Key accomplishments include:

- Trained 24,675 low-income youth and adults and 12,044 small business owners and employees with Digital Literacy skills (101% goal).
- Secured 2,745 ICT career-path jobs for low-income residents (107% goal).
- Achieved 9,331 new broadband subscriptions by low-income households and distributed 5,547 computers to low-income households (101% goal).

Total ACT Budget	$11,081,130
NTIA Grant	$ 7,108,181
CETF Match Funds	$ 1,572,320
Partner Cash Match	$ 2,379,839
Partner In-Kind Match	$ 20,790

<u>Lessons Learned</u>

The successful implementation of the NTIA grants by CETF and our 19 partners was led by Senior Vice President Susan Walters, who prepared a report *Lessons Learned from the Field* which has been submitted as part of this testimony for the Congressional record.

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<u>CETF Lessons Learned from ARRA NTIA BTOP Grants</u>
- Grantee executive leadership and staff management capacity are essential.
- Coaching and the "learning community" were key to reaching goals.
- Thoughtful work plans in advance led to faster recognition of problems.
- Anchor institutions and community organizations need to work to ensure that clients actually obtain broadband (information and encouragement alone are not sufficient).
- Integrating digital literacy training and broadband adoption into existing programs is the best way to ensure sustainability and continually narrow the Digital Divide.

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The experience of all NTIA grantees has been incorporated into the NTIA Took Kit which is a very useful compilation of data and recommendations for accelerating broadband adoption. NTIA Administrator Larry Strickling and his team (Laura Breeden and colleagues) have a wealth of knowledge about "what works" and established working relationships with state agencies and non-profit organizations throughout the nation that are valuable assets that should be supported and leveraged for sustained progress in closing the Digital Divide.

Broadband Empowers People and Transforms Lives

The California Emerging Technology Fund (CETF) has amble evidence about the ways in which broadband access and information technology empowers people and transforms lives. This is particularly effective when broadband is integrated into services and programs that have relevance to everyday living, such as in school, job training, housing, and healthcare.

For example:
- CETF has developed School2Home to turn around low-performing middle schools through the integration of broadband and computing technology into the teaching and learning processes with significant parent engagement. Not only is School2Home improving academic performance above district and statewide gains, but also driving broadband adoption: Spanish-speaking parents increased broadband adoption at home from 48% to 76% (a 58% increase) and English-speaking parents increased from 84% to 94% (a 12% increase).
- CETF partner The Stride Center has a significant track record in training and securing employment for individuals with multiple barriers to employment, demonstrating that ICT workforce preparation can result in 90% of the clients obtaining jobs with a median wage double the overall regional labor market average.

The power of the statistics on closing the Digital Divide and performance data on the grants comes to life with the stories of the people who are becoming self-sufficient and productive taxpayers because of these public and private investments. Consider the experience of these real people who have benefited from broadband access and information technology:
— Daniel made the honor roll once he had broadband at home and was able to keep up with his homework assignments and navigate the Internet to gather information.
— Yanira was as a grocery delivery driver when she injured her back and couldn't work in that job any longer. With an online course she learned how to write a resume and cover letter, search for job listings, and email applications to companies—when she began she didn't even know how to send e-mails. After just a month, she started a new job in the delivery business making nearly $3 more per hour.
— Henri recently landed his first job as a digital animator after receiving job training and now is on a career pathway with living wages.
— Rosa is getting her high school equivalency diploma after completing two computer skills certification classes to earn a free refurbished computer and signing up for broadband at home.
— Alicia used to struggle to find work, but now works fulltime after learning how to use electronic job boards in a digital literacy class.
— Deborah was able to keep up with her high school homework with the benefit of broadband access and graduated with a 4.0 GPA. She searched the Internet for the right college and was able to apply online for admission and a full scholarship.
— Maria's flower shop has blossomed since attending a computer training class and learning how to manage and market her business.
— Sheryl turned her live around from drug abuse and losing her children after learning computer skills at a non-profit that received ARRA funds from NTIA BTOP. Today she has a full-time job, which allowed her to regain custody of her children.

Conclusions for Closing the Digital Divide and Accelerating Broadband Adoption

Although there has been a steady rise in the number of people adopting and using broadband at home, it is becoming increasing harder to reach those who remain off-line because they are remote rural residents without access and urban poor residents without digital literacy skills nor the means to afford market prices. However, all the data and experience indicates that the vast majority of people who do not have or use broadband at home want to adopt the technology when they understand the value proposition and have access. Thus, it is very important to understand what actually works to reach these consumers who should be regarded as "prospective customers in emerging markets."

Dr. John Horrigan (who helped develop the National Broadband Plan and has worked for the Pew Charitable Trusts and Joint Center for Political and Economic Studies) concludes that the cost of digital exclusion is real and rising and that the broadband adoption challenge has three primary dimensions: cost, relevance, and digital literacy. He further finds increasing broadband adoption requires sustaining capacity and scale of strategic initiatives with states and local communities involved in the "ground game" to focus on "digital readiness" in unserved and disadvantaged communities. He provides valuable insights to guide the work in accelerating broadband adoption.

The following are the major conclusions from the experience of the California Emerging Technology Fund and our community-based partners who have been on the ground in unserved rural communities and disadvantaged urban neighborhoods.

- It is essential to set goals with quantified metrics and accountability for performance in order to drive broadband deployment and adoption to close the Digital Divide and to regularly report to the public and stakeholders to ensure continued focus on the goals.

- Optimizing impact of any investment requires engaging public officials at all levels of government and civic leaders in regional consortia and local communities. There is no substitute for leadership, but leaders need to be involved in developing the strategies and supported in systematically implementing a coherent, integrated plan.

- Broadband adoption will succeed by working in partnership with community-based organizations that are the "trusted messengers" and "honest brokers" for the unserved and disadvantaged populations.

- Affordable broadband offers are required to increase adoption among low-income households. This is likely to require an Affordable Broadband Lifeline Rate Program given that voluntary efforts to date have had modest market penetration for a variety of reasons, with the most extensive program reaching less than 10% of eligible participants.

- Sustainable broadband adoption requires a comprehensive approach that targets and aligns resources in low-income communities with an integrated, comprehensive "neighborhood transformation" strategy that incorporates broadband adoption into other services, such as education, workforce preparation, and healthcare.

Recommendations for Continued Federal Government Leadership in Broadband Adoption

There is a foundation of leadership and expertise in the federal government on which to launch the next generation of work to accelerate broadband adoption to close the Digital Divide in America. In particular, the powers and resources of the FCC coupled with the experience and relationships of NTIA in collaboration with the other federal departments is a solid platform for action. Congress can greatly augment this foundation by the following actions:

➢ Set national goals and performance metrics for broadband deployment and adoption along with a timetable and assigned responsibilities for achieving them to encourage implementation of the National Broadband Plan and utilization of the NTIA Took Kit. Institute regular Congressional oversight proceedings to ensure performance and accountability.

➢ Integrate broadband and information technologies into all federal policies and programs through funding incentives to align efforts across departments. There is a need to "connect the dots" with a set of coherent strategies that transcend "bureaucratic silos" to optimize access to and use of the Internet with high-speed connections. For example:
  — U.S. Department of Health and Human Services (HHS) should build upon the ARRA Health Information Technology for Economic and Clinical Health Act (HITECH) framework to encourage stronger linkages and purposeful collaboration of health exchanges and "meaningful use" to the telehealth networks funded by the FCC Rural Health Care Pilots and/or the new Healthcare Connect Fund. HHS and the FCC should make a concerted joint effort to connect all state and local government public health services, federally-qualified health centers (FQHCs), critical care hospitals, tribal healthcare facilities (if desired by Tribal Leaders) to these telehealth-telemedicine networks. This kind of an effort will need to be coordinated with other departments and programs, such as the U.S. Department of Agriculture's Distance Learning, Telemedicine and Broadband Program to ensure rural communities are connected.
  — U.S. Department of Education should aggressively encourage the integration of broadband and computing technologies into the teaching and learning processes in all federal grants to improve education, particularly to turn around low-performing schools because of the ability of the technology to engage and involve low-income parents with an approach similar to School2Home. Implementation nationwide of Common Core Standards will require a major effort on a scale not yet contemplated by educators and policymakers. Promise Neighborhoods grantees should be encouraged to promote "smart communities" by incorporating broadband adoption strategies into their programs.
  — U.S. Department of Labor should encourage integration of digital literacy and ICT skills training into all existing workforce preparation programs through Workforce Investment Act allocations to states and all other grants.
  — U.S. Department of Housing and Urban Development should promote "smart housing" in all publicly-subsidized multi-unit complexes by allowing the installation of an advanced communications system with broadband connectivity in each residence to be included in construction costs and the maintenance of such a system to be included in operating budgets. Choice Neighborhoods grantees should be encouraged to incorporate broadband adoption strategies into their programs.

— U.S. Department of Agriculture (Rural Utility Service and all other rural economic development programs) should encourage larger-scale integrated proposals for existing grant funds that combine broadband deployment and adoption. There should be consideration of easements for broadband deployment in National Forests to support public safety, emergency response, and homeland security.

— U.S. Department of Interior should identify all resources to assist Tribal Leaders (who request such assistance) in providing broadband service to Tribal Lands. There should be consideration of easements for broadband deployment in National Parks to support public safety, emergency response, and homeland security.

— U.S. Department of Homeland Security should become a proactive partner in FirstNet to accelerate broadband deployment and adoption to support public safety, emergency response, and homeland security.

➢ Request and support the FCC to accelerate reform the Universal Services Fund (USF) and to incorporate best practices for sustainable broadband adoption. With limited resources, priority consideration for funding and/or subsidies to broadband providers should be given to companies that: (a) have a coherent, explicit program with quantified goals and metrics to increase broadband adoption; (b) partner with CBOs that have a proven track record as the "trusted messenger and honest broker" in broadband adoption; and (c) target low-income communities in collaboration with other stakeholders pursuing "digital inclusion" and "neighborhood transformation" strategies (such as digital literacy in schools, workforce training, or publicly-subsidized housing).

— An Affordable Broadband Lifeline Rate Program should be established within the next year and made available to residents in low-income census tracts in which there is a coherent "digital inclusion" component of a "neighborhood transformation" initiative with responsible local governments, key stakeholders, and respected CBOs.

— Renewal and reform of eRate should prioritize low-performing schools and libraries in low-income neighborhoods that have established a coherent program with quantified goals and accountability to increase broadband adoption, especially as part of an overall "neighborhood transformation" initiative.

— Connect America Fund and other programs to subsidize broadband infrastructure should give priority funding to deployment projects with plans and partners to promote broadband adoption.

➢ Provide additional funding to NTIA as a prudent investment in global competitiveness to establish the "next generation" broadband adoption program that builds upon the ARRA BTOP experience, aligns with other existing efforts, and leverages federal resources through partnerships to achieve explicit adoption goals and outcomes by 2020.

— Encourage states to adopt broadband adoption strategies and plans by giving priority consideration for funding to projects that align with and complement state programs that have explicit adoption goals with accountability for performance.

— Facilitate collaboration among successful BTOP grantees to join forces with state governments to develop broadband adoption strategies and plans.

— Request assistance from the National Association of Regulatory Utility Commissioners (NARUC) to engage states and convene information forums on development of broadband adoption strategies and plans.

- Foster public-private partnerships to accelerate broadband deployment and adoption. There is no substitute for the innovation and efficiency of the private sector when engaged as sincere partners motivated to achieve explicit goals. Public-private partnerships can significantly leverage public resources for a higher return on investment to taxpayers and ratepayers.
  - Request the FCC and NTIA to engage broadband providers in helping design the "next generation" broadband adoption program to achieve explicit goals and outcomes.
  - Encourage providers to partner with EveryoneOn (formerly Connect-to-Compete) by setting adoption targets coupled with affordable broadband offers that can be made available without undermining profitability. There needs to be market competition for low-income consumers to become sustainable broadband customers.
  - Request the FCC to structure USF reforms for a Broadband Lifeline Rate Program and eRate to encourage and reward providers who partner with non-profit intermediaries (such as EveryoneOn) and trusted CBOs with a proven track record and align with state plans. Reimbursement and subsidies from the USF should reward public-private partnerships that drive to and achieve explicit broadband adoption goals.