Order Code RL33816

CRS Report for Congress

Broadband Loan and Grant Programs in the USDA's Rural Utilities Service

January 23, 2007

Lennard G. Kruger
Specialist in Science and Technology
Resources, Science, and Industry Division

Prepared for Members and
Committees of Congress

Broadband Loan and Grant Programs in the USDA's Rural Utilities Service

Summary

Given the large potential impact broadband access to the Internet may have on the economic development of rural America, concern has been raised over a "digital divide" between rural and urban or suburban areas with respect to broadband deployment. While there are many examples of rural communities with state of the art telecommunications facilities, recent surveys and studies have indicated that, in general, rural areas tend to lag behind urban and suburban areas in broadband deployment.

Citing the lagging deployment of broadband in many rural areas, Congress and the Administration acted in 2001 and 2002 to initiate pilot broadband loan and grant programs within the Rural Utilities Service (RUS) at the U.S. Department of Agriculture (USDA). Subsequently, Section 6103 of the Farm Security and Rural Investment Act of 2002 (P.L. 107-171) amended the Rural Electrification Act of 1936 to authorize a loan and loan guarantee program to provide funds for the costs of the construction, improvement, and acquisition of facilities and equipment for broadband service in eligible rural communities. Currently, RUS/USDA houses the only two federal assistance programs *exclusively* dedicated to financing broadband deployment: the Rural Broadband Access Loan and Loan Guarantee Program and the Community Connect Grant Program.

RUS broadband loan and grant programs have been awarding funds to entities serving rural communities since FY2001. A number of criticisms of the RUS broadband loan and grant programs have emerged, including criticisms related to loan approval and the application process, eligibility criteria, and loans to communities with existing providers.

The current authorization for the Rural Broadband Access Loan and Loan Guarantee Program expires on September 30, 2007. It is expected that the 110th Congress will consider reauthorization of the program as part of the farm bill. Some key issues pertinent to a consideration of the RUS broadband programs include restrictions on applicant eligibility, how "rural" is defined with respect to eligible rural communities, how to address assistance to areas with pre-existing broadband service, technological neutrality, funding levels and mechanisms, and the appropriateness of federal assistance. Ultimately, any modification of rules, regulations, or criteria associated with the RUS broadband program will likely result in "winners and losers" in terms of which companies, communities, regions of the country, and technologies are eligible or more likely to receive broadband loans and grants.

This report will be updated as events warrant.

Contents

Introduction 1
Background: Broadband and Rural America 1
Pilot Broadband Loan and Grant Programs 4
Rural Broadband Access Loan and Loan Guarantee Program 5
Community Connect Broadband Grants 8
Other Broadband Programs 9
Criticisms of RUS Broadband Programs 11
    Loan Approval and Application Process 11
    Eligibility Criteria 13
    Loans to Communities With Existing Providers 13
Issues for Reauthorization 14
    Restricting Applicant Eligibility 14
    Definition of “Rural Community” 15
    Pre-existing Broadband Service 15
    Technological Neutrality 16
    Funding 17
    Appropriateness of Federal Assistance 17

List of Tables

Table 1. Funding for the Rural Broadband Access Loan and Loan Guarantee Program 6
Table 2. Appropriations for the Community Connect Broadband Grants, FY2002-FY2006 9
Table 3. Number of Customers Receiving New or Improved Telecommunication Services (Broadband) Through USDA Financing of Telecommunications Facilities 10

Broadband Loan and Grant Programs in the USDA's Rural Utilities Service

Introduction

The Rural Utilities Service (RUS) within the U.S. Department of Agriculture (USDA) houses the only two federal assistance programs *exclusively* dedicated to financing deployment of broadband Internet access in rural America. These are: the Rural Broadband Access Loan and Loan Guarantee Program and the Community Connect Grant Program. The two programs initially appeared as pilot programs in 2001 and 2002. The broadband loan program was authorized by the 2002 farm bill (P.L. 107-171); this authorization expires on September 30, 2007.

The 110th Congress is expected to consider the RUS broadband program as part of the reauthorization of the farm bill in 2007. Given concerns over the lagging status of broadband deployment in many rural areas, Congress is likely to examine how the RUS broadband programs might be positioned to most effectively address rural broadband development. This report provides detailed background information on the RUS broadband loan and grant programs, outlines criticisms of how the RUS broadband program has been implemented thus far, and discusses issues that Congress may be asked to consider during the reauthorization process.

Background: Broadband and Rural America

The broadband loan and grant programs at RUS are intended to accelerate the deployment of broadband services in rural America. "Broadband" refers to high-speed Internet access for private homes, commercial establishments, schools, and public institutions. Currently in the United States, broadband is primarily provided via cable modem (from the local provider of cable television service) or over the telephone line (digital subscriber line or "DSL"). Other broadband technologies include fiber optic cable, fixed wireless, satellite, and broadband over power lines (BPL).

Broadband access enables a number of beneficial applications to individual users and to communities. These include e-commerce, telecommuting, voice service (voice over the Internet protocol or "VOIP"), distance learning, telemedicine, public safety, and others. It is becoming generally accepted that broadband access in a community can play an important role in economic development. A February 2006 study by the Massachusetts Institute of Technology for the Department of Commerce's Economic Development Administration marked the first attempt to measure the impact of broadband on economic growth. The study found that "between 1998 and 2002, communities in which mass-market broadband was available by December 1999 experienced more rapid growth in employment, the

number of businesses overall, and businesses in IT-intensive sectors, relative to comparable communities without broadband at that time."[1]

Access to affordable high-speed Internet service is viewed as particularly important for the economic development of rural areas because it enables individuals and businesses to participate fully in the online economy regardless of geographical location. For example, aside from enabling existing businesses to remain in their rural locations, broadband access could attract new business enterprises drawn by lower costs and a more desirable lifestyle. Essentially, broadband potentially allows businesses and individuals in rural America to live locally while competing globally in an online environment.

Given the large potential impact broadband may have on the economic development of rural America, concern has been raised over a "digital divide" between rural and urban or suburban areas with respect to broadband deployment. While there are many examples of rural communities with state of the art telecommunications facilities,[2] recent surveys and studies have indicated that, in general, rural areas tend to lag behind urban and suburban areas in broadband deployment. For example:

- A September 2004 Department of Commerce report, *A Nation Online: Entering the Broadband Age*, found that a lower percentage of Internet households have broadband in rural areas (24.7%) than in urban areas (40.4%), and that "while broadband usage has grown significantly in all areas since the previous survey, the rural-urban differential continues."[3] The report also found that broadband penetration rates are higher in the West and Northeast than in the South and Midwest.[4]

- December 2005 data from the Pew Internet & American Life Project indicated that while broadband adoption is growing in urban, suburban, and rural areas, broadband users make up larger percentages of urban and suburban users than rural users. Pew found that the percentage of all U.S. adults with broadband at home

---

[1] Gillett, Sharon E., Massachusetts Institute of Technology, *Measuring Broadband's Economic Impact*, report prepared for the Economic Development Administration, U.S. Department of Commerce, February 28, 2006 p. 4. Available at [http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs2006/mitcmubbimpactreport_2epdf/v1/mitcmubbimpactreport.pdf].

[2] See for example: National Exchange Carrier Association (NECA), *Trends 2006: Making Progress With Broadband*, 2006, 26 p. Available at [http://www.neca.org/media/trends_brochure_website.pdf].

[3] U.S. Department of Commerce, Economics and Statistics Administration, National Telecommunications and Information Administration, *A Nation Online: Entering the Broadband Age*, September 2004, pp. 12-13.

[4] Ibid., p. 12.

is 38% for urban areas, 40% for suburban areas, and 24% for rural areas.[5]

- A May 2006 report released by the Government Accountability Office (GAO) found that 17% of rural households subscribe to broadband, as opposed to 28% of suburban and 29% of urban households.[6] GAO also found that lower broadband subscription rates in rural areas are related to availability, not to a lesser tendency of rural households to purchase broadband service.[7]

- Finally, and most recently, in the latest Federal Communications Commission (FCC) data on the deployment of high-speed Internet connections (released July 2006), high-speed subscribers were reported in 99% of the most densely populated zip codes, as opposed to 88% of zip codes with the lowest population densities.[8]

The comparatively lower population density of rural areas is likely the major reason why broadband is less deployed than in more highly populated suburban and urban areas. Particularly for wireline broadband technologies — such as cable modem and DSL — the greater the geographical distances among customers, the larger the cost to serve those customers. For example, in providing telecommunications services, investment per subscriber in rural systems averages $2,921 compared to $1,920 for urban.[9] Thus, there is often less incentive for companies to invest in broadband in rural areas than, for example, in an urban area where there is more demand (more customers with perhaps higher incomes) and less cost to wire the market area.

The terrain of rural areas can also be a hindrance, in that it is more expensive to deploy broadband technologies in a mountainous or heavily forested area. An additional added cost factor for remote areas can be the expense of "backhaul" (e.g. the "middle mile") which refers to the installation of a dedicated line which transmits a signal to and from an Internet backbone which is typically located in or near an urban area.

---

[5] Horrigan, John B., Pew Internet & American Life Project, *Rural Broadband Internet Use,* February 2006, Available at [http://www.pewinternet.org/pdfs/PIP_Rural_Broadband.pdf].

[6] U.S. Government Accountability Office, *Broadband Deployment is Extensive throughout the United States, but It Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas,* GAO-06-426, May 2006, p. 12. Available at [http://www.gao.gov/new.items/d06426.pdf].

[7] Ibid., p. 5.

[8] FCC, *High-Speed Services for Internet Access: Status as of December 31, 2005,* July 2006, p. 4. Available at [http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-266596A1.pdf].

[9] Office of Management and Budget, Program Assessment Rating Tool (PART), "Detailed Information on the Rural Telecommunications Loan Programs Assessment," assessment year 2004, available at [http://www.whitehouse.gov/omb/expectmore/detail.10001017.2005.html]

Cable modem and DSL currently comprise about 90% of broadband deployment nationwide.[10] However, because of the challenges of deploying these technologies in low population density areas, other broadband technologies have been identified as perhaps offering potential in rural areas. These include fixed wireless (WIMAX, wi-fi), satellite, and broadband over powerlines (BPL).

Pilot Broadband Loan and Grant Programs

Given the lagging deployment of broadband in rural areas, Congress and the Administration acted to initiate pilot broadband loan and grant programs within the Rural Utilities Service of the U.S. Department of Agriculture. While RUS had long maintained telecommunications loan and grant programs (Rural Telephone Loans and Loan Guarantees, Rural Telephone Bank, and more recently, the Distance Learning and Telemedicine Loans and Grants) none were exclusively dedicated to financing rural broadband deployment. Title III of the FY2001 agriculture appropriations bill (P.L. 106-387) directed USDA/RUS to conduct a "pilot program to finance broadband transmission and local dial-up Internet service in areas that meet the definition of 'rural area' used for the Distance Learning and Telemedicine Program."

Subsequently, on December 5, 2000, RUS announced the availability of $100 million in loan funding through a one-year pilot program "to finance the construction and installation of broadband telecommunications services in rural America."[11] The broadband pilot loan program was authorized under the authority of the Distance Learning and Telemedicine Program (7 U.S.C. 950aaa), and was available to "legally organized entities" not located within the boundaries of a city or town having a population in excess of 20,000.

The FY2001 pilot broadband loan program received applications requesting a total of $350 million. RUS approved funding for 12 applications totaling $100 million. The FY2002 agriculture appropriations bill (P.L. 107-76) designated a loan level of $80 million for broadband loans, and on January 23, 2002, RUS announced that the pilot program would be extended into FY2002, with $80 million in loans made available to fund many of the applications that did not receive funding during the previous year.[12]

Meanwhile, the FY2002 agriculture appropriations bill (P.L. 107-76) allocated $20 million for a pilot broadband grant program, also authorized under the Distance Learning and Telemedicine Program. On July 8, 2002, RUS announced the availability of $20 million for a pilot grant program for the provision of broadband service in rural America. The program was specifically targeted to economically

---

[10] *High-Speed Services for Internet Access: Status as of December 31, 2005*, Chart 2.

[11] Rural Utilities Service, USDA, "Construction and Installation of Broadband Telecommunications Services in Rural America; Availability of Loan Funds," *Federal Register*, Vol. 65, No. 234, December 5, 2000, p. 75920.

[12] Rural Utilities Service, USDA, "Broadband Pilot Loan Program," *Federal Register*, Vol. 67, No. 15, January 23, 2002, p. 3140.

challenged rural communities with no existing broadband service. Grants were made available to entities providing "community-oriented connectivity" which the RUS defined as those entities "who will connect the critical community facilities including the local schools, libraries, hospitals, police, fire and rescue services and who will operate a community center that provides free and open access to residents."[13]

In response to the July 8, 2002, Notice of Funds Availability, RUS received more than 300 applications totaling more than $185 million in requested grant funding. RUS approved 40 grants totaling $20 million. The pilot program was extended into FY2003, as the Consolidated Appropriations Resolution of 2003 (P.L. 108-7) allocated $10 million for broadband grants. On September 24, 2003, 34 grants were awarded to eligible applicants who did not receive funding during the previous year.

Rural Broadband Access Loan and Loan Guarantee Program

Building on the pilot broadband loan program at RUS, Section 6103 of the Farm Security and Rural Investment Act of 2002 (P.L. 107-171) amended the Rural Electrification Act of 1936 to authorize a loan and loan guarantee program to provide funds for the costs of the construction, improvement, and acquisition of facilities and equipment for broadband service in eligible rural communities.[14] Section 6103 made available, from the funds of the Commodity Credit Corporation (CCC), a total of $100 million through FY2007 ($20 million for each of fiscal years 2002 through 2005, and $10 million for each of fiscal years 2006 and 2007). P.L. 107-171 also authorized any other funds appropriated for the broadband loan program.

Beginning in FY2004, Congress has annually blocked mandatory funding from the CCC. Thus — starting in FY2004 — the program has been funded as part of annual appropriations in the Distance Learning and Telemedicine account within the Department of Agriculture appropriations bill. Every fiscal year, Congress has approved an appropriation for the loan program which is used to subsidize a specific loan level (the total amount of lending authority). **Table 1** shows — for the life of the program to date — loan subsidies, loan levels (lending authority), and actual funds announced by RUS yearly for loan applications. Announced available funding typically exceeds yearly loan levels because large balances of unobligated money have been carried over from year to year. However, Section 1401 of the Deficit Reduction Act of 2005 (P.L. 109-171) cancelled unobligated funds remaining as of October 1, 2006.

For FY2007, the Administration requested a $10.8 million subsidy which would support a loan level of about $357 million ($297 million in Treasury rate loans, $30 million in 4% loans, and $30 million in loan guarantees). The FY2007 House Agriculture Appropriations bill, passed by the House on May 23, 2006 (H.R. 5384; H.Rept. 109-463), would provide $10.8 million (supporting a loan level of $503

---

[13] Rural Utilities Service, USDA, "Broadband Pilot Grant Program," *Federal Register*, Vol. 67, No. 130, July 8, 2002, p. 45080.

[14] Title VI of the Rural Electrification Act of 1936 (7 U.S.C. 950bb).

million) for the cost of broadband treasury rate loans. On June 22, 2006, the Senate Appropriations Committee approved $10.75 million (S.Rept. 109-266) supporting a Treasury rate loan level of $500 million.

Under the third Continuing Resolution (P.L. 109-383), which provides funding for most federal agencies (including USDA) through February 15, 2007, programs are funded at the lowest of the House, Senate, and FY2006 levels. Under this formula, the broadband loan program would be subject to the FY2006 level of $10.75 million for the cost of broadband loans, supporting a loan level of $500 million. However, it is not clear which funding formula may be used in a possible future Continuing Resolution which would provide funding through the duration of FY2007.

Table 1. Funding for the Rural Broadband Access Loan and Loan Guarantee Program

	Budget Authority (subsidy level)	Loan Level (lending authority)	Announced Available Funding for Loans and Loan Guarantees[a]
FY2003	$40 million[b]	$1.455 billion	$1.455 billion[c]
FY2004	$13.1 million	$602 million	$2.211 billion[d]
FY2005	$11.715 million	$550 million	$2.157 billion[e]
FY2006	$10.75 million	$500 million	$1.085 billion[f]

a. Because all available funds were not awarded, unobligated balances were carried over from year to year.

b. Composed of $20 million from FY2002 plus $20 million for FY2003 of mandatory funding from the Commodity Credit Corporation, as directed by P.L. 107-171. In the FY2004, FY2005, and FY2006 appropriations bills, mandatory funding from the CCC was canceled.

c. Rural Utilities Service, USDA, "Rural Broadband Access Loans and Loan Guarantees Program," *Federal Register*, Vol. 68, No. 20, January 30, 2003, pp. 4753-4755.

d. Rural Utilities Service, USDA, "Rural Broadband Access Loans and Loan Guarantees Program," *Federal Register*, Vol. 69, No.60, March 29, 2004, pp. 16231-16232.

e. Rural Utilities Service, USDA, "Rural Broadband Access Loans and Loan Guarantees Program," *Federal Register*, Vol. 70, No.42, March 4, 2005, pp. 10595-10596.

f. USDA, Rural Utilities Service, "Rural Broadband Access Loan Program," powerpoint presentation, October 19, 2006. Available at [http://www.mnart.org/powerpoint/AnnualMtg /Dominic.ppt#734,13,BroadbandLoan Program:FY2006 Budget].

The Rural Broadband Access Loan and Loan Guarantee Program is codified as 7 U.S.C. 950bb. Specifically, Treasury rate loans, 4% loans, and loan guarantees are authorized for entities providing broadband service for "eligible rural communities," defined as any area of the United States that is not contained in an incorporated city

or town with a population in excess of 20,000 inhabitants.[15] RUS is required to be technologically neutral in determining whether or not to make a loan, and is instructed to give priority to rural communities with no existing residential broadband service. Loans are used for financing new or improved existing broadband provider facilities. Loans cannot be used to finance installations or equipment at customers' premises.

On January 30, 2003, the RUS published in the *Federal Register* the regulation (7 CFR part 1738) establishing the Rural Broadband Access Loan and Loan Guarantee Program, as authorized by P.L. 107-171.[16] According to the regulation, entities eligible to receive loans include corporations, limited liability companies, cooperative or mutual organizations, Indian tribes, and public bodies. Specifically **not** eligible are individuals, partnerships, and any entity serving 2% or more of the telephone subscriber lines in the United States. All applicants are required to demonstrate adequate credit support — a minimum of 20% of requested loan amount, including cash on hand equivalent to one full year of operating expense.[17]

To be eligible for 4% loans, applicants must be proposing to serve a community with no existing broadband service, a population of 2,500 or less, and a service area with population density of no more than 20 persons per square mile. Additionally, the community must be located in a county with a per capita income of less than or equal to 65% of the national per capita income.

As of September 30, 2006, the broadband loan program received 185 applications, requesting a total of $3.546 billion in loans. As of September 30, 63

---

[15] Section 772 of the FY2004 Consolidated Appropriations Act (P.L. 108-199) changed the definition of an "eligible rural community" to be defined as "any area of the United States that is not contained in an incorporated city or town with a population in excess of 20,000 inhabitants." Accordingly, the March 29, 2004 Notice of Funds Availability for the Rural Broadband Access Loans and Loan Guarantee Program defined "Eligible Rural Community" as follows:

> The definition of eligible rural community in Section 601(b)(2) of the Rural Electrification Act (7 U.S.C. 950bb)(b)(2), qualifying for financial assistance under the Rural Broadband Access Loan and Loan Guaranty Program, has been amended by provisions in the Consolidated Appropriations Act, 2004, to mean any area of the United States that is not contained in an incorporated city or town with a population in excess of 20,000 inhabitants. Therefore, an applicant no longer must demonstrate that it is not located in an area designated as a standard metropolitan statistical area. This change supersedes and nullifies contrary provisions in regulations implementing the broadband program found at 7 CFR part 1738.

[16] Rural Utilities Service, USDA, "Rural Broadband Access Loans and Loan Guarantees," *Federal Register*, Vol. 68, No. 20, January 30, 2003, pp. 4684-4692.

[17] The cash-on-hand requirement is waived for companies with two previous years of positive cash flow.

applications were approved (totaling $1.1 billion), 20 were in review (totaling $930 million), and 102 had been returned (totaling $1.516 billion).[18]

Applications for the Rural Broadband Access Loan and Loan Guarantee program are accepted at any time. The maximum loan amount for 4% loans is $7.5 million. There is no maximum for treasury rate loans, and the minimum level for all loans is $100 thousand. Loans are made for the term equal to the expected service life of financed facilities. Further information, including application materials and guidelines, is available at [http://www.usda.gov/rus/telecom/broadband.htm].

Community Connect Broadband Grants

The Consolidated Appropriations Act of 2004 (P.L. 108-199) appropriated $9 million "for a grant program to finance broadband transmission in rural areas eligible for Distance Learning and Telemedicine Program benefits authorized by 7 U.S.C. 950aaa." On July 28, 2004, RUS published its final rule on the broadband grant program, called the Community Connect Grant Program (7 CFR part 1739, subpart A).[19] Essentially operating the same as the pilot broadband grants, the program provides grant money to applicants proposing to provide broadband on a "community-oriented connectivity" basis to currently unserved rural areas for the purpose of fostering economic growth and delivering enhanced health care, education, and public safety services.

Funding for the broadband grant program is provided through annual appropriations in the Distance Learning and Telemedicine account within the Department of Agriculture appropriations bill. **Table 2** shows a history of appropriations for the Community Connect Broadband Grants (including the pilot grants of FY2002 and FY2003).

For FY2007, the Administration requested zero funding for broadband grants. The FY2007 House Agriculture Appropriations bill, passed by the House on May 23, 2006 (H.R. 5384; H.Rept. 109-463), would provide $8.9 million for broadband grants. On June 22, 2006, the Senate Appropriations Committee approved $10 million for broadband grants (S.Rept. 109-266).

Under the 3rd Continuing Resolution (P.L. 109-383), which provides funding for most federal agencies (including USDA) through February 15, 2007, programs are funded at the lowest of the House, Senate, and FY2006 levels. Under this formula, the broadband grant program would be subject to the House level of $8.9 million. However, it is not clear which funding formula may be used in a possible future Continuing Resolution that would provide funding through the duration of FY2007.

---

[18] A listing of approved and pending applications is available at [http://www.usda.gov/rus/telecom/broadband.htm].

[19] Rural Utilities Service, USDA, "Broadband Grant Program," 7 CFR part 1739, *Federal Register*, Vol. 69, No. 144, July 28, 2004, pp. 44896-44903.

Table 2. Appropriations for the Community Connect Broadband Grants, FY2002-FY2006

Fiscal Year	Appropriation
FY2002	$20 million
FY2003	$10 million
FY2004	$9 million
FY2005	$9 million
FY2006	$9 million

Source: Compiled by CRS from appropriations bills.

Eligible applicants for broadband grants include incorporated organizations, Indian tribes or tribal organizations, state or local units of government, cooperatives, private corporations, and limited liability companies organized on a for profit or not-for-profit basis. Individuals or partnerships are not eligible.

Funded projects must: serve a rural area of 20,000 population or less[20] where broadband service does not exist, serve one and only one single community, deploy free basic broadband service (defined as 200 kbps in both directions) for at least two years to all community facilities, offer basic broadband to residential and business customers, and provide a community center with at least ten computer access points within the proposed service area while making broadband available for two years at no charge to users within that community center.

Since the inception of the RUS broadband grant program, $57.7 million in grant money has been awarded to 129 awardees. Awardees must contribute a matching contribution equal to 15% of the requested grant amount.

RUS typically publishes an annual Notice of Funding Availability (NOFA) in the *Federal Register*, which specifies the deadline for applications, the total amount of funding available, and the maximum and minimum amount of funding available for each grant. Further information, including application materials and guidelines, is available at [http://www.usda.gov/rus/telecom/commconnect.htm].

Other Broadband Programs

The Rural Broadband Access Loan and Loan Guarantee Program and the Community Connect Broadband Grants are currently the only federal programs *exclusively* dedicated to deploying broadband infrastructure. However, there exist

---

[20] A rural area is defined as "any area of the United States not included within the boundaries of any incorporated or unincorporated city, village, or borough having a population in excess of 20,000 inhabitants." (7 CFR 1739.3)

other federal programs that provide financial assistance for various aspects of telecommunications development.[21] Though not explicitly or exclusively devoted to broadband, many of those programs are used to help deploy broadband technologies in rural areas. For example, since 1995, the RUS Rural Telephone Loan and Loan Guarantee program — which has traditionally financed telephone voice service in rural areas under 5,000 inhabitants — has required that all telephone facilities receiving financing must be capable of providing DSL broadband service at a rate of at least 1 megabyte per second.[22] The RUS Distance Learning and Telemedicine grants program is used to support deployment of broadband technologies specifically for telemedicine and distance learning applications. **Table 3** shows the number of customers receiving broadband due to USDA financing of telecommunications facilities.

Table 3. Number of Customers Receiving New or Improved Telecommunication Services (Broadband) Through USDA Financing of Telecommunications Facilities

FY2001	FY2002	FY2003	FY2004	FY2005	FY2006
315,000	310,000	380,000	370,000	230,000	290,000

Source: U.S. Dept. of Agriculture, *FY2007 Budget Summary and Performance Plan*, p. 53, and U.S. Dept. of Agriculture, *2006 Performance and Accountability Report*, November 2006, p. 82.

Note: Customers are defined as access lines financed by the programs.

The other major vehicle for funding telecommunications development in rural areas is the Universal Service Fund (USF).[23] Subsidies provided by USF's Schools and Libraries Program and Rural Health Care Program are used for a variety of telecommunications services, including broadband access. While the USF's High Cost Program does not *explicitly* fund broadband infrastructure, subsidies are used, in many cases, to upgrade existing telephone networks. Regarding the USF High Cost Program, the Congressional Budget Office has found that "current policy implicitly provides funds for broadband in rural areas," adding that:

> Whether such upgrades are motivated by the intention to provide broadband or better conventional telephone service is not immediately clear. However, the fact that wireline carriers as a whole have been losing subscribers and long-distance

---

[21] See CRS Report RL30719, *Broadband Internet Access and the Digital Divide: Federal Assistance Programs, by* Lennard G. Kruger and Angele A. Gilroy.

[22] In the Rural Electrification Loan Restructuring Act (the 1993 farm bill), Congress amended the Rural Electrification Act to require that facilities financed under this program be capable of providing broadband service at the rate of 1 megabyte per second.

[23] For more information on the Universal Service Fund, see CRS Report RL30719, *Broadband Internet Access and the Digital Divide: Federal Assistance Programs, by* Lennard G. Kruger and Angele A. Gilroy.

> revenue over the past half decade suggests that at least part of the new investment in local loops has been made with the expectation of generating revenue from broadband subscriptions.[24]

In addition to federal support for broadband deployment, there are programs and activities ongoing at the state and local level. Surveys, assessments, and reports from the American Electronics Association,[25] Technet,[26] the Alliance for Public Technology,[27] the California Public Utilities Commission,[28] and the AEI-Brookings Joint Center[29] have explored state and local broadband programs. A related issue is the emergence of municipal broadband networks (primarily wireless and fiber based) and the debate over whether such networks constitute unfair competition with the private sector.

Criticisms of RUS Broadband Programs

Broadband loan and grant programs have been awarding funds to entities serving rural communities since FY2001. Since their inception, a number of criticisms of the RUS broadband loan and grant programs have emerged.

Loan Approval and Application Process. Perhaps the major criticism of the broadband loan program is that not enough loans are approved, thereby making it difficult for rural communities to take full advantage of the program. As of September 30, 2006, the broadband loan program had received 185 applications, totaling $3.546 billion in requested loans. Of those applications, 63 have been approved, totaling $1.1 billion; 20 are in review, totaling $930 million, and 102 have been returned, totaling $1.5 billion.[30] According to RUS officials, 28% of available

---

[24] Congressional Budget Office, *Factors That May Increase Future Spending from the Universal Service Fund*, CBO Paper, June 2006, p. 25. Available at [http://www.cbo.gov/ftpdocs/72xx/doc7291/06-16-UniversalService.pdf].

[25] American Electronics Association, *Broadband in the States 2003: A State-by-State Overview of Broadband Deployment*, May 22, 2003. Available at [http://www.aeanet.org/publications/idet_broadbandstates03.asp].

[26] TechNet, *The State Broadband Index: An Assessment of State Policies Impacting Broadband Deployment and Demand*, July 17, 2003, 48 p. Available at [http://www.michigan.gov/documents/State_Broadband_Index_71282_7.pdf].

[27] Alliance for Public Technology, *A Nation of Laboratories: Broadband Policy Experiments in the States*, March 5, 2004, 48 p. Available at [http://www.apt.org/publications/reports-studies/broadbandreport_final.pdf].

[28] California Public Utilities Commission, *Broadband Deployment in California*, May 5, 2005, 83 p. Available at [http://www.cpuc.ca.gov/static/telco/reports/broadbandreport.htm].

[29] Wallsten, Scott, AEI-Brookings Joint Center for Regulatory Studies, *Broadband Penetration: An Empirical Analysis of State and Federal Policies*, Working Paper 05-12, June 2005, 29 p. Available at [http://aei-brookings.org/admin/authorpdfs/page.php?id=1161].

[30] U.S. Department of Agriculture, Rural Development, "Telecommunications Funding Opportunities," powerpoint presentation, 2006.

loan money was awarded in 2004, and only 5% of available loan money was awarded in 2005.[31]

The loan application process has been criticized as being overly complex and burdensome, requiring applicants to spend months preparing costly market research and engineering assessments. Many applications are rejected because the applicant's business plan is deemed insufficient to support a commercially viable business. The biggest reason for applications being returned is insufficient credit support, whereby applicants do not have sufficient cash-on-hand (one year's worth is required in most cases). The requirement for cash-on-hand is viewed as particularly onerous for small start up companies, many of whom lack sufficient capital to qualify for the loan. Such companies, critics assert, may be those entities most in need of financial assistance.

In report language to the FY2006 Department of Agriculture Appropriations Act (P.L. 109-97), the Senate Appropriations Committee (S.Rept. 109-92) directed the RUS "to reduce the burdensome application process and make the program requirements more reasonable, particularly in regard to cash-on-hand requirements." The Committee also directed USDA to hire more full-time employees to remedy delays in application processing times.

At a May 17, 2006 hearing held by the Senate Committee on Agriculture, Nutrition, and Forestry, the Administrator of the RUS stated that RUS is working to make the program more user friendly, while at the same time protecting taxpayer investment:

> As good stewards of the taxpayers' money, we must make loans that are likely to be repaid. One of the challenges in determining whether a proposed project has a reasonable chance of success is validating the market analysis of the proposed service territory and ensuring that sufficient resources are available to cover operating expenses throughout the construction period until such a time that cash flow from operations become sufficient. The loan application process that we have developed ensures that the applicant addresses these areas and that appropriate resources are available for maintaining a viable operation.[32]

According to RUS, the loan program was initially overwhelmed by applications (particularly during a two week period in August 2003), and as the program matures, application review times have dropped. As of January 2007, there were 21 applications pending requesting a total of $357.165 million.[33]

---

[31] GAO, *Broadband Deployment is Extensive throughout the United States, but It Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas*, p. 33.

[32] Testimony of Jim Andrew, Administrator, Rural Utilities Service, U.S. Department of Agriculture, "Broadband Program Administered by USDA's Rural Utilities Service," full committee hearing before the Senate Committee on Agriculture, Nutrition, and Forestry, 109th Congress, May 17, 2006.

[33] Rural Utilities Service, private communication, January 18, 2007.

Eligibility Criteria. Since the inception of the broadband grant and loan programs, the criteria for applicant eligibility has been criticized both for being too broad and for being too narrow. An audit report released by USDA's Office of Inspector General (IG) found that the "programs' focus has shifted away from those rural communities that would not, without Government assistance, have access to broadband technologies."[34] Specifically the IG report found that the RUS definition of rural area has been "too broad to distinguish usefully between suburban and rural communities,"[35] with the result that, as of March 10, 2005, $103.4 million in loans and grants (nearly 12% of total funding awarded) had been awarded to 64 communities located near large cities. The report cited examples of affluent suburban subdivisions qualifying as rural areas under the program guidelines and receiving broadband loans.[36]

On the other hand, eligibility requirements have also been criticized as too narrow. For example, the limitation of assistance only to communities of 20,000 or less in population excludes small rural towns that may exceed this limit, and also excludes many municipalities seeking to deploy their own networks.[37] Similarly, per capita income requirements can preclude higher income communities with higher costs of living (e.g. rural Alaska), and the limitation of grant programs only to underserved areas excludes rural communities with existing but very limited broadband access.[38]

Loans to Communities With Existing Providers. The USDA Rural Broadband Access statute (7 U.S.C. 950bb) specifies that the program "shall give priority to eligible rural communities in which broadband service is not available to residential customers." The IG report found that RUS too often has given loans to communities with existing broadband service. The IG report found that "RUS has not ensured that communities without broadband service receive first priority for loans," and that although RUS has a system in place to prioritize loans to unserved communities, the system "lacks a cutoff date and functions as a rolling selection process — priorities are decided based on the applicants who happen to be in the pool at any given moment."[39] The result is that a significant number of communities with some level of preexisting broadband service have received loans. According to the IG report, of 11 loans awarded in 2004, 66% of the associated communities served by those loans had existing service. According to RUS, 31% of communities served by all loans (during the period 2003 through early 2005) had preexisting competitive

---

[34] U.S. Department of Agriculture, Office of Inspector General, Southwest Region, *Audit Report: Rural Utilities Service Broadband Grant and Loan Programs*, Audit Report 09601-4-Te, September 2005, p. I. Available at [http://www.usda.gov/oig/webdocs/09601-04-TE.pdf].

[35] Ibid., p. 6.

[36] Ibid., p. 8.

[37] Martinez, Michael, "Broadband: Loan Fund's Strict Rules Foil Small Municipalities," *National Journal's Technology Daily*, August 23, 2005.

[38] GAO, *Broadband Deployment is Extensive throughout the United States, but It Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas*, p. 33-34.

[39] Ibid., p. 13.

service (not including loans used to upgrade or expand existing service).[40] In some cases, according to the IG report, "loans were issued to companies in highly competitive business environments where multiple providers competed for relatively few customers."[41]

Awarding loans to entities in communities with preexisting competitive service has raised criticism from competitors who already offer broadband to those communities. According to the National Cable and Telecommunications Association (NCTA), "RUS loans are being used to unfairly subsidize second and third broadband providers in communities where private risk capital already has been invested to provide broadband service."[42] Critics argue that providing loans in areas with preexisting competitive broadband service creates an uneven playing field and discourages further private investment in rural broadband.[43] In response, RUS stated in the IG report that its policies are in accordance with the statute, and that they address "the need for competition to increase the quality of services and reduce the cost of those services to the consumer."[44] RUS argues that the presence of a competitor does not necessarily mean that an area is adequately served, and additionally, that in order for some borrowers to maintain a viable business in an unserved area, it may be necessary for that company to also be serving more densely populated rural areas where some level of competition already exists.[45]

Issues for Reauthorization

The current authorization for the Rural Broadband Access Loan and Loan Guarantee program expires on September 30, 2007. It is expected that the 110th Congress will consider reauthorization of the program as part of a possible 2007 farm bill. Any modification of rules, regulations, or criteria associated with the RUS broadband program will likely result in "winners and losers" in terms of which companies, communities, regions of the country, and technologies are eligible or more likely to receive broadband loans and grants. The following are some key issues pertinent to a consideration of the RUS broadband programs.

Restricting Applicant Eligibility. The RUS broadband program has been criticized for excluding too many applicants due to stringent financial requirements (e.g. the requirement that an applicant have a year's worth of cash-on-hand) and an application process — requiring detailed business plans and market surveys — that

---

[40] Ibid., p. 14.

[41] Ibid., p. 15

[42] Letter from Kyle McSlarrow, President and CEO, National Cable & Telecommunications Association to the Honorable Mike Johanns, Secretary of the U.S. Department of Agriculture, May 16, 2006.

[43] Testimony of Tom Simmons, Vice President for Public Policy, Midcontinent Communications, before Senate Committee on Agriculture, Nutrition, and Forestry, May 17, 2006.

[44] *Audit Report: Rural Utilities Service Broadband Grant and Loan Programs*, p. 17.

[45] Rural Utilities Service, private communication, January 18, 2007.

some view as overly expensive and burdensome to complete. During the reauthorization process, Congress may wish to consider whether the criteria for loan eligibility should be modified, and whether a more appropriate balance can be found between the need to make the program more accessible to unserved and often lower-income rural areas, and the need to protect taxpayers against bad loans.

Definition of "Rural Community". The definition of which communities qualify as "rural" has been changed twice by statute since the broadband loan program was initiated. Under the pilot program, funds were authorized under the Distance Learning and Telemedicine Program, which defines "exceptionally rural areas" (under 5,000 inhabitants), "rural areas" (between 5,000 and 10,000) and "mid-rural areas" (between 10,000 and 20,000). RUS determined that communities of 20,000 or less would be eligible for broadband loans in cases where broadband services did not already exist.

In 2002, this definition was made narrower by the Farm Security and Rural Investment Act (P.L. 107-171), which designated eligible communities as any incorporated or unincorporated place with fewer than 20,000 inhabitants, and which was outside any standard metropolitan statistical area (MSA). The requirement that communities not be located within MSA's effectively prohibited suburban communities from receiving broadband loans. However, in 2004, the definition was again changed by the FY2004 Consolidated Appropriations Act (P.L. 108-199). The act broadened the definition, keeping the population limit at 20,000, but eliminating the MSA prohibition, thereby permitting rural communities near large cities to receive loans. Thus the current definition used for rural communities is the same as what was used for the broadband pilot program, except that loans can now be issued to communities with preexisting service.

The definition of what constitutes a "rural" community is always a difficult issue for Congressional policymakers in determining how to target rural communities for broadband assistance. On the one hand, the narrower the definition the greater the possibility that deserving communities may be excluded. On the other hand, the broader the definition used, the greater the possibility that communities not traditionally considered "rural" or "underserved" may be eligible for financial assistance.

A related issue is the scope of coverage proposed by individual applications. While many of the loan applications propose broadband projects offering service to multiple rural communities, RUS sees a coming trend towards larger regional and national proposals, covering hundreds or even more than a thousand communities.[46] The larger the scope of coverage, the greater the complexity of the loan application and the larger the possible benefits and risks to taxpayers.

Pre-existing Broadband Service. While the majority of broadband loans (and all broadband grants) are awarded to entities serving areas without pre-existing broadband service, and while RUS is directed by statute to "give priority to eligible rural communities in which broadband service is not available to residential

[46] Rural Utilities Service, private communication, January 18, 2007.

customers," a significant number of Treasury-rate loans have been awarded in areas with pre-existing service. Loans to areas with competitive pre-existing service — that is, areas where existing companies already provide some level of broadband — have sparked controversy because loan recipients are likely to compete with other companies already providing broadband service.

During reauthorization, Congress may be asked to more sharply define whether and/or how loans should be given to companies serving rural areas with preexisting competitive service.[47] On the one hand, one could argue that the federal government should not be subsidizing competitors for broadband service, particularly in sparsely populated rural markets which may be able only to support one provider. Furthermore, keeping communities with preexisting broadband service eligible may divert assistance from unserved areas that are most in need. On other hand, many suburban and urban areas currently receive the benefits of competition between broadband providers — competition which can potentially drive down prices while improving service and performance. It is therefore appropriate, it is argued, that rural areas also receive the benefits of competition, which in some areas may not be possible without federal financial assistance.

Technological Neutrality. The 2002 farm bill (P.L. 107-171) directed RUS to use criteria that are "technologically neutral" in determining which projects to approve for loans. In other words, RUS is prohibited from typically valuing one broadband technology over another when assessing loan applications. As of September 2006, 30% of approved and funded projects employed fiber-to-the-home technology, 24% employed DSL, 22% wireless (unlicensed), 19% hybrid fiber-coaxial (cable), 3% wireless (licensed), and 2% broadband over powerlines (BPL).[48] No funding has been provided for projects utilizing satellite broadband.[49]

While decisions on funded projects are required to be technologically neutral, RUS (through the Secretary of Agriculture) does have the latitude to determine minimum required data transmission rates for broadband projects eligible for funding. According to the statute, "the Secretary shall, from time to time as advances in technology warrant, review and recommend modifications of rate-of-data transmission

---

[47] The statute (7 U.S.C. 950bb) allows States and local governments to be eligible for loans only if "no other eligible entity is already offering, or has committed to offer, broadband services to the eligible rural community."

[48] USDA, Rural Utilities Service, "Rural Broadband Access Loan Program," powerpoint presentation, October 19, 2006.

[49] According to the GAO, satellite companies state that RUS's broadband loan program requirements "are not readily compatible with their business model or technology," and that "because the agency requires collateral for loans, the program is more suited for situations where the providers, rather than individual consumers, own the equipment being purchased through the loan. Yet, when consumers purchase satellite broadband, it is common for them to purchase the equipment needed to receive the satellite signal, such as the reception dish." Satellite companies argue that in some rural areas, satellite broadband might be the most feasible and cost-effective solution. See GAO, *Broadband Deployment is Extensive throughout the United States, but It Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas*, pp. 34-35.

criteria for purposes of the identification of broadband service technologies." To date, RUS broadband loan and grant programs have required a minimum threshold of 200 kbps (kilobytes per second) in both directions (both uploading and downloading). While the 200 kbps minimum matches the standard definition of broadband that is used by the Federal Communications Commission (FCC), it is considered a low threshold that captures almost all existing broadband technology.[50]

Some have argued that the minimum threshold of 200 kbps should be raised to ensure that rural areas receive "next-generation" broadband technologies with faster data rates capable of more varied and sophisticated applications. On the other hand, significantly raising minimum data rates could exclude certain technologies — for example typical data transmission rates for fiber and some wireless technologies exceed what is offered by "current generation" technologies such as DSL and cable. Proponents of keeping the minimum threshold at a low level could argue that underserved rural areas are best served by any broadband technology that is economically feasible to deploy, regardless of whether it is "next" or "current" generation.

Funding. Under the 2002 farm bill (P.L. 107-171), broadband loan subsidies were funded at a total of $100 million through FY2007 ($20 million for each of fiscal years 2002 through 2005, and $10 million for each of fiscal years 2006 and 2007). This $100 million was to be transferred from funds of the Commodity Credit Corporation (CCC). However, beginning in FY2004, Congress has annually blocked mandatory funding from the CCC, thus ensuring that the program was funded solely through annual appropriations.

During reauthorization, the 110th Congress may wish to consider whether the mandatory CCC funding mechanism provided in the 2002 farm bill should be retained, eliminated, or modified. Also at issue is whether the current funding levels for the RUS broadband programs are optimal. Given the relatively low utilization of the broadband loan program, should funding remain at current levels or below, or alternatively, if modifications are made to ensure fuller utilization, and given the need to bridge the digital divide, should funding be increased? A related issue is whether more money should be shifted from the broadband loan program to the Community Connect broadband grant program, in order to better address the need for broadband in lower income rural communities that may not be able to meet financial criteria necessary to qualify for loans.

Appropriateness of Federal Assistance. Finally, there is the broader issue of whether government intervention in the broadband marketplace is appropriate or effective. Some argue that federal investment in broadband deployment could distort

---

[50] Critics of the FCC's broadband definition of 200 kbps have pointed to higher download and upload speeds typically offered in other countries. See Turner, Derek S., Free Press, *Broadband Reality Check II: The Truth Behind America's Digital Divide*, August 2006, pp 5-9. Available at [http://www.freepress.net/docs/bbrc2-final.pdf]. For further discussion of international broadband speeds and prices, including the differences between advertised and actual speeds, see Kende, Michael, Analysis Consulting Limited, *Survey of International Broadband Offerings*, October 4, 2006, 12 p. Available at [http://www.analysys.com/pdfs/BroadbandPerformanceSurvey.pdf].

private sector investment decisions in a dynamic and rapidly evolving marketplace,[51] and question whether other strategies — such as deregulation, tax incentives, or spectrum policy — may be more effective in fostering increased broadband deployment.

On the other hand, proponents of financial assistance counter that the available data show, in general, that the private sector will invest in areas where it expects the greatest return — areas of high population density and income. Without some governmental assistance in underserved areas, they argue, it is reasonable to conclude that broadband deployment will lag behind in many rural and low income areas.[52]

---

[51] See Leighton, Wayne A., *Broadband Deployment and the Digital Divide: A Primer*, a Cato Institute Policy Analysis, No. 410, August 7, 2001, 34 pp. Available at [http://www.cato.org/pubs/pas/pa410.pdf].

[52] See for example: Cooper, Mark, Consumer Federation of America and Consumers Union, *Expanding the Digital Divide & Falling Behind on Broadband*, October 2004, 33 pages. Available at [http://www.consumersunion.org/pub/ddnewbook.pdf].