



## *Celebrating 40 Years*

# Broadband Availability and Adoption: A State Perspective

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# Today's discussion will cover . . .

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- **Broadband Overview**
  - Where is broadband available?
  - Who is adopting broadband?
  - What technologies are most prevalent?
- **State broadband initiatives**
  - Mapping service availability
  - Broadband commissions, partnerships, and state commission oversight
- **Broadband legislation**
- **Key issues facing state commissions**
  - Responding to the voice vs. data conundrum
  - Ensuring/measuring broadband adoption
  - Coordinating with extra-PUC organizations (broadband commissions, task forces, etc.)



## Broadband availability is increasing, but coverage gaps persist

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- Nearly 90% of Americans have wired internet access at speeds of 25 Mbps/3 Mbps or higher
  - 369.4M US internet connections as of June, 2016
  - 8% increase from the 342M connections in 2015
- 10% remain unserved or underserved, although deployment is improving
  - 55M consumers had no high speed access in 2015
  - 34M have no high speed access in 2016 – a 40% reduction
  - 12M students without access in schools
- Rural, tribal, and insular areas continue to lag behind
  - 39% of rural areas do not have fixed broadband access compared to 4% of urban areas
  - 41% of tribal areas do not have fixed access

(Data from FCC Internet Access Service Status Report, June 2016)



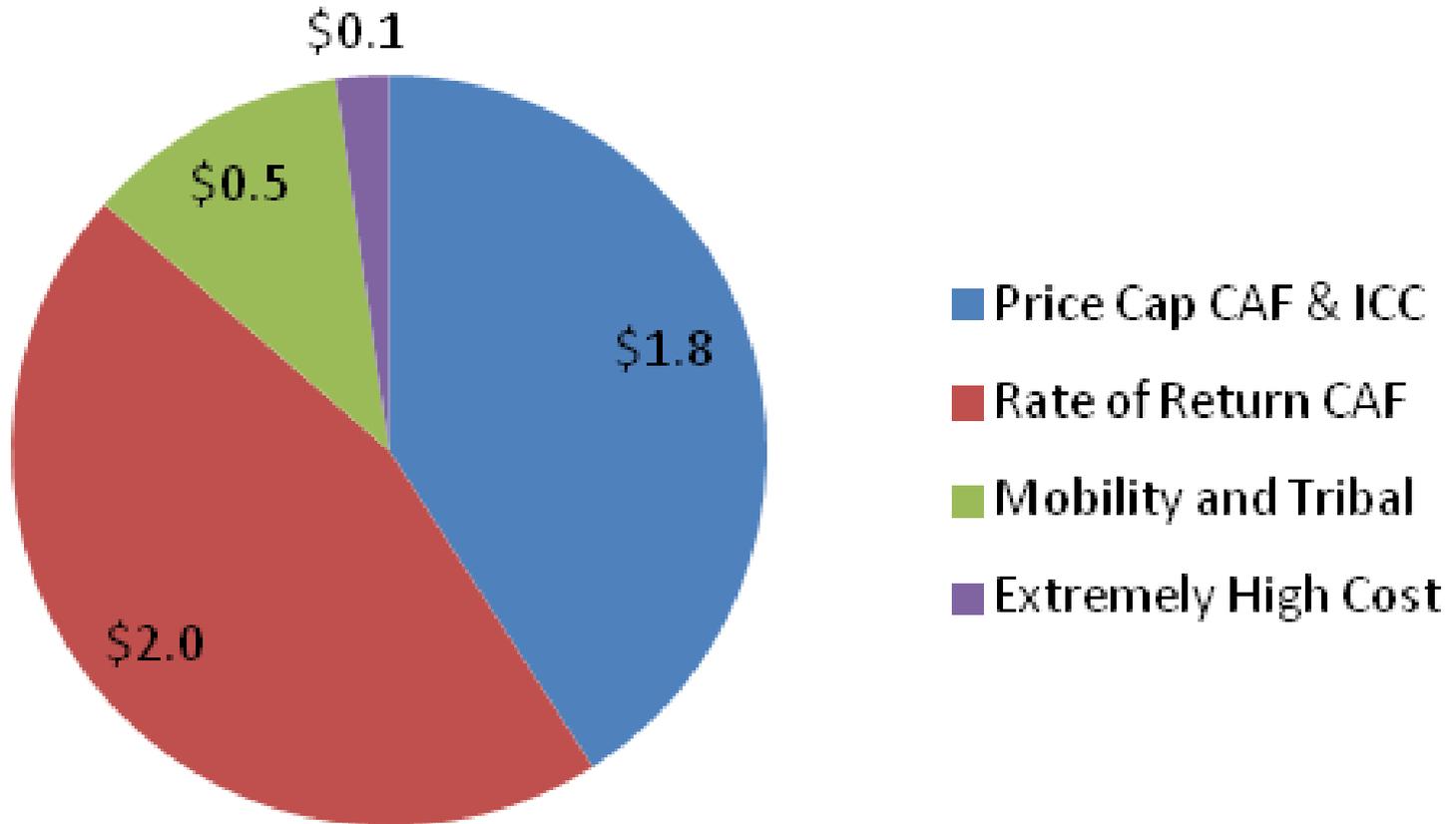
## FCC is targeting the Connect America Fund (CAF) to bring coverage to unserved areas

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- Goal: Provide targeted support to locations without “unsubsidized competitors”
  - Provide “reasonably comparable” service at “reasonably comparable” prices
  - Maintain voice service while increasing broadband availability
  - Minimize the USF contribution burden
  - Extend internet access at 25 Mbps/3Mbps to 7.3M users
- 83% of users without internet access are in former ILEC territory
  - \$9B offered to these carriers to extend service to these areas
  - \$2B in unclaimed funds will be distributed via a reverse auction
  - Reverse auction will be technology neutral – includes mobile and satellite carriers
- Additional funds for rural support, mobility fund, extremely high cost areas
- CAF monies create a single monopoly carrier in each unserved area



# CAF provides \$4.5B in funding for underserved areas



\$ in Billions; FCC data



## Broadband availability does not necessarily translate to adoption

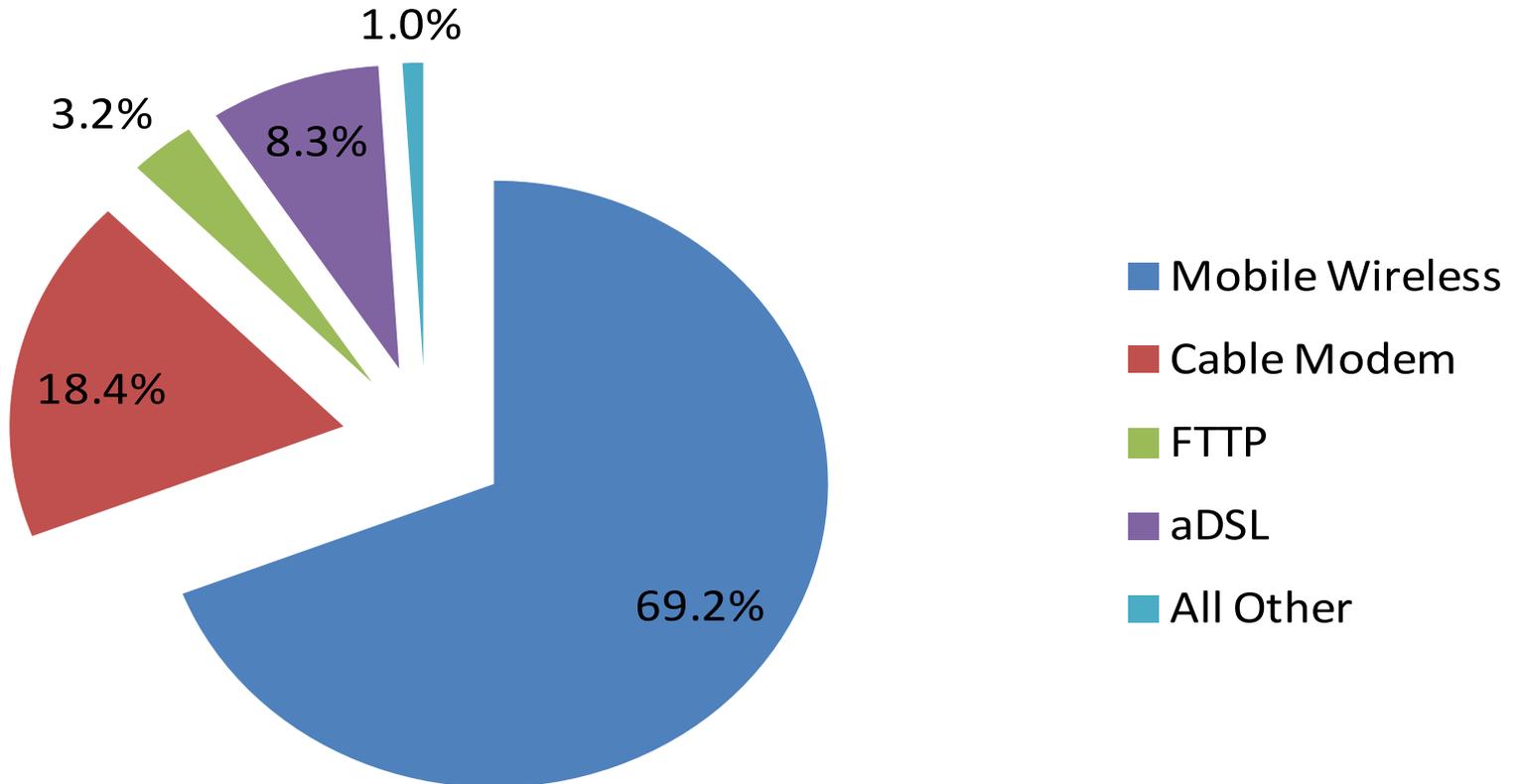
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- Fixed broadband adoption has leveled off
  - 70% of adults had fixed broadband in 2013
  - 67% had fixed broadband in 2015
  - May signal a trend away from wired broadband to other technologies
- Mobile broadband helping to close the digital divide
  - FCC defines mobile broadband as 10 Mbps/1 Mbps, including 3G and LTE services
  - 70% of all broadband connections are now mobile
  - Broadband lifeline applications primarily from wireless carriers
- Mobile is not a panacea - 53% of rural Americans do not have access to wireless at broadband speeds
- CAF Mobility Fund may decrease this gap



# Consumers are choosing among multiple technologies

Internet connections by technology



FCC Access Report, 2016



## State broadband initiatives focus on the specific needs of their populations

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- Broadband mapping
  - 50 states and DC created maps to identify providers, speed, availability
  - Initial funding from the American Recovery and Reinvestment Act (ARRA)
  - Some states have continued this effort, but the national map has not been updated since 2014
- State broadband offices and task forces
  - Determine state broadband priorities
  - Provide grants/loans for broadband build out
  - Enhance adoption efforts
- Statewide broadband networks
  - Use state assets to provide middle mile support
  - Create “open networks” to encourage broad participation
  - Create public/private partnerships
- Transfer state USF funds to broadband



## California, Colorado, Minnesota, and New York (among others) provide models for state broadband initiatives

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- California – California Advanced Services Fund (CASF) - \$315M (2016)
  - Provide infrastructure funding to bring broadband to 98% of CA households
  - Infrastructure grant and revolving loan account supporting 56 projects to bring broadband to over 26,000 unserved households - \$275M
  - Public housing account - \$7.6M for infrastructure; \$1.9M for adoption
  - Rural and regional consortium fund - \$15M grants to expand access and adoption
  - CA PUC manages the CASF and works with the CA Broadband Council to develop state broadband goals
- Colorado - Governor's Office of Broadband Technology – OIT
  - Broadband Deployment Board includes representatives from PUC, industry, residents of unserved areas, and technical experts
  - Broadband Portal to identify available support
  - Strategy team to coordinate state broadband efforts
  - Funding from USF monies for areas with effective competition



## Minnesota and New York also have robust broadband programs

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- Minnesota – Office of Broadband Development
  - Provide all citizens with 25 Mbps/3 Mbps by 2022; 100Mbps by 2026
  - Border to Border broadband development grants - \$20M (2017)
  - Focus on adoption as well as deployment through education, equipment, and training
  - Governor's BB Taskforce has recommended adding broadband to the state Lifeline program (TAP)
- New York – New York Broadband Program
  - \$500M in matching grants to companies participating in public/private broadband partnerships
  - Program rules mirror CAF II
  - FCC approved NY request to include unclaimed ILEC CAF funding in this program
  - PA, MA have requested similar funds transfer



# 2017 broadband legislation

- 34 bills proposed during the 2017 legislative session (as of 6/14/17)
  - 3 bills direct state USF funds to broadband
  - 11 bills create broadband grant programs
  - 6 bills address municipal broadband – extending (or limiting) municipal systems
  - 3 bills provide broadband deployment tax credits
  - 1 bill defines criteria for identifying “broadband ready communities”
  - 10 bills direct the PUC or a special task force to develop strategies for broadband deployment and adoption
- 13 of these bills have been enacted to date
  - New Mexico, Oregon, and Utah add broadband to the services supported by state USF funds
  - Idaho, Minnesota, New Mexico, and Wyoming fund broadband grants
  - Maryland and Nevada implement task forces to study broadband deployment
  - Indiana creates “broadband ready communities”
  - Kentucky establishes public/private broadband partnerships
  - Tennessee and West Virginia allow municipal broadband in areas without commercial providers



## Broadband legislation enacted as of 6/14/2017

State	Legislation
ID	<b>SB 1034</b> , Modify broadband improvement grant rules to remove open use req.
IN	<b>HB 1626</b> , Develop a procedure to promote BB-ready communities
KY	<b>HB 343, (Ch 89)</b> Establish public-private broadband partnerships
MD	<b>SB 717</b> , Rural internet task force
MN	<b>SF 1937</b> , Border to border broadband grants
NM	<b>SB 308</b> , Use State USF funds for rural broadband
NM	<b>SB 24</b> , Broadband Grants to Local Governments
NV	<b>SB 53</b> , Broadband strategic plan
OR	<b>HB 2091</b> , USF funding for voice and broadband
TN	<b>SB 1215</b> , BB grants; electric co-ops may provide SVC in unserved areas that have not received other funding
UT	<b>SB 130</b> , Provide USF support for BB
WV	<b>HB 3093</b> , Re-establish BB Council; allow municipal broadband
WY	<b>HB 253</b> , Provide \$25M to fund economic investment, including tech projects



## State commissions face three key issues as broadband deployment increases

- As broadband replaces voice as the primary focus of the federal universal service program, how should the states respond?
  - Update state USF programs to include broadband
  - Support Broadband Lifeline, both standalone and bundled services
  - Identify potential rule changes to simplify broadband deployment
- How can state commissions measure and improve broadband adoption, particularly in rural areas and areas with lower economic status?
  - Reinvigorate broadband mapping programs
  - Include adoption as a map component
  - Implement broadband crowd-sourcing tools like North Carolina and Virginia
- How should state commissions work with broadband commissions, government task forces, and separately constituted broadband authorities to manage broadband deployment and adoption?
  - State utility commissions understand the key needs of their constituents
  - Provide input where possible
  - Reach out to legislators, task forces, and industry to create joint programs to support broadband deployment