



Expanding Broadband in Urban and Rural Areas: What Lawmakers Can Do?

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Presentation Content and Structure

- Goal of the Expanding Broadband Presentation
- California Broadband Availability and Adoption Challenges
- A Decade of California Broadband Activity
 - California Public Utilities Commission (CPUC)
 - California Emerging Technology Fund (CETF)
 - California Broadband Task Force (CBTF)
 - California Broadband Council (CBC)
 - Timeline of Legislative and Policy Changes
- California Broadband Metrics: Then and Now
- Recommendations for Policymakers and Stakeholders
- Group Questions, Answers, and Dialogue



Presentation Goal

To provide a vast amount of:

- Broadband legislative and policy change examples;
- Tangible broadband deployment and adoption metrics;
- Broadband policy recommendations and sources; and
- Interactive discussions

to enable Committee members and participants to return to their respective jurisdictions and explore, initiate, and/or implement broadband deployment and adoption programs.



California Availability and Adoption Challenges

Current Examples Across 58 Counties

- Broadband Availability:

– Trinity	3.08%	– Alpine	15.48%
– Mono	59.14%	– Modoc	62.05%
– Mariposa	63.36%	– Tuolumne	63.62%

- Broadband Adoption (only households **with** availability):

– Inyo	24.56%	– Tehama	43.33%
– Glenn	43.66%	– Yuba	45.73%
– Tulare	45.77%	– Merced	48.20%
– Siskiyou	54.79%	– Colusa	56.90%
– Lake	57.35%	– Madera	57.49%
– Imperial	58.61%	– Sutter	58.71%
– Fresno	58.76%	– S Barbara	59.01%



Rural Telephone Initiative (RTI)

- On September 18, 2003, the CPUC authorized RTI.
- A \$70 million program that provides funds for the build out of basic telephone service.
- All technologies, such as plain old telephone system (POTS), mobile cellular, voice over Internet Protocol (VoIP), were eligible.
- Voice services could have been provided utilizing broadband or vice versa.
- Program operated from 2004 to 2012.



Mergers: The California Broadband Ignition

- On February 28, 2005, SBC and AT&T filed a request to the CPUC to merge operations.
- On April 21, 2005, Verizon and MCI filed a request to the CPUC to merge operations.
- On November 18, 2005, the CPUC authorized the mergers. The companies agreed to nearly \$100,000,000 in commitments to increase access to broadband and advanced telecommunications services in underserved communities in California.
 - AT&T contributed \$45 million to CETF.
 - Verizon contributed \$15 million to CETF.
 - SBC and Verizon agreed to increase corporate philanthropy by \$47 million and \$20 million, respectively, over five years and to focus those contributions on low-income and underserved communities.



California Emerging Technology Fund (CETF)

- On November 18, 2005, CETF was established as a non-profit corporation pursuant to requirements from the CPUC in approving the mergers of SBC-AT&T and Verizon-MCI.
- Provides leadership statewide to close the digital divide by accelerating the deployment and adoption of broadband to unserved and underserved communities and populations, and ensures that California is a global leader in the availability and use of broadband technology.
- Leverages the \$60 million seed capital, in a venture philanthropic method, with a minimum 4:1 match requirement.
- Received two umbrella ARRA adoption and awareness grants totalling nearly \$15 million.



Major CETF Programs and Policies

- Funded Rural and Regional Broadband Consortia for three years, that the CPUC starting funding this year. The original 6 consortia (now a total of 13) represent several counties and work with all levels of government, Internet service providers, members of the public, local businesses, and anchor institutions. They assess broadband availability within their communities, catalogue network assets, work on broadband adoption activities, and assist providers submit applications to public and private grant/loan broadband infrastructure funding programs.
- Funds an annual public survey, performed by the Public Policy Institute of California (PPIC), to quantify broadband availability and adoption by socio-economic groups across California's diverse regions.
- Champions, authors, and supports many broadband legislative changes that promote or modify broadband deployment and adoption throughout the state of California.



Major CETF Programs and Policies (cont.)

- Released a Broadband Model Policies and Ordinances guide to assist municipal and county governments in accelerating the deployment and adoption of broadband within their jurisdictions.
- Released an Economic and Environmental Benefits of Broadband Policy Brief that outlines how local, county, and state government leaders can utilize broadband to drive improvements in the environment and the economy.
- Second largest funder of the California Telehealth Network (CTN), behind the Federal Communications Commission (FCC), to deploy a single unified telehealth/telemedicine network into rural and urban health clinics, hospitals, and medical offices throughout California.
- Provided planning and implementation broadband adoption grants to over 80 organizations.



Major CETF Programs and Policies (cont.)

- Released “Wired for Wireless?”, a report that explores digital inclusion and next generation Government-led wireless networks.
- Launched a multi-year state-wide broadband awareness and adoption media campaign utilizing radio, newspaper, television, and community technology fairs.
- Operates School2Home, a 1:1 computing device to underperforming middle school students that integrates technology into lesson plans, parental digital literacy skills, and teacher professional development.

CETF members of the Board of Directors, and staff, are multi-disciplined subject matter experts in public policy making, communications, Internet and telecommunications technologies, grant making, grant management, and civic engagement.



California Broadband Task Force (CBTF)

- On November 18, 2005, as part of California Executive Order S-23-06, the Governor created a 21-member CBTF composed of public and private stakeholders with the expertise to advise policymakers on a framework for making California a global leader in the telecommunications revolution.
- The first report, released on June 25, 2007, described administrative actions that state governments could immediately act upon to increase broadband availability and adoption in California.
- The second report, released in January, 2008, contained a comprehensive assessment of the state of broadband in California, including detailed maps of availability, analysis of adoption, pricing survey, and recommendations for methods to eliminate broadband access and adoption barriers.



California Advanced Services Fund (CASF)

- In December 2007 the CPUC authorized CASF, a program 100% funded by California High Cost Fund (CHCF) telecom ratepayer surcharges.
- CASF v1 (2007-2012) provided \$100 million in grants to broadband infrastructure in unserved and underserved communities.
- CASF v2 (2012-2014) added \$100 million to the original grant program and introduced both a \$15 million infrastructure deployment loan program and a \$10 million Rural and Regional Urban Consortia broadband adoption program. The consortia are to:
 - Increase sustainability of broadband infrastructure projects.
 - Promote broadband deployment availability for California residences.
 - Promote access and adoption efforts for California residences.
 - Increase broadband adoption via education, outreach and training.
 - Support community-based parties that are working on to increase deployment, access, and adoption.

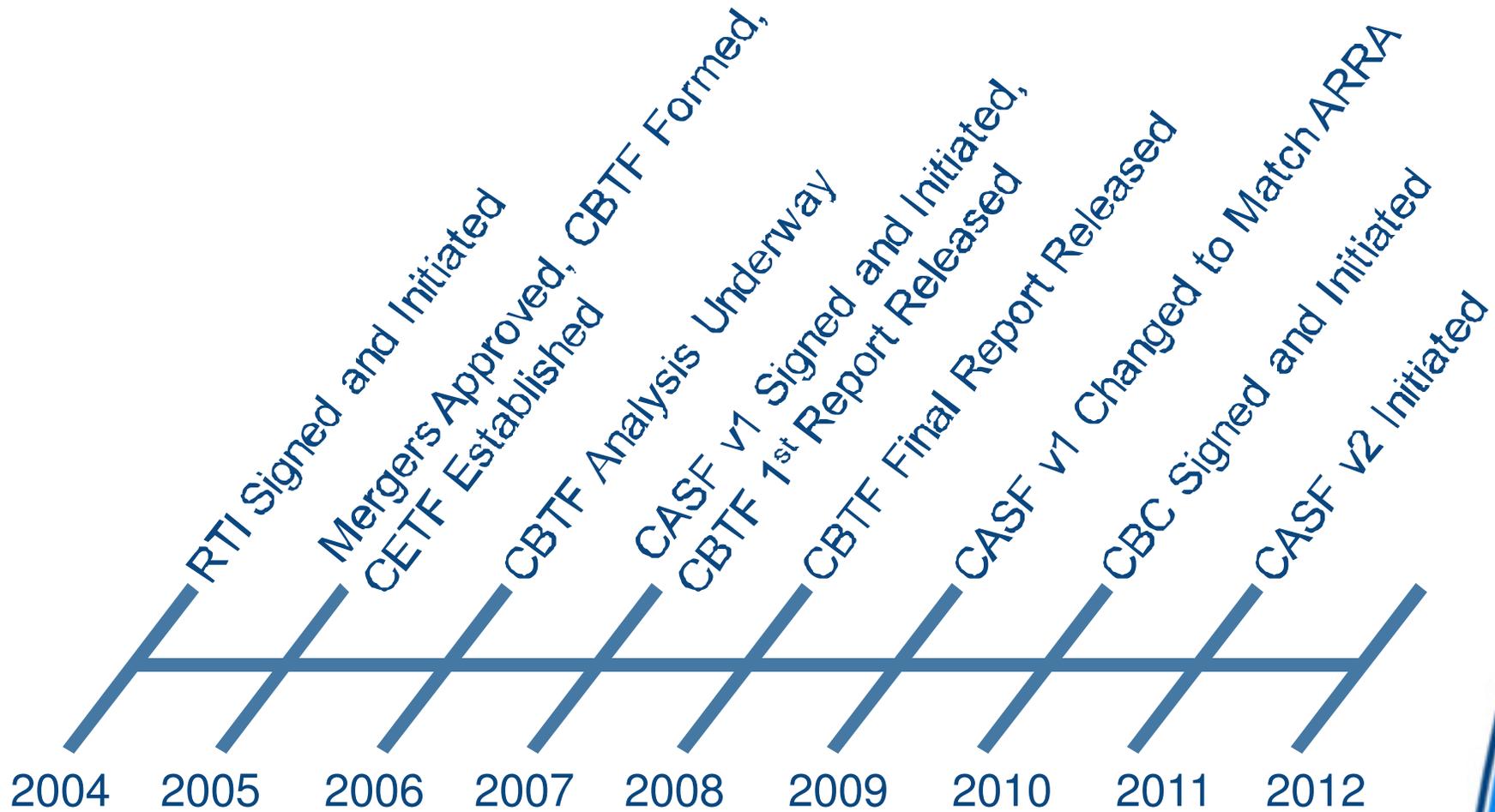


California Broadband Council (CBC)

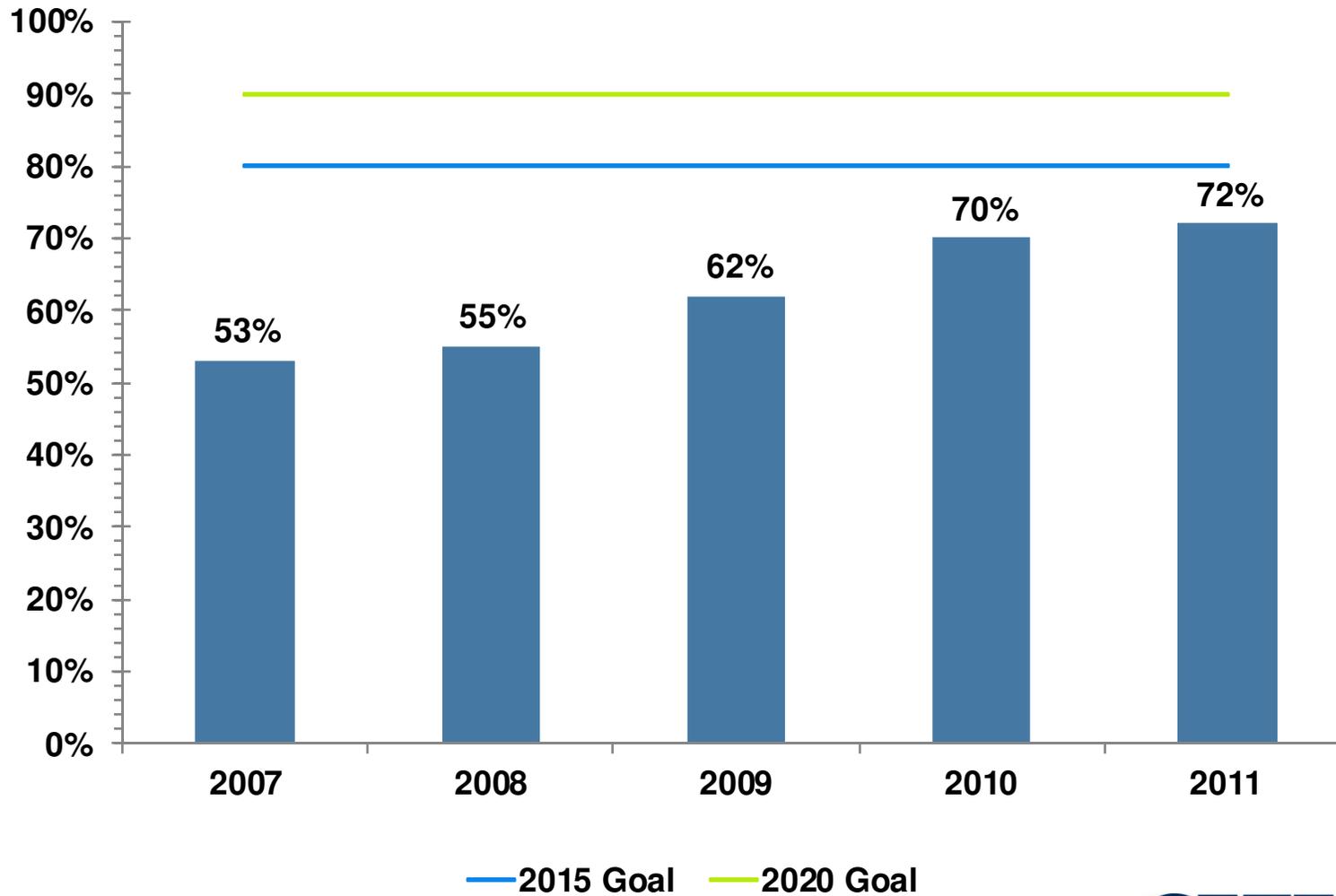
- On September 28, 2010, the Governor of California signed Senate Bill 1462 that established CBC.
- The council is to marshal the resources of the state to further the policy of increasing broadband network deployment and eliminating the digital divide by expanding broadband accessibility, literacy, adoption, and usage.
- CBC consists of 9 members including a State Senator, a Member of the State Assembly, the CPUC President, the CETF President and CEO, and senior leadership from many State of California Agencies:
 - Business, Housing, and Transportation Agency (the state's largest)
 - Department of General Services
 - Emergency Management Agency
 - California Technology Agency
 - Department of Education



Timeline of California Broadband Initiatives



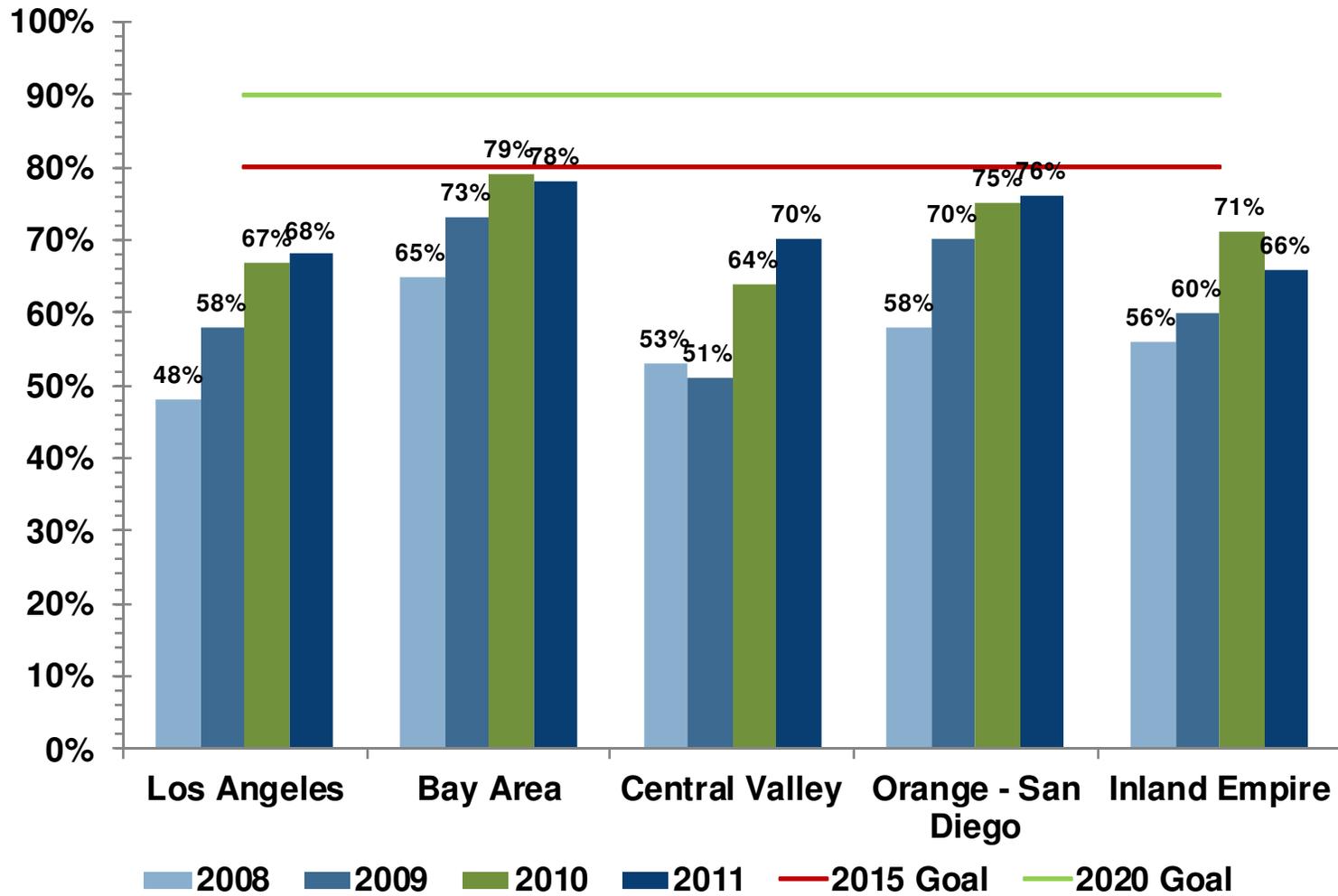
Overall CA Broadband Adoption Metrics



Source: PPIC 2011 Annual State-wide Survey



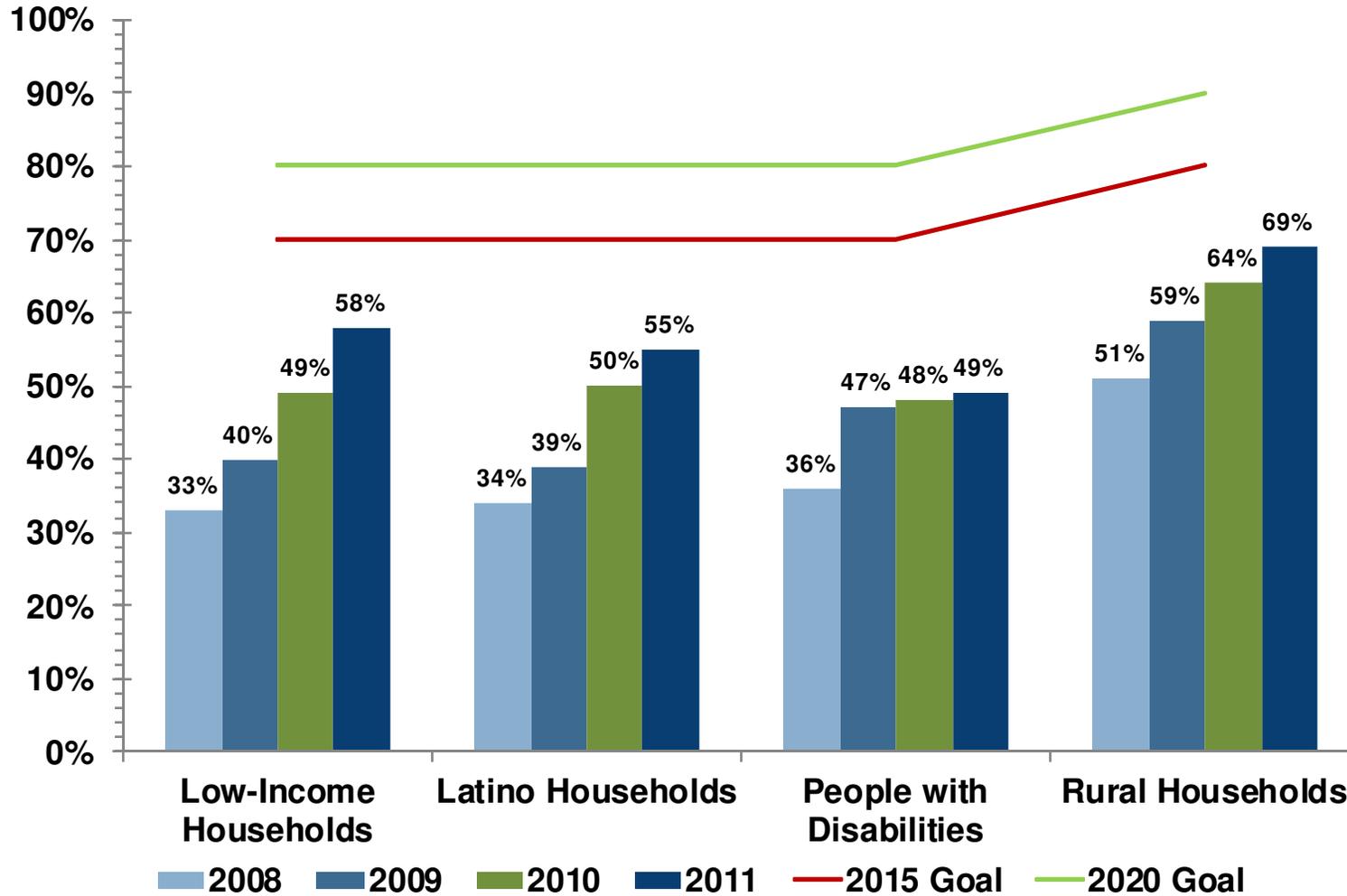
Regional CA Broadband Adoption Metrics



Source: PPIC 2011 Annual State-wide Survey



CA Group Broadband Adoption Metrics

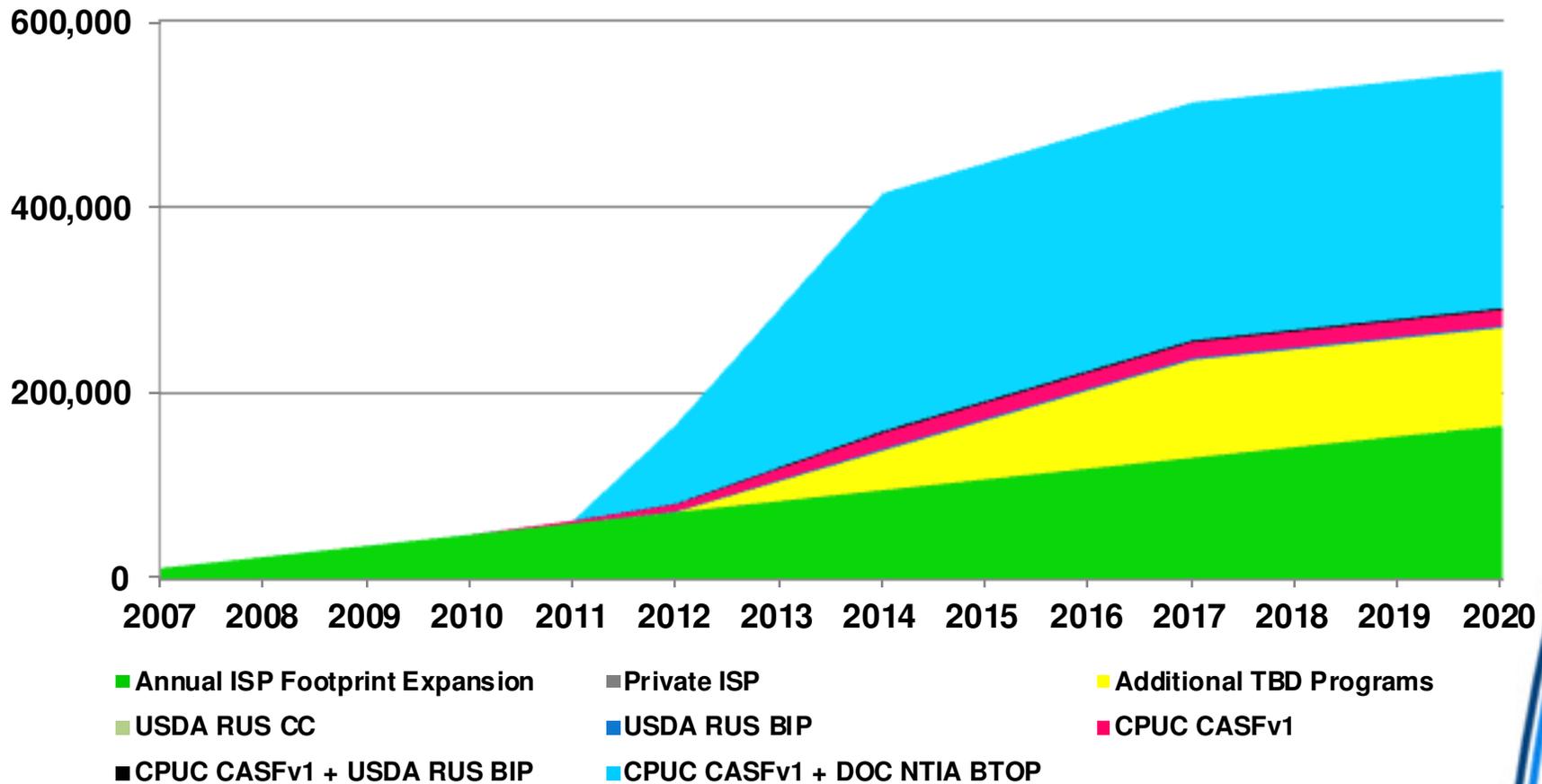


Source: PPIC 2011 Annual State-wide Survey



California Broadband Adoption Metrics

Cumulative Schedule of California Broadband Deployment Unserved or Underserved Households by Public Funding Source



Policy and Program Recommendations

- Identify or establish a government, CBO, non-profit, or private organization that is accountable for broadband deployment and adoption, and empower it to champion, author, and support change.
- Set realistic and stretch goals for the organization responsible for broadband, and hold it fully accountable for the results.
- Utilize State and/or ratepayer surcharges to fund broadband deployment in unserved and underserved communities, and to help address adoption challenges.
- Adoption efforts should consider cost-effective refurbished computer availability, digital literacy, security, software applications, etc.
- Make available and/or leverage existing state, county, and municipal resources and assets to facilitate the deployment of broadband (conduits, empty space/closets/huts, fiber, strands, roof tops, power feeds, towers, unused copper interconnects, GIS staff, poles, etc).



Policy and Program Recommendations (cont.)

- Make available open hotspots in government offices and buildings, parks, community centers, recreational centers, and other such locations that residents are likely to visit and/or gather.
- Equally support all forms of broadband local access that enables real-time high-speed interactive exchanges of Internet data, such as mobile wireless (cellular, 3G, 4G, WiMAX, etc), fixed wireless (Wi-Fi, WiMAX, BRAN, FSO, MMW, etc), and wireline (DSL, DOCSIS, Ethernet, fiber, etc). Do not just focus on “telcos” and “cablecos”.
- Enforce minimum downstream and upstream data transmission rates for broadband deployment, with thresholds for latency, packetloss, and jitter to ensure residents can fully utilize Internet applications.
- Collect street address or tax parcel details for each residence and business, including broadband access availability, subscription status, cost, as well as downstream and upstream service rates.



Policy and Program Recommendations (cont.)

- Release maps and GIS shapefiles of broadband access availability and adoption to the general public, at the street address and/or tax parcel level, to facilitate and simplify ISP, CBO, and government department and/or agency broadband adoption and deployment activity.
- Pursue public-private investments and partnerships that incorporate broadband infrastructure while expanding or altering public infrastructure or internal government assets.
- Endorse and expand digital literacy training in libraries, adult night schools, job training centers, and community centers.
- Mandate that state, county, and municipal governments must offer relevant products, services, and bill payments available through the Internet as a method to drive broadband adoption.



Policy and Program Recommendations (cont.)

- Leverage broadband infrastructure to correct Emergency Services network redundancy, quality, availability, or sporadic coverage issues.
- Require providers, via legislation or policies from a Public Utilities Commission or equivalent regulatory body, to build out broadband access service into unserved or underserved communities or households on an annual basis as a percentage of existing households served within their footprint.
- Implement a fiber conduit installation policy with periodic access points when trenching or opening major roadways or highways.
- Facilitate, support, and endorse county and municipal governments and/or utilities to provide broadband Internet access services.
- Implement state-wide streamlined and standards-based processes, including costs, physical assets, database structures, data format, permitting, and GIS use.

Policy and Program Recommendations (cont.)

- Implement a state funding program, such as California Teleconnect Fund (CTF) operated by the CPUC, that subsidizes CBO, library, and school broadband and telecommunications services similar to FCC Universal Service Fund (USF) programs.
- Collect, study, modify, and incorporate the tremendous amount of data made available in comprehensive reports released by CETF, CBTF, and CBC into the broadband deployment and adoption efforts taking place within your state, counties, and municipalities.
- Review and consider the CPUC and State of California broadband adoption and deployment legislative submissions and approved bills in order to streamline and shorten changes within your jurisdictions.



Links to CETF-Funded Program Reports

CETF

<http://www.cetfund.org>

Annual Reports

<http://www.cetfund.org/annualreports>

Model Broadband Policies and Ordinances

http://www.cetfund.org/files/CETF_Resource_Guide_Model_Policies_web2_0.pdf

Broadband as a Environmental and Economic Improvement Strategy

<http://www.valleyvision.org/work/priorities/BBgreen.html>

Annual California Broadband and Adoption Surveys and Reports

http://www.ppic.org/main/publication_show.asp?i=263

<http://www.ppic.org/main/publication.asp?i=985>

Wireless Comparative Analysis and Best Practices Report, “Wired for Wireless?”

http://www.cetfund.org/files/Wireless_Report_090309.pdf



Links to Other Programs and Information

CPUC	http://www.cpuc.ca.gov
CASF	http://www.cpuc.ca.gov/PUC/Telco/Information+for+providing+service/CASF
RTI	http://www.cpuc.ca.gov/PUC/Telco/generalInfo/rtifg.htm
CHCF-A	http://www.cpuc.ca.gov/PUC/Telco/Public+Programs/chcfa.htm
CHCF-B	http://www.cpuc.ca.gov/PUC/Telco/Public+Programs/chcfB.htm
CBTF	http://www.cio.ca.gov/broadband/taskforce/
1st Report	http://www.cio.ca.gov/broadband/pdf/CBTF_Prelim_Report.pdf
2nd Report	http://www.cio.ca.gov/broadband/pdf/CBTF_FINAL_Report.pdf
CBC	http://www.broadbandcouncil.ca.gov



Contact Information

Thank you for your participation in this discussion. I am optimistic that it will have a positive impact in your state, counties, municipalities, and communities!

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