

Utilities and Energy

N-1 Broadband Expansion

The federal government in conjunction with states, including Kansas, has engaged in multiple efforts over the past few decades to determine how to expand broadband access, particularly to rural America. The definition of “broadband” has evolved as multiple task forces and advisory committees, at the state and federal level, have grappled with the issue of broadband accessibility.

Federal Developments

The 1996 Telecommunications Act

With the enactment of the 1996 Telecommunications Act (Act), Congress updated federal telecommunication law for the first time since the enactment of the Communications Act of 1934. The Act addresses five general areas: radio and television broadcasting, cable television, telephone services, Internet and online computer services, and telecommunications equipment manufacturing. The Act was signed into law by President Clinton, who stated the legislation “opens up competition between local telephone companies, long distance providers, and cable companies, and expands the reach of advanced telecommunications services to schools, libraries, and hospitals.”

The Act contains provisions that created the Federal Universal Service Fund (FUSF). The FUSF was created to provide support through four programs: High-Cost Support, Low-Income Support, Schools and Libraries Support, and Rural Health Care Support. The FUSF is funded by contributions from providers of telecommunications based on an assessment of their interstate and international end-user revenues.

Definitions

Following is a list of terms defined in the Act and codified in Title 47 of the *U.S. Code of Federal Regulations* (CFR).

Local exchange carrier (LEC). Any person engaged in the provision of telephone exchange service or exchange access. [47 CFR § 51.5]

Incumbent local exchange carrier (ILEC). With respect to an area, the local exchange carrier that:

- Provided telephone exchange service in such area on February 8, 1996, and was deemed to be a member of the exchange carrier association pursuant to 47 CFR § 69.601(b) on February 8, 1996; or
- Is a person or entity that, on or after February 8, 1996, became a successor or assign of a member of the exchange carrier association. [47 CFR § 51.5]

Rural incumbent local exchange carrier. A carrier that meets the definitions of “rural telephone company” and “incumbent local exchange carrier.” [47 CFR § 51.5]

Rural telephone company. A LEC operating entity to the extent that such entity:

- Provides common carrier service to any local exchange carrier study area that does not include either:
 - Any incorporated place of 10,000 inhabitants or more, or any part thereof, based on the most recently available population statistics of the Bureau of the Census; or
 - Any territory, incorporated or unincorporated, included in an urbanized area, as defined by the Bureau of the Census as of August 10, 1993;
- Provides telephone exchange service, including exchange access, to fewer than 50,000 access lines;
- Provides telephone exchange service to any LEC study area with fewer than 100,000 access lines; or
- Has less than 15 percent of its access lines in communities of more than 50,000 on February 8, 1996. [47 CFR § 51.5]

Rate-of-return carrier. Any ILEC not subject to price cap regulation as defined in 47 CFR § 61.3. [47 CFR § 51.5]

Price cap regulation. A method of regulation of dominant carriers (a carrier found by the Federal

Communications Commission (FCC) to have market power [*i.e.*, power to control prices]) provided in 47 CFR §§ 61.41 through 61.49. [47 CFR § 61.3]

Frozen high-cost support. Beginning January 1, 2012, each price cap LEC and rate-of-return carrier affiliated with a price cap LEC receives a “baseline support amount” equal to its total 2011 support in a given study area, or an amount equal to \$3,000 times the number of reported lines for 2011, whichever is lower. Each price cap LEC and rate-of-return carrier affiliated with a price cap LEC receives a “monthly baseline support amount” equal to its baseline support amount divided by 12. [47 CFR § 54.312]

The National Broadband Plan (2010)

In early 2009, Congress directed the FCC to develop a National Broadband Plan (Plan) to ensure every American has “access to broadband capability.” Congress also required the Plan to include a detailed strategy for achieving affordability and maximizing use of broadband to advance “consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.”

The Plan states the government may influence broadband in the following four ways:

- Design policies to ensure robust competition and, as a result, maximize consumer welfare, innovation, and investment;
- Ensure efficient allocation and management of assets the government controls or influences, such as spectrum, poles, and rights-of-way, to encourage network upgrades and competitive entry;
- Reform current universal service mechanisms to support deployment of broadband and voice in high-cost areas; ensure low-income Americans

can afford broadband; and, in addition, support efforts to boost adoption and utilization; and

- Reform laws, policies, standards and incentives to maximize the benefits of broadband in sectors government influences significantly, such as public education, health care, and government operations.

The Plan also recommended, as part of creating the Connect America Fund (CAF), supporting the provision of affordable broadband and voice with at least 4 megabits per second (Mbps) actual download speeds and shift up to \$15.5 billion over the next decade from the existing Universal Service Fund program to support broadband.

Connect America Fund (also known as the Federal Universal Service High-Cost Program)

In 2011, the FCC issued a Reform Order (Order) creating the CAF to support broadband, create a Mobility Fund to support 3G or better wireless coverage, and expand the Lifeline Program to allow subsidies to be provided for broadband. The Order set performance goals for reform of the FUSF to include, among other things, ensuring universal availability of modern networks capable of providing voice and broadband service to homes, businesses, and community anchor institutions; ensuring universal availability of modern networks capable of providing advanced mobile and broadband service; and ensuring rates for broadband services and rates for voice services are reasonably comparable in all regions of the nation.

The Order directed CAF to be implemented in two phases, with the first phase deploying new broadband service to 37 states with \$115.0 million in public funding and tens of millions in private investment. To qualify for CAF Phase I support, a carrier had to provide broadband with actual speeds of 4 Mbps download and 1 Mbps upload and deploy broadband to at least one currently unserved location for each \$775 in additional high-cost support received. CenturyLink accepted \$35.0 million, none of

which was spent in Kansas. In the second round of Phase I funding, AT&T was approved for \$95.0 million, none designated for Kansas; CenturyLink was approved for nearly \$40.0 million, of which \$81,474 was designated to be spent in Kansas; and FairPoint Communications Missouri, Inc., was approved for \$2.9 million, of which \$91,612 was designated to be spent in Kansas.

In CAF Phase II, each incumbent price-cap carrier was asked to make a state-level commitment to provide affordable broadband to all high-cost locations in its service territory. In CAF Phase II funding, rate-of-return carriers receiving CAF support to offset lost intercarrier compensation (charges that one carrier pays to another carrier to originate, transport, and/or terminate telecommunications traffic) must offer broadband service with actual speeds of at least 4 Mbps download and 1 Mbps upload upon a customer's reasonable request. AT&T accepted \$18.9 million in support offered for Kansas; therefore, it will be required to deploy 10 Mbps/1 Mbps voice and broadband-capable services to at least 95.0 percent of the 35,375 eligible areas by the end of 2020. CenturyLink accepted \$16.5 million in support offered for Kansas; therefore, it will be required to deploy 10 Mbps/1 Mbps voice and broadband-capable services to at least 95.0 percent of the 29,018 eligible areas by the end of 2020. (*Note: Eligible areas include census blocks unserved by mobile broadband services, and carriers may not receive support for areas they have previously stated they plan to serve.*)

The areas for which price-cap carriers did not accept model-based support, as well as other areas, were made available in the Phase II auction. The competitive bidding process concluded in August 2018, with financial documentation due to the FCC in February 2019. Seven bidders in Kansas were awarded a total of \$46.7 million in support across ten years to provide broadband service with speeds ranging from 25 Mbps/3 Mbps to 1,000 Mbps/500 Mbps. More information on the results of the CAF II auction can be found at <https://www.fcc.gov/auction/903>.

The 2011 Order also created the Remote Areas Fund (RAF) to be funded with a budget of at least \$100.0 million annually. The RAF's stated purpose

is to ensure people living in the most remote areas of the nation, where the cost of providing broadband service is extremely high, can obtain service. As of September 12, 2019, there is no information on FCC plans to commence the RAF auction. The RAF will employ technology-neutral rules.

Broadband Deployment Advisory Committee (2017)

On January 31, 2017, the FCC chairperson announced the formation of the Broadband Deployment Advisory Committee, to provide advice and recommendations for the FCC on how to accelerate the deployment of high-speed Internet access. The Committee was anticipated to meet for two years. The Committee has recommended, among other things, a model code for states titled the State Broadband Infrastructure Deployment Act. A full list of recommendations can be found at <https://www.fcc.gov/broadband-deployment-advisory-committee>.

Broadband Definitions

In 1999, the FCC determined “advanced telecommunications capability” and “advanced services” and, in effect, “broadband” are services and facilities with an upstream (customer-to-provider) and downstream (provider-to-customer) transmission speed of more than 200 kilobits per second. The FCC changed the definition of broadband in 2010 to a minimum download speed of 4 Mbps and minimum upload speed of 1 Mbps. As part of its “2015 Broadband Progress Report,” the FCC voted to change the definition of broadband by raising the minimum download speeds to 25 Mbps and the minimum upload speed to 3 Mbps, which triples the number of U.S. households without broadband access (as defined by the current definition).

Kansas Developments

Statutes

In 1996, the Kansas Legislature enacted a series of telecommunication-related statutes that,

among other things, set forth a statewide policy and a definition of broadband (KSA 66-2001 *et seq.*).

Kansas statute declares it is the policy of the State to ensure every Kansan will have access to a first class telecommunications infrastructure that provides excellent services at an affordable price; ensure consumers throughout the state realize the benefits of competition through increased services and improved telecommunications facilities and infrastructure at reduced rates; promote consumer access to a full range of telecommunications services, including advance telecommunications services that are comparable in urban and rural areas throughout the state; advance the development of a statewide telecommunications infrastructure that is capable of supporting applications, such as public safety, telemedicine, services for persons with special needs, distance learning, public library services, access to Internet providers, and others; and protect consumers of telecommunications services from fraudulent business practices and practices that are inconsistent with the public interest, convenience, and necessity.

Kansas law provides the following definitions:

- “Broadband network” means a connection that delivers services at speeds exceeding 200 kilobits per second in both directions (KSA 66-2005); and
- “Broadband” is the transmission of digital signals at rates equal to or greater than 1.5 Mbps (KSA 66-1,187).

The Kan-Ed Act defines “broadband technology-based video communication” to mean a class of communications technologies that may include switched ethernet services, DSL, cable modem, private line service, multiprotocol label switching based networks, managed or dedicated Internet technologies and other future technologies, capable of supporting such applications (KSA 2018 Supp. 75-7222).

Task Forces and Committees

Kansas Broadband Advisory Task Force (2010)

In 2010, the Kansas Broadband Advisory Task Force (KBATF) was created by Governor Parkinson by Executive Order (EO) 10-08. The KBATF was charged with, among other things, developing recommendations for development and implementation of a broadband digital strategy to support statewide availability and adoption of broadband services consistent with the 2010 National Broadband Plan.

In 2015, Governor Brownback abolished the KBATF by EO 15-01.

Special Committee on Rural Broadband Services (2012)

The Special Committee on Rural Broadband Services was charged with examining how recent FCC changes to the FUSF and the Kansas Universal Service Fund would affect rural broadband, the accessibility of rural broadband services, and the progress and accuracy of mapping rural broadband service.

In its report to the 2013 Legislature, the Special Committee recommended, among other things, the standing committees on utilities should review short- and long-term planning and solutions for rural broadband, the Department of Commerce should report to the standing committees on utilities a broadband mapping update, and members of the Legislature should be provided an electronic notification when the updated broadband mapping is released.

Telecommunications Study Committee (2013)

The Telecommunications Study Committee was created by 2013 HB 2201. The Committee was created to study, among other things, the possibility of establishing a Kansas Broadband Fund. In its statutorily required annual report to the 2015 Legislature, the Committee recommended the Senate and House utilities committees review

the definitions of broadband, telecommunications services, and telecommunications infrastructure with a focus on “future-proofing” those definitions to accommodate the rapid changes in technology.

Statewide Broadband Expansion Task Force (2018)

Senate Sub. for HB 2701 (2018) created the Statewide Broadband Expansion Task Force. The mission of the Task Force is to:

- Work collaboratively to develop an approach that includes, but is not limited to, the development of criteria for the creation of a statewide map for defining and evaluating the broadband needs of Kansas citizens, businesses, industries, institutions, and organizations;
- Identify and document risks, issues, and constraints associated with a statewide broadband expansion project and to develop any corresponding risk mitigation strategies where appropriate;
- Consider any recent actions by the FCC relating to broadband services;
- Identify opportunities and potential funding sources to:
 - Expand broadband infrastructure and increase statewide access to broadband services;
 - Remove barriers that may hinder deployment of broadband infrastructure or access to broadband services; and
 - Consider options for the deployment of new advanced communication technologies;
- Develop criteria for prioritizing the expansion of broadband services across Kansas;
- Review current law and regulations concerning access to the public right-of-way for public utilities and make corresponding recommendations for any changes necessary to encourage broadband deployment; and

- Propose future activities and documentation required to complete the statewide broadband expansion plan, including an upgradeable, functional map of the state of available broadband service, as well as including which technologies should be deployed and the methods to finance broadband expansion.

The Task Force submitted a progress report to the Legislature in January 2019. At the March 28, 2019, meeting, the Task Force established three subcommittees to address the various aspects of its charge and were directed to meet at least twice prior to a final December 2019 meeting of the full Task Force. The Legislative Coordinating Council has approved one meeting day for the 2019 Interim, and it is scheduled for December 17. A final report is required to be submitted to the Legislature by January 15, 2020.

Mapping

On July 31, 2019, Connected Nation, a nonprofit organization that helps address broadband

and digital technology gaps, in partnership with the Governor's Office, published a statewide broadband map of wire-line and wireless coverage. The map was funded by a \$300,000 grant in 2018 and was created by collecting data in collaboration with Kansas broadband service providers. The map is available at <https://connectednation.org/kansas/interactivemap>.

Other States

Forty-three states and the District of Columbia have at least one statute related to broadband technology. While some states provide definitions of broadband for various purposes, states have also endeavored to expand access to high-speed Internet through broadband technology and to improve existing broadband service. In addition, all 50 states have created a task force, commission, or broadband project to identify or address broadband access issues. For additional information about other states, please see the memorandum at <http://www.kslegresearch.org/KLRD-web/Utilities&Energy.html>.

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