Background and Issues for Congressional Oversight of ARRA Broadband Awards

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Summary

The American Recovery and Reinvestment Act (ARRA, P.L. 111-5) provided an unprecedented level of federal funding for broadband projects across the nation. These projects are intended to expand broadband availability and adoption in unserved and underserved areas, which in turn is believed to contribute to increased future economic development in those areas.

The ARRA provided nearly $7 billion for broadband grant and loan programs to be administered by two separate agencies: the National Telecommunications and Information Administration (NTIA) of the Department of Commerce (DOC) and the Rural Utilities Service (RUS) of the U.S. Department of Agriculture (USDA). With the ARRA broadband projects awarded and now moving forward, the focus in Congress has shifted to oversight. Projects are required to be substantially complete within two years, and fully complete within three years. NTIA and RUS are monitoring the awards to protect against waste, fraud, and abuse, and to ensure that each project reaches its promised milestones, goals, and outcomes. A key oversight role will be played by the Offices of Inspector General in the DOC and the USDA, which will monitor the projects for waste, fraud, and abuse, and will investigate specific complaints. Both NTIA and RUS have the authority to reclaim and recover awards (either for cause or in cases where awardees decide not to pursue the project) and return the deobligated funds to the U.S. Treasury.

The 112th Congress will play an important oversight role. A number of committees, including the House Committee on Energy and Commerce, the House Committee on Agriculture, the Senate Committee on Commerce, Science and Transportation, the Senate Committee on Agriculture, Nutrition, and Forestry, and the House and Senate Appropriations Committees are expected to monitor the ARRA broadband programs in NTIA and RUS.

To date, the House Subcommittee on Communications and Technology has held two oversight hearings on the ARRA broadband programs. On April 5, 2011, the Committee on Energy and Commerce approved a bill, H.R. 1343, which seeks to clarify and reinforce the requirement that deobligated ARRA broadband funding is returned to the U.S. Treasury. The legislation also sets forth requirements for how NTIA and RUS must respond to information and recommendations received from the Office of the Inspector General and the Comptroller General.

As the ARRA broadband projects move forward, the primary issue for the 112th Congress is how to ensure that the money is being spent wisely and will most effectively provide broadband service to areas of the nation that need it most, while at the same time minimizing any unwarranted disruption to private sector broadband deployment. Congress will also be assessing how the broadband stimulus projects fit into the overall goals of the National Broadband Plan.

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Background

Signed into law on February 17, 2009, the American Recovery and Reinvestment Act (ARRA, P.L. 111-5) provided $7.2 billion for broadband grant and loan programs at the National Telecommunications and Information Administration (NTIA) of the Department of Commerce (DOC) and the Rural Utilities Service (RUS) of the U.S. Department of Agriculture (USDA).[1]

The ARRA directed broadband grant and loan funding in the following way:

- $4.7 billion[2] to NTIA/DOC for a broadband grant program including broadband infrastructure grants, grants for expanding public computer capacity, and grants to encourage sustainable adoption of broadband service. The NTIA grant program is called the Broadband Technology Opportunity Program (BTOP).
- $2.5 billion to RUS/USDA for broadband grants, loans, and loan/grant combinations. The law stated that 75% of the area to be served by an eligible project must be a rural area. The RUS broadband grant and loan program is called the Broadband Initiatives Program (BIP).

Subsequently, P.L. 111-226, signed into law on August 10, 2010, rescinded $302 million of unobligated BTOP money from NTIA.

There were two rounds of ARRA broadband funding. Both NTIA and RUS evaluated and scored each application based on the proposed project's purpose, benefits, viability, budget, and sustainability. The ARRA mandated that all funding be obligated and awarded by September 30, 2010, and as of October 1, 2010, all ARRA broadband funds were awarded.

BTOP and BIP projects must be substantially completed[3] within two years and fully completed within three years. With the awards phase completed, NTIA and RUS are now focusing on monitoring and overseeing the progress of the funded projects as they move forward.

Where Is the Money Going?

As of October 1, 2010, all BTOP and BIP awards were announced. In total, NTIA and RUS announced awards for 553 projects,[4] constituting $7.465 billion in federal funding. This included 233 BTOP projects (totaling $3.936 billion) and 320 BIP projects (totaling $3.529 billion[5]). Of

[1] For more detailed information on the ARRA broadband programs, see CRS Report R40436, *Broadband Infrastructure Programs in the American Recovery and Reinvestment Act*, by Lennard G. Kruger, and CRS Report R41164, *Distribution of Broadband Stimulus Grants and Loans: Applications and Awards*, by Lennard G. Kruger.

[2] Of this total, the ARRA directed $350 million to NTIA for funding broadband data gathering and implementation of the State Broadband Data and Development Grant program. A small portion of this money was allocated to the Federal Communications Commission (FCC) for the purpose of preparing a National Broadband Plan.

[3] "Substantially completed" means that awardees have met 67% of their milestones and received 67% of their funding.

[4] This figure does not include BTOP's State Broadband Data & Development (SBDD) grants (56 awards totaling $293 million to each of the 50 states, territories, and the District of Columbia). SBDD grants fulfill the ARRA's requirement that NTIA prepare a national broadband map. SBDD grants also support state efforts to foster efficient and creative use of broadband.

[5] The amount awarded by BIP exceeds the amount appropriated by ARRA because BIP awards consist partially of (continued...)

the $7.465 billion total announced, $6.273 billion was grant funding, and $1.192 billion was loan funding.

Awards by State

Table A-1 in the Appendix shows a state-by-state breakdown of BTOP and BIP funding, while **Table A-2** shows per capita BTOP and BIP funding by state. Funding is associated with a state based on the service area covered by the project. For BTOP grants, amounts shown may include the NTIA-estimated per-state share of any awards that impact multiple states.

Awards by Entity Type

Table 1 and **Table 2** show BTOP and BIP awards by the type of entity that received the awards. Most BTOP awards went to government entities (states and localities) and non-profit organizations, while a quarter of awards went to for-profit entities. By contrast, the vast majority of BIP infrastructure awards (90%) went to for-profit corporations or cooperatives (primarily private telecommunications providers offering last mile rural broadband service).

Table 1. BTOP Awards by Grantee Entity Type

Entity Type	Number of Awards	% of Total Awards
Government	89	38%
Non-Profit	58	25%
For-Profit	55	24%
Higher Education	25	11%
Tribe	6	2%
Total	233	100%

Source: Department of Commerce, National Telecommunications and Information Administration, The Broadband Technology Opportunities Program: Expanding Broadband Access and Adoption in Communities Across America, Overview of Grant Awards, December 14, 2010, p. 3, available at http://www.ntia.doc.gov/reports/2010/NTIA_Report_on_BTOP_12142010.pdf.

(...continued)

loans, which are subsidized by a comparatively smaller amount of budget authority.

Table 2. BIP Infrastructure Awards by Entity Type

Entity Type	Number of Awards	Total Grant ($millions)	Total Loan ($millions)	Total Award ($millions)
For-Profit Corporation	202	1183	544	1727
Cooperative or Mutual	65	740	486	1226
Public Entity	13	209	123	332
Non-profit Corporation	8	67	20	87
Indian Tribe	9	34	17	51
Total	297	2233	1191	3425

Source: U.S. Department of Agriculture, Rural Utilities Service, *December 27, 2010 RUS Quarterly ARRA Report*, p. 5, available at http://www.rurdev.usda.gov/supportdocuments/BIPQuarterlyReport_12-10.pdf.

Awards by Project Type

Table 3 and **Table 4** provide breakdowns of BTOP and BIP awards by project type. Most of the BTOP infrastructure projects were for "middle mile"—that is, a broadband infrastructure project that does not predominantly provide broadband service to end users or to end-user devices, and may include interoffice transport, backhaul, Internet connectivity, or special access. In contrast, most BIP awards were for "last mile" projects, which is any infrastructure project the predominant purpose of which is to provide broadband access to end users or end-user devices.

Table 3. BTOP Awards by Project Type

	Number of Grants	Grant funding awarded	Percentage of Total Number of Grants	Percentage of Total Grant Funding Awarded
Infrastructure[a]	123	$3.46 billion	53%	88%
Public Computer Centers	66	$201 million	28%	5%
Sustainable Broadband Adoption	44	$250.7 million	19%	6%
Total	233	$3.94 billion	100%	100%

Source: Department of Commerce, National Telecommunications and Information Administration, The Broadband Technology Opportunities Program: Expanding Broadband Access and Adoption in Communities Across America, Overview of Grant Awards, December 14, 2010, p. 3, available at http://www.ntia.doc.gov/reports/2010/NTIA_Report_on_BTOP_12142010.pdf.

a. The Infrastructure projects include seven grants totaling approximately $382 million for projects to deploy public safety broadband networks.

Table 4. BIP Awards by Project Type

	Number of Projects	Grants ($millions)	Loans ($millions)	Total Awards ($millions)
Last Mile	285	2142	1110	3253
Middle Mile	12	91	82	173
Satellite	4	100	0	100
Technical Assistance	19	3	0	3
Total	320	2337	1191	3529

Source: U.S. Department of Agriculture, Broadband Initiatives Program, Awards Report, *Advancing Broadband: A Foundation for Strong Rural Communities*, January 2011, p. 2, available at http://www.rurdev.usda.gov/supportdocuments/RBBreport_V5ForWeb.pdf.

Awards by Technology

Deployment of broadband infrastructure can encompass a number of different types of technologies, including fiber, wireless, cable modem, DSL, satellite, and others. **Table 5** and **Table 6** show the types of technologies that are being deployed by funded BTOP and BIP infrastructure projects. Most BTOP projects (92%) are either fiber or fiber in tandem with wireless technology. This reflects the fact that most BTOP projects are middle mile.

Table 5. BTOP Infrastructure Awards by Type of Technology

Technology	Number of awarded projects	Percentage of total infrastructure projects
Fiber	89	72%
Fiber and Wireless	24	20%
Wireless	10	8%
Total	123	100%

Source: Department of Commerce, National Telecommunications and Information Administration, The Broadband Technology Opportunities Program: Expanding Broadband Access and Adoption in Communities Across America, Overview of Grant Awards, December 14, 2010, p. 3, available at http://www.ntia.doc.gov/reports/2010/NTIA_Report_on_BTOP_12142010.pdf.

Table 6. BIP Infrastructure Awards by Type of Technology

Technology	Number of awarded projects	Percentage of total infrastructure projects
Wireline	213	72%
Wireless	51	17%
Wireless/Wireline	33	11%
Total	297	100%

Source: U.S. Department of Agriculture, Broadband Initiatives Program, Awards Report, *Advancing Broadband: A Foundation for Strong Rural Communities*, January 2011, p. 4, available at http://www.rurdev.usda.gov/supportdocuments/RBBreport_V5ForWeb.pdf.

Budgetary Profile

Under the ARRA, a total of $4.4 billion was appropriated to NTIA for BTOP, and $2.5 billion was appropriated to RUS for BIP. The ARRA specified that all funds for BTOP and BIP were to be obligated by September 30, 2010.

According to Recovery.gov, the federal website that provides access to ARRA spending, NTIA has obligated $4.244 billion for BTOP projects (including funding for broadband mapping and pass-through money to the FCC for the National Broadband Plan), with the remainder being administrative costs or deobligated funding returned to the U.S. Treasury from returned projects. Because funded projects receive money incrementally as they reach prescribed milestones, the total outlay level (money actually paid out) is much lower, only $348 million as of April 8, 2011.

For BIP, the total obligation level is $3.5 billion, which represents $2.37 billion in budget authority. Administrative costs and deobligated funding returned to the U.S. Treasury compose the remainder of the $2.5 billion approved by the ARRA.[6] The obligation level is higher than the budget authority because BIP awards consist partially of loans, with loans being subsidized by a comparatively smaller amount of budget authority. According to Recovery.gov, the total outlay level for BIP is $63 million as of April 8, 2011.

What Is the Status of Oversight Activities?

With the awards phase completed, the focus now shifts to oversight and monitoring of funded projects. Projects are required to be substantially complete (67% of milestones reached, 67% of funding received) within two years, and fully complete within three years. For each project, federal funds are drawn down incrementally as various milestones are reached (for example, meeting environmental and historic preservation requirements, resolving rights of way issues, arriving at various phases of construction, etc.). Recipients and subrecipients are monitored by agency staff to ensure that project goals, performance, timelines, milestones, budgets, and other requirements are being met. In cases where NTIA or RUS detects waste, fraud, or abuse, or where it is determined that the awardee is not fulfilling the terms of the award conditions, the agencies

[6] USDA Rural Utilities Service, *Broadband Initiatives Program, Quarterly Program Status Report*, December 27, 2010, p. 2, available at http://www.rurdev.usda.gov/supportdocuments/BIPQuarterlyReport_12-10.pdf.

have the authority to take back the funding (deobligate) and return the money to the U.S. Treasury.

Reporting Requirements

The ARRA directed that all award recipients file quarterly and annual reports with the corresponding funding agency. Reports provide detailed financial and project deployment information. NTIA is mandated by ARRA to report every 90 days on the status of BTOP to the House and Senate Appropriations Committees, the House Committee on Energy and Commerce, and the Senate Committee on Commerce, Science and Transportation.[7] The ARRA required the Secretary of Agriculture to submit a report to the House and Senate Appropriations Committees on planned spending and actual obligations, describing the use of ARRA funds for the RUS broadband programs, not later than 90 days after enactment, and quarterly thereafter until all funds are obligated.[8]

Transparency

As directed by the ARRA, NTIA maintains a publically available website which provides, for each BTOP grant: detailed project descriptions, all quarterly progress reports from the recipient to NTIA, all official award documentation (including the project application), and environmental documents.[9] By contrast, RUS provides only brief (single paragraph) project summaries for each award.[10] The ARRA did not contain any specific transparency mandates for the BIP/RUS program.

Inspector General Reports

To date, the Office of Inspector General (OIG) at the Department of Commerce has issued two reports on BTOP.[11] The DOC OIG is currently performing an audit of NTIA's effectiveness in monitoring BTOP awards, and is reviewing a complaint filed regarding Motorola's BayWeb project (see below, section on problems with particular awards). Future DOC OIG activities include:

- assessing NTIA's oversight of the Booz Allen Hamilton contract that supported BTOP implementation;
- identifying high risk projects to determine whether they are on schedule, on budget, and will meet program objectives;
- performing specific reviews in response to credible complaints; and

[7] BTOP quarterly reports are available at http://www2.ntia.doc.gov/BTOP-Reports. The most recent report was released on February 28, 2011. The next report is due to be released no later than mid-June 2011.

[8] BIP quarterly reports are available at http://www.rurdev.usda.gov/UTP_BIPResources-Docs.html#congress. The most recent report was released on December 27, 2010.

[9] All of this information is available at http://www2.ntia.doc.gov/awards.

[10] Available at http://www.rurdev.usda.gov/supportdocuments/Round1and2%20Awardees.pdf.

[11] Available at http://www.oig.doc.gov/Pages/Audits-Evaluations.aspx?YearStart=01/01/2010&YearEnd=12/31/2010.

- reviewing the existence and availability of recipient matching funds.[12]

According to DOC Inspector General Todd Zinser, the existence and availability of matching funds is a primary concern. BTOP grants have a 20% matching fund requirement, which comes to over $1.4 billion. For in-kind (non-cash) contributions towards meeting the matching fund requirement, the OIG is particularly concerned over the proper valuation of equipment and services.[13]

Until 2011, the USDA OIG had not reviewed the BIP program, instead leaving that review to the Government Accountability Office (GAO).[14] OIG has previously reviewed (in 2005 and 2009) the existing RUS Rural Broadband Access Loan and Loan Guarantee Program, and made a number of criticisms, primarily that too many loans were made in areas with preexisting broadband service and in areas that were not sufficiently rural. According to Phyllis Fong, the USDA Inspector General, the OIG will be again looking at these issues and likely evaluate current RUS broadband program operations.[15]

Program Evaluation

There is another question separate from how effectively the broadband awards are being managed by the agencies and implemented by the recipients: how effective overall are the ARRA broadband programs in meeting the goals of providing broadband service to unserved and underserved areas, increasing broadband adoption levels, and generally contributing to the nation's economic development? Both NTIA and RUS have released estimates of jobs directly created, miles of broadband network deployed, number of homes connected, and other measures.[16]

Evaluating the overall performance and impact of broadband programs is complex. Not only must the validity of the agency estimates be assessed; it is also necessary to take into account broadband deployment that might have occurred without federal funding. Additionally, calculating the overall economic impact of broadband deployment on a region must account for a variety of outside factors that may not necessarily be associated with the deployment of broadband.

[12] Testimony of the Honorable Todd J. Zinser, Inspector General, U.S. Department of Commerce, before the House Subcommittee on Communications and Technology, Committee on Energy and Commerce, February 10, 2011, p. 10-11, available at http://republicans.energycommerce.house.gov/Media/file/Hearings/Telecom/021011_ARRA_Broadband/Zinser.pdf.

[13] Ibid, p. 11-12.

[14] See Statement of Mark L. Goldstein, Director, Physical Infrastructure Issues, Government Accountability Office, *Broadband Programs Awards and Risks to Oversight*, before the House Subcommittee on Communications and Technology, Committee on Energy and Commerce, February 10, 2011, available at http://republicans.energycommerce.house.gov/Media/file/Hearings/Telecom/021011_ARRA_Broadband/Goldstein.pdf

[15] Testimony of Phyllis K. Fong, Inspector General, U.S. Department of Agriculture, before the House Subcommittee on Communications and Technology, Committee on Energy and Commerce, February 10, 2011, p. 2, available at http://republicans.energycommerce.house.gov/Media/file/Hearings/Telecom/021011_ARRA_Broadband/Fong.pdf.

[16] See *The Broadband Technology Opportunities Program: Expanding Broadband Access and Adoption in Communities Across America, Overview of Grant Awards*, p. 19, and *Advancing Broadband: A Foundation for Strong Rural Communities*, p. 3-4.

On September 20, 2010, NTIA awarded a $5 million, four-year contract to Potomac, MD-based ASR Analytics to measure the impact of BTOP grants on broadband availability and adoption, and on economic and social conditions in areas served by grantees.[17] Funding for the award was obtained through the Department of Interior's National Business Center. According to NTIA, the study "will result in reports and case studies to help inform the government on the economic impact of BTOP grant funding, as well as identify factors influencing performance and impact that can be used to inform future private and/or public sector investments."[18]

Notwithstanding NTIA and RUS efforts to assess the economic impacts of their programs, it is likely that policymakers will seek independent evaluations that assess the long-term effects of ARRA broadband programs on jobs, economic growth, and prosperity.

Problems with Particular Awards

With over 550 broadband awards made, it is to be expected that there will be instances where recipients may decide to decline or return the award, or where formal complaints may be filed with the DOC or USDA Inspectors General. The following includes specific instances that have been publically reported:

- A $50 million BTOP grant to construct the San Francisco Bay Area Wireless Enhanced Broadband (BayWEB) project is the subject of an inquiry by the Department of Commerce Office of the Inspector General. The IG will examine the procedures followed by NTIA in reviewing an initial complaint by the County of Santa Clara and City of San Jose, and will review the valuation of equipment provided as matching share by the grantee, in addition to the equipment being purchased from the grantee as part of the project.[19]
- A complaint was filed with RUS calling for an investigation and suspension of a $66.4 million award ($56.4 million loan, $9.9 million grant) to Lake County Minnesota for construction of the Lake County Fiber Network. The complaint, filed by Mediacom, alleges that the project lacks the financial viability to repay the loan, and that Lake County lacks the legal authority to build the network.[20]
- Leech Lake Reservation Business Committee in Minnesota did not accept its Public Computer Center award for $1.7 million.[21]
- The state of Wisconsin returned a $23 million BTOP grant to expand the BadgerNet Converged Network.[22]

[17] *Communications Daily*, "BIP Disbursements Totaled $3.5 Billion: Metrics Concerns Expressed," October 21, 2010.

[18] BTOP Quarterly Program Status Report, November 2010, p.7, available at http://ntia.doc.gov/recovery/BTOP/BTOP_QuarterlyReport_11172010.pdf.

[19] Memorandum from Todd Zinser, Department of Commerce Office of the Inspector General to Lawrence Strickling, Assistant Secretary for Communications and Information, NTIA, Notification of Inquiry Related to Broadband Technology Opportunities Program Award Made to Motorola, December 17, 2010, reprinted in StimulatingBroadband.com.

[20] *Communications Daily*, "Minnesota Stimulus Project under Attack," March 17, 2011.

[21] NTIA, *BTOP Quarterly Program Status Report*, February 2011, p. 1, available at http://www.ntia.doc.gov/recovery/BTOP/BTOP_QuarterlyReport_Feb_2011.pdf.

[22] Rick Barrett, *Milwaukee Wisconsin Journal Sentinel*, "State Giving Back Stimulus Funds Intended for Broadband Expansion," February 15, 2011, available at http://www.jsonline.com/news/statepolitics/116208059.html.

- Education Networks of America returned its $14.3 million BTOP grant to construct a fiber network to connect community anchor institutions in Indiana.[23]
- Lenowisco Planning District, VA, has returned a $20.2 million award to RUS, and RUS has rescinded the money.[24]

Issues for Congress

The 112th Congress is expected to play an important oversight role. A number of committees, including the House Committee on Energy and Commerce, the House Committee on Agriculture, the Senate Committee on Commerce, Science and Transportation, the Senate Committee on Agriculture, Nutrition, and Forestry, and the House and Senate Appropriations Committees are expected to continue to monitor the ARRA broadband programs in NTIA and RUS.

Congressional Oversight

The House Subcommittee on Communications and Technology has held two hearings on BTOP and BIP, both focusing on program oversight and draft legislation to clarify and reinforce the requirement that deobligated funding (i.e., funding that is returned by awardees or reclaimed by the agencies) is returned to the U.S. Treasury. The first hearing, held on February 10, 2011, heard testimony from the Inspectors General of the Departments of Commerce and Agriculture. The second hearing, held on April 1, 2011, heard testimony from the Administrators of NTIA and RUS.

Referring to the fact that a small fraction (5%) of BTOP and BIP obligated funds have as yet been spent (as outlays), that the OIG of both Commerce and Agriculture plan on investigating complaints about individual awards as they arise (or have already arisen), and that 13 awards (totaling $77 million) have already been returned by awardees, Subcommittee Chairman Walden cited the need for the legislation, stating that "it is logical to expect that issues of fraud, waste, and abuse will start popping up now that the money is beginning to flow."[25] On April 5, 2011, the full Committee approved the legislation, introduced by Representative Bass as H.R. 1343, which contains the following provisions:

- Directs NTIA and RUS to take prompt and appropriate action to terminate for cause any BTOP or BIP award; cause may include an insufficient level of performance, wasteful spending, or fraudulent spending;
- Whether reclaimed by the agency for cause, or returned voluntarily by the awardee, upon terminating an award NTIA or RUS is directed to immediately

[23] House Committee on Energy and Commerce, Internal Memorandum, March 30, 2011, available at http://republicans.energycommerce.house.gov/Media/file/Hearings/Telecom/040111/CTmemo.pdf.

[24] Letter from Jonathan Adelstein, Administrator, RUS to Lenowisco Planning District Commission, February 25, 2011, reprinted in StimulatingBroadband.com.

[25] Opening Statement of Chairman Greg Walden, Communications and Technology Subcommittee Hearing on H.R. __ , a Bill to Clarify NTIA and RUS Authority to Return Reclaimed Stimulus Funds to the U.S. Treasury, April 1, 2011, available at http://republicans.energycommerce.house.gov/Media/file/Hearings/Telecom/040111/WaldenHEARINGOpening.pdf.

deobligate an amount equivalent to the award, less allowable costs, and return the money to the U.S. Treasury within 30 days;

- If NTIA or RUS receives information from the OIG of the Department of Commerce or the U.S. Department of Agriculture, or the Comptroller General of the United States, pertaining to material noncompliance or improper usage of award funds, the agencies shall decide within 30 days whether to terminate the award unless the official providing the information recommends that NTIA or RUS not make such a determination;
- When NTIA or RUS consider terminating an award, they shall, within three days, notify Congressional Committees of their determination and any action taken as a result of the determination, or why no action was necessary; in cases where a determination is made not to terminate the award, the notification can be made on a confidential basis.

While RUS and NTIA (as well as Minority Members on the Energy and Committee) support H.R. 1343, they assert that existing statute already requires the agencies to return unused funds to the U.S. Treasury[26] and to take steps against waste, fraud, and abuse. The Energy and Commerce Committee majority argues that the legislation adds another level of required reporting, establishes formal timelines for agencies to respond to IG reports, and removes all ambiguity related to the requirement that agencies return unused funds to the U.S. Treasury. H.R. 1343 was also referred to the House Committee on Agriculture.

Awards in Project Areas with Existing Broadband Service

One of the ongoing concerns expressed by some Members of Congress is the extent to which grants and loans have been awarded to projects serving areas that may already have existing providers offering broadband service.[27] While the ARRA statute does not explicitly address the issue of existing providers, the law does direct RUS and NTIA to favor projects proposing to serve areas that have limited or no broadband service. For example, the ARRA specified that at least 75% of the area to be served by a RUS BIP project shall be in a rural area "without sufficient access to high-speed broadband service to facilitate economic development, as determined by the Secretary of Agriculture," and that priority shall be given to "projects that provide service to the highest proportion of rural residents that do not have access to broadband service."

Regarding NTIA's BTOP program, the ARRA stated that the purpose of the program is to "provide access to broadband service to consumers residing in unserved areas of the United States" and to "provide improved access to broadband service to consumers residing in underserved areas of the United States." At the same time, the ARRA directed NTIA to give higher consideration to projects that would increase affordability, subscribership, and broadband speeds to the greatest population of users in the area.

[26] According to NTIA Administrator Lawrence Strickling at the April 1 hearing, "NTIA's authority to make new BTOP grant awards expired on September 30, 2010, and, to the extent there were any unobligated BTOP funds as of September 30, those funds expired and became unavailable at that time. Moreover, should any funds be deobligated in the future, the Pay It Back Act [Title XIII of the Dodd Frank Wall Street Reform and Consumer Protection Act, P.L. 111-203], enacted in July 2010, requires NTIA to return withdrawn or recaptured BTOP or SBDD grant funds to the Treasury promptly and to return any remaining unobligated balances to the Treasury as of January 1, 2013.

[27] Grant Gross, "US Lawmakers Question Use of Broadband Stimulus Funds," *PC World*, March 4, 2010.

Thus, RUS and NTIA had some degree of flexibility in how to implement the grant and loan programs, and how to define project eligibility with respect to the level of existing broadband service in proposed project areas. In the first round Notice of Funds Availability (NOFA),[28] both NTIA and RUS used the same definition of unserved and underserved areas. Eligible "unserved areas" were defined as areas where at least 90% of households lacked access to terrestrial broadband service. Eligible "underserved areas" for last mile projects were defined as areas in which at least one of the following factors was met:

- no more than 50% of the households in the proposed funded service area have access to facilities-based, terrestrial broadband service at greater than the minimum broadband transmission speed;
- no broadband service provider advertises broadband transmission speeds of at least 3 megabits per second (Mbps) downstream; or
- the rate of broadband subscribership for the proposed funded service area is 40% of households or less.

Additionally, a proposed funded service area would qualify as underserved for middle mile projects if one interconnection point terminated in a proposed funded service area that qualified as unserved or underserved for last mile projects. For first round BIP projects only, an additional project category called "Remote Area" was defined as an unserved, rural area 50 miles from the limits of a non-rural area.

In the second round NOFAs (separate NOFAs were issued by RUS[29] and NTIA[30] respectively), the characterization of eligible project areas was altered. BIP projects were required to cover an area that was at least 75% rural and that did not have high speed access broadband service at the rate of 5 Mbps (upstream and downstream combined) in at least 50% of its area. Regarding BTOP projects (which in the second round were exclusively oriented towards large middle mile projects called Comprehensive Community Infrastructure or CCI), virtually *all* proposed service areas were considered eligible, with the understanding that during the application evaluation, factors such as unserved and underserved areas, remoteness, and delivered speed would be considered.

In order to help assess the level of existing broadband service in proposed BIP and BTOP projects, RUS and NTIA established a process whereby existing providers were given 30 days to file a Public Notice Response (PNR) for each broadband infrastructure application received by the agencies. In the PNR, existing providers had the opportunity to indicate if they were already providing broadband service in each and any of the service areas within the proposed project area, and if they believed that the proposed project area did not meet the threshold of being unserved or underserved. In round one, based on their assessment of the public notice response from the existing service provider, the agencies could either reclassify the application from "unserved" to "underserved," reject the application, or continue to consider the application as it was submitted. In round two, RUS stated that existing service providers were not required to provide a PNR, but

[28] Department of Agriculture and Department of Commerce, "Broadband Initiatives Program; Broadband Technology Opportunities Program; Notice," 74 *Federal Register* 33104-33134, July 9, 2009.

[29] Department of Agriculture, Rural Utilities Service, "Broadband Initiatives Program," 75 *Federal Register* 3820-3837, January 22, 2010.

[30] Department of Commerce, National Telecommunications and Information Administration, "Broadband Technology Opportunities Program," 75 *Federal Register* 3792-3820, January 22, 2010.

they must do so in order for their existing services to be considered when determining the eligibility of the proposed funded service areas identified in the associated BIP application.

While the presence of a PNR likely indicates that an existing service provider is offering some level of broadband service somewhere within the proposed project area, it does not necessarily mean that the area is not unserved or underserved, or that the existing service provider is providing adequate broadband service in terms of such factors as coverage, affordability, or speed. On the other hand, the lack of a public notice response does not necessarily indicate the absence of an existing service provider within the proposed service area; rather an existing service provider might simply have declined to file a public notice response within the 30-day period.

Based on the PNR data provided in the BroadbandUSA Applications Database and the *Round Two Application Directory*,[31] about two-thirds of awarded BIP projects already had some level of existing broadband service, and three-quarters of the awarded BIP money went to projects with at least one existing provider somewhere within the project area. Many of the awarded projects received more than one PNR.

In Round One, BTOP and BIP used the same methodology for collecting PNRs. Of the 48 BTOP applications that received awards in Round One, 5 had zero PNRs submitted. Thus, 90% of awarded BTOP infrastructure projects received one or more PNRs in Round One. The high percentage is not surprising, given that most BTOP infrastructure projects are middle mile projects (85% of total BTOP infrastructure projects) which cover a significantly larger project area than last mile projects.

In Round Two, NTIA significantly changed the methodology for collecting PNRs. NTIA posted a list of 69,880 Census block groups or tracts that each Round Two Comprehensive Community Infrastructure (CCI) applicant proposed to serve through its project. The posting of this information initiated a window for existing broadband service providers to submit information about the broadband services they currently offer in their respective service territories by Census block group or tract. Census block group or tract numbers are not listed according to specific applications, and NTIA stated that they would connect challenges from service providers to the proposed service areas of relevant Round Two CCI applications. In total, 391 existing broadband providers filed PNRs in Round Two.[32]

The presence of an existing broadband provider in a project's proposed service area was one of many factors RUS and NTIA considered when deciding whether to fund an application. In the case of some "unserved" areas, it was possible that there could be at least one existing provider present, and in the case of "underserved areas" it was a certainty that one or more existing broadband providers would be present in the proposed service area. Thus, PNRs were one, but by no means the only, tool used by RUS and NTIA to assess the level of existing broadband service in proposed project areas. Agencies also used available broadband deployment data and analysis gathered by the FCC, the states, and others.[33] Where feasible, RUS also relied on regional USDA

[31] Available at http://broadbandusa.sc.egov.usda.gov/.

[32] Available at http://www2.ntia.doc.gov/archives#responses.

[33] The National Broadband Map—which is based on data gathered by the State Broadband Data and Development Grant Program—was released on February 17, 2011. Thus, the map and data were not available until after the BTOP and BIP awards were determined by NTIA and RUS.

rural development staff to assess the adequacy of broadband service in proposed project areas. Finally, other factors were considered when assessing the existing broadband service in a proposed project area—factors such as affordability, quality of service, available download and upload speeds, and adoption rates.

The issue of providing federal funding to areas and communities with existing providers is controversial, and has been previously raised with respect to the RUS Rural Broadband Access Loan and Loan Guarantee Program.[34] Broadband awards to areas with preexisting service—that is, areas where existing companies already provide some level of broadband—have sparked controversy because award recipients might compete to some extent with other companies already providing broadband service. 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, providing grants and loans for projects serving communities with preexisting broadband service 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 among broadband providers—competition which can potentially drive down prices while improving service and performance. It is therefore appropriate, others have argued, that rural areas also receive the benefits of competition, which in some areas may not be possible without federal financial assistance. It is also argued that it may not be economically feasible for applicants to serve sparsely populated unserved communities unless they are permitted to also serve more lucrative areas which may already have existing providers. Additionally, it is argued that middle mile broadband facilities, which are primarily being constructed under BTOP, can in some cases serve to assist existing providers to more economically serving unserved communities.

Funding for Oversight and Program Administration

In addition to issuing BTOP and BIP awards, both NTIA and RUS must oversee and administer those awarded projects as they progress towards completion. In FY2009 and FY2010, NTIA administration of the BTOP program was funded by the ARRA, which allocated not more than 3% of BTOP funding for administrative costs. With that funding expiring on September 30, 2010, NTIA sought additional administrative funding in the appropriations process. NTIA argued that additional appropriations were essential to enable oversight and management of the grants that had been awarded. In its FY2011 budget proposal, the Administration requested $23.7 million for NTIA to continue operating its grant management office. The Continuing Appropriations and Surface Transportation Extension Act, 2011 (P.L. 111-322), which funded the federal government through March 4, 2011, included a $20 million addition to the NTIA Salaries and Expenses account which could be used for BTOP oversight. According to the February 2011 BTOP Quarterly Report, "this authorizes a level of spending by NTIA that is sufficient to administer and oversee BTOP projects through the end of Fiscal Year 2011."[35] The Department of Defense and Continuing Appropriations Act, 2011 (P.L. 112-10) included the $20 million addition for the rest

[34] See CRS Report RL33816, *Broadband Loan and Grant Programs in the USDA's Rural Utilities Service*, by Lennard G. Kruger

[35] *BTOP Quarterly Program Status Report*, p. 5.

of FY2011. In its budget request for FY2012, NTIA is requesting $32 million for BTOP administration and oversight.

In contrast to NTIA, RUS has not requested additional appropriations to manage the BIP program. According to GAO, RUS used Recovery Act funds to fully fund a contract extension with ICF International to provide BIP program support through 2014. Additionally, RUS extended the term of employment through FY2011 for 25 temporary employees assisting with BIP project oversight. GAO cautions, however, that "should there be a reduction in RUS's fiscal year 2011 budget, the agency will need to assess its impacts and the temporary employment of 25 staff members."[36]

Stimulus Awards and the National Broadband Plan

As mandated by the ARRA, the National Broadband Plan (NBP) was released by the FCC on March 17, 2010. The NBP set a broadband availability goal that "every American should have affordable access to robust broadband service, and the means and skills to subscribe if they so choose," and cited a "broadband availability gap" of 14 million people in the United States living in 7 million housing units that do not have access to terrestrial broadband infrastructure capable of download speeds of at least 4 Mbps.[37] The FCC has estimated that $24 billion in additional funding would be necessary to fill what it refers to as the "broadband availability gap."[38]

As provided for in the ARRA, BTOP and BIP are one-time only programs, and are but one component in any strategy to reach ubiquitous nationwide broadband availability. According to the National Broadband Plan:

> BTOP and BIP alone will not be sufficient to close the broadband availability gap. Other government support is required to complete the task of connecting the nation to ensure that broadband reaches the highest-cost areas of the country. Closing the broadband availability gap and connecting the nation will require a substantial commitment by states and the federal government alike. This commitment must include initial support to cover the capital costs of building new networks in areas that are unserved today, as well as ongoing support for the operation of newly built networks in areas where revenues will be insufficient to cover ongoing costs.[39]

The other major federal vehicle for funding telecommunications development in rural areas is the Universal Service Fund (USF).[40] 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.

[36] Statement of Mark L. Goldstein, Government Accountability Office, Testimony before the House Subcommittee on Communications and Technology, Committee on Energy and Commerce, "Broadband Programs Awards and Risks to Oversight," February 10, 2011, p. 6-7, available at http://republicans.energycommerce.house.gov/Media/file/Hearings/Telecom/021011_ARRA_Broadband/Goldstein.pdf.

[37] *Connecting America: The National Broadband Plan*, p. 20.

[38] Ibid., p. 136.

[39] Ibid., p. 139.

[40] 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.

The National Broadband Plan has recommended that the Universal Service Fund transition from voice service to broadband service. The FCC is currently considering a series of USF reforms. In the 112th Congress, legislation to reform universal service—which could have a significant impact on the amount of financial assistance available for broadband deployment in rural and underserved areas—is expected to be considered. For more information on universal service, see CRS Report RL33979, *Universal Service Fund: Background and Options for Reform*, by Angele A. Gilroy.

Another important component of reaching National Broadband Plan goals is encouraging the continuing and accelerating rollout of wireless broadband. In recent years wireless broadband has grown faster than any other broadband technology deployment—according to the FCC, the number of mobile wireless broadband connections has almost tripled since 2008, and as of June 30, 2010, accounted for 46% of all broadband connections and 42% of residential broadband connections.[41]

In his 2011 State of the Union Address, President Obama set a goal of enabling entities to provide wireless broadband to at least 98% of all Americans within five years. Among the ways wireless broadband could be further deployed to unserved or underserved areas is through broadband funding programs (such as universal service) and by making additional spectrum available to providers.[42]

Finally, there exist other federal programs that provide financial assistance for various aspects of telecommunications and broadband development.[43] These include the Rural Broadband Access Loan and Loan Guarantee Program and the Community Connect Broadband Grants at RUS, which prior to enactment of the ARRA, were the only federal programs exclusively dedicated to deploying broadband infrastructure.[44] Both of these programs are ongoing (unlike the ARRA broadband programs), but on a smaller scale than the BIP program. The Rural Broadband Access Loan and Loan Guarantee Program (also referred to as the Farm Bill Broadband Loan Program) was held in abeyance during the BIP application and award period. Pursuant to the 2008 Farm Bill, interim rules for the loan program were published and a Notice of Solicitation of Applications was published in the *Federal Register* on March 14, 2011. Compared to BIP, the Farm Bill Broadband Loan Program offers less money (expected to be between $300 million and $400 million in FY2011) and awards only loans, while BIP offered both grants and loans. The Community Connect Broadband Grants is a markedly smaller program than BIP ($13.4 million in FY2011) and is available only for projects serving single communities of under 20,000 population that have no existing broadband transmission service.

[41] In this case, broadband connection is defined as over 200 kbps in one direction. FCC, *Internet Access Services, Status as of June 30, 2010*, March 2011, p. 23-24, available at http://www.fcc.gov/Daily_Releases/Daily_Business/2011/db0321/DOC-305296A1.pdf.

[42] See CRS Report R40674, *Spectrum Policy in the Age of Broadband: Issues for Congress* , by Linda K. Moore.

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

[44] See CRS Report RL33816, *Broadband Loan and Grant Programs in the USDA's Rural Utilities Service*, by Lennard G. Kruger.

Appendix.

Table A-1. State-by-State Distribution of All BTOP, SBDD, and BIP Awards

	Number of Awards	Total Amount of Grants and Loans ($millions)
California	29	444.3
Kentucky	20	315.0
Texas	32	312.8
North Carolina	18	278.6
Oklahoma	27	277.6
Missouri	20	263.5
Michigan	18	245.7
Washington	17	244.3
Minnesota	29	242.3
Illinois	18	239.6
Tennessee	16	233.9
Pennsylvania	13	215.9
National awards[a]	7	206.0
Ohio	20	202.4
Louisiana	10	189.8
New Mexico	17	184.5
West Virginia	10	184.3
Vermont	7	174.0
Wisconsin	23	171.4
Georgia	17	170.7
Iowa	20	166.9
New York	20	160.7
Virginia	16	154.5
Colorado	13	146.5
Kansas	14	144.9
Alabama	15	142.5
Alaska	9	138.8
Montana	8	133.4
Arkansas	8	128.5
Mississippi	10	127.3
Florida	13	126.5

	Number of Awards	Total Amount of Grants and Loans ($millions)
Maryland	6	125.0
Arizona	14	113.0
Connecticut	2	97.6
North Dakota	11	96.1
Massachusetts	9	94.5
American Samoa	2	92.9
Virgin Islands	4	67.5
Nevada	12	66.7
Indiana	10	63.5
New Hampshire	7	54.5
South Dakota	8	53.4
Oregon	15	52.7
New Jersey	3	49.7
Utah	9	48.9
South Carolina	7	45.4
Maine	7	42.6
Puerto Rico	3	41.1
Hawaii	5	40.4
Nebraska	6	31.6
Idaho	13	30.5
District of Columbia	4	27.2
Rhode Island	3	24.9
Wyoming	3	14.8
Guam	2	7.5
Delaware	2	5.0
Northern Mariana Islands	2	3.4

Source: NTIA, *The Broadband Technology Opportunities Program: Expanding Broadband Access and Adoption in Communities Across America, Overview of Grant Awards*, December 2010, available at http://www.ntia.doc.gov/reports/2010/NTIA_Report_on_BTOP_12142010.pdf,

Notes: Amounts shown may include the NTIA-estimated per-State share of any awards that impact multiple states. For BIP grants and loans, multistate awards (except for the satellite grants) have been split and categorized as separate state-specific awards by RUS. BTOP totals include the $293 million in State Broadband Data & Development (SBDD) grants distributed to each of the 50 states, five territories, and the District of Columbia.

a. Four BIP satellite projects, two BTOP Sustainable Broadband Adoption projects, and one BTOP Comprehensive Community Infrastructure project.

Table A-2. State-by-State Per Capita Distribution of BTOP and BIP Awards

Principal state or project area	Grants + Loans Announced ($millions)	Population (July 1, 2009)	Federal funding per capita ($)
Vermont	174.0	621,760	279.85
Alaska	138.8	698,473	198.72
North Dakota	96.1	646,844	148.57
Montana	133.4	974,989	136.82
West Virginia	184.3	1,819,777	101.28
New Mexico	184.5	2,009,671	91.81
Oklahoma	277.6	3,687,050	75.29
Kentucky	315.0	4,314,113	73.02
South Dakota	53.4	812,383	65.73
Iowa	166.9	3,007,856	55.49
Kansas	144.9	2,818,747	51.41
Minnesota	242.3	5,266,214	46.01
District of Columbia	27.2	599,657	45.36
Arkansas	128.5	2,889,450	44.47
Missouri	263.5	5,987,580	44.01
Mississippi	127.3	2,951,996	43.12
Louisiana	189.8	4,492,076	42.25
New Hampshire	54.5	1,324,575	41.15
Tennessee	233.9	6,296,254	37.15
Washington	244.3	6,664,195	36.66
Maine	42.6	1,318,301	32.31
Hawaii	40.4	1,295,178	31.19
Wisconsin	171.4	5,654,774	30.31
Alabama	142.5	4,708,708	30.26
North Carolina	278.6	9,380,884	29.70
Colorado	146.5	5,024,748	29.16
Connecticut	97.6	3,518,288	27.74
Wyoming	14.8	544,270	27.19
Nevada	66.7	2,643,085	25.24
Michigan	245.7	9,969,727	24.64
Rhode Island	24.9	1,053,209	23.64
Maryland	125.0	5,699,478	21.93
Idaho	30.5	1,545,801	19.73
Virginia	154.5	7,882,590	19.60
Illinois	239.6	12,910,409	18.56

Principal state or project area	Grants + Loans Announced ($millions)	Population (July 1, 2009)	Federal funding per capita ($)
Nebraska	31.6	1,796,619	17.59
Utah	48.9	2,784,572	17.56
Ohio	202.4	11,542,645	17.53
Georgia	170.7	9,829,211	17.37
Arizona	113.0	6,595,778	17.13
Pennsylvania	215.9	12,604,767	17.13
Massachusetts	94.5	6,593,587	14.33
Oregon	52.7	3,825,657	13.78
Texas	312.8	24,782,302	12.62
California	444.3	36,961,664	12.02
South Carolina	45.4	4,561,242	9.95
Indiana	63.5	6,423,113	9.89
New York	160.7	19,541,453	8.22
Florida	126.5	18,537,969	6.82
New Jersey	49.7	8,707,739	5.71
Delaware	5.0	885,122	5.65

Source: Compiled and calculated by CRS from *The Broadband Technology Opportunities Program: Expanding Broadband Access and Adoption in Communities Across America, Overview of Grant Awards.* Population data is from National and State Population Estimates, U.S. Census Bureau.

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