

Broadband Infrastructure Programs in the American Recovery and Reinvestment Act

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Summary

The American Recovery and Reinvestment Act (ARRA, P.L. 111-5) provides \$7.2 billion primarily for broadband grant 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). Of the \$7.2 billion total, the ARRA provides \$4.7 billion to establish a Broadband Technology Opportunities Program (BTOP) at NTIA, and \$2.5 billion as additional funding for broadband grant, loan, and loan guarantee programs at RUS. Broadband grants funded by the ARRA are competitive and applicants must apply directly to NTIA and RUS. The NTIA appropriation also includes \$350 million for a national broadband inventory map, funding for the Broadband Data Improvement Act (P.L. 110-385), and funding to be transferred to the Federal Communications Commission (FCC) to develop a national broadband plan.

The unprecedented scale and scope of the ARRA broadband programs, coupled with the short time frame for awarding grants, presents daunting challenges with respect to program implementation as well as Congressional oversight. Congress is closely monitoring how equitably and effectively broadband grants are allocated among states and the various stakeholders, and to what extent the programs fulfill the goals of short term job creation and the longer term economic benefits anticipated from improved broadband availability, access, and adoption. A continuing issue is how to strike a balance between providing federal assistance for unserved and underserved areas where the private sector may not be providing acceptable levels of broadband service, while at the same time minimizing any deleterious effects that government intervention in the marketplace may have on competition and private sector investment.

Implementation decisions made by NTIA and RUS could have a significant impact on how the program is shaped and targeted, and the extent to which the program meets the goals and purposes set forth by the ARRA. Some implementation issues expected to be addressed include defining "underserved" and "unserved" areas with respect to broadband service, defining "nondiscrimination and network interconnection obligations," defining "broadband," the role of the states, coordination between federal agencies, broadband data collection, and evaluation and transparency.

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Introduction

Broadband infrastructure refers to networks of deployed telecommunications equipment and technologies necessary to provide high-speed Internet access and other advanced telecommunications services for private homes, businesses, commercial establishments, schools, and public institutions. In the United States, broadband infrastructure is constructed, operated, and maintained primarily by the private sector, including telephone, cable, satellite, wireless, and other information technology companies. Currently deployed broadband technologies include cable modem, DSL (copper wire), wireless systems (mobile and fixed), fiber, and satellite. Although broadband is deployed by private sector providers, federal and state regulation of the telecommunications industry as well as government financial assistance programs can have a significant impact on private sector decisions to invest in and deploy broadband infrastructure, particularly in underserved and unserved areas of the nation.

The American Recovery and Reinvestment Act (ARRA, P.L. 111-5) provides \$7.2 billion primarily for broadband grant 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). Of the \$7.2 billion total, the ARRA provides \$4.7 billion to establish a Broadband Technology Opportunities Program (BTOP) at NTIA, and \$2.5 billion for broadband grant, loan, and loan guarantee programs at RUS. The ARRA also directs the Federal Communications Commission (FCC) to develop a national broadband strategy. In comparison with previously existing federal broadband programs in the United States, ¹ the broadband grant programs established and funded by P.L. 111-5 are unprecedented in scale and scope.

The impetus behind broadband provisions in the ARRA was two-fold: in the short term, to create jobs through the construction and deployment of broadband infrastructure, and in the long term, to address concerns over economic and societal impacts of inadequate broadband availability, access, and adoption, particularly in rural and lower-income areas of the nation. The unprecedented scale and scope of the ARRA broadband programs, coupled with the short time frame for awarding grants, presents daunting challenges with respect to program implementation as well as Congressional oversight.

American Recovery and Reinvestment Act of 2009, P.L. 111-5

In December 2008, leadership in the House and Senate, as well as the Obama transition team, announced their intention to include a broadband component in the infrastructure portion of the economic stimulus package. At the same time, numerous interested parties, including broadband equipment manufacturers; large, mid-sized, and small wireline and wireless service providers; satellite operators; telecommunications unions; consumer groups; education groups; public safety

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¹ See CRS Report RL30719, *Broadband Internet Access and the Digital Divide: Federal Assistance Programs*, by Lennard G. Kruger and Angele A. Gilroy.

² See Ibid., pp. 1-4.

organizations; think tanks; and others unveiled a multitude of specific proposals for government support of broadband infrastructure.³

The House and Senate approved the Conference Report on H.R. 1 (H.Rept. 111-16) on February 13, 2009. On February 17, 2009, President Obama signed P.L. 111-5, the American Recovery and Reinvestment Act (ARRA). Broadband provisions of the ARRA provided a total of \$7.2 billion, primarily for broadband grants. The total consists of \$4.7 billion to NTIA/DOC for a newly established Broadband Technology Opportunities Program (BTOP) and \$2.5 billion to RUS/USDA broadband grant, loan, and loan guarantee programs.⁴

NTIA/DOC

Of the \$4.7 billion appropriated to NTIA:

- \$4.35 billion is directed to a competitive broadband grant program, of which not less than \$200 million shall be available for competitive grants for expanding public computer center capacity (including at community colleges and public libraries); not less than \$250 million to encourage sustainable adoption of broadband service; and \$10 million transferred to the DOC Office of Inspector General for audits and oversight;
- \$350 million is directed for funding the Broadband Data Improvement Act (P.L. 110-385) and for the purpose of developing and maintaining a broadband inventory map, which shall be made accessible to the public no later than two years after enactment; and
- Funds deemed necessary and appropriate by the Secretary of Commerce, in consultation with the FCC, may be transferred to the FCC for the purposes of developing a national broadband plan, which shall be completed one year after enactment.

The Broadband Technology Opportunities Program within NTIA is authorized by Division B, Title VI of the ARRA. Specific implementation requirements and guidelines for the new NTIA broadband grants are as follows:

- Establishes a "national broadband service development and expansion program"
 with purposes to include providing access to broadband service to consumers
 residing in unserved and underserved areas; providing broadband education,
 awareness, training, access, equipment and support to various institutions;
 improving access to, and use of, broadband service by public safety agencies; and
 stimulating demand for broadband, economic growth, and job creation.
- Directs NTIA to consult with each state to identify unserved and underserved areas (with respect to access to broadband service) as well as the appropriate allocation of grant funds within that state.

³ See CRS Report R40149, *Infrastructure Programs: What's Different About Broadband?*, by Charles B. Goldfarb and Lennard G. Kruger.

⁴ For information on stimulus funding directed to the existing broadband programs at RUS, see CRS Report RL33816, *Broadband Loan and Grant Programs in the USDA's Rural Utilities Service*, by Lennard G. Kruger.

- Directs NTIA, to the extent practical, to award not less than one grant in each state.
- Does not define "unserved area," "underserved area," and "broadband." The
 Conferees instructed NTIA to coordinate its understanding of these terms with
 the FCC, and in defining "broadband service" to take into consideration technical
 differences between wireless and wireline networks and to consider the actual
 speeds these networks are able to deliver to consumers under a variety of
 circumstances.
- Directs NTIA, in coordination with the FCC, to publish "non-discrimination and network interconnection obligations" that shall be contractual conditions of awarded grants, and specifies that these obligations should adhere, at a minimum, to the FCC's broadband principles to promote the openness and interconnected nature of the Internet (FCC 05-151, adopted August 5, 2005).⁵
- Directs NTIA, when considering applications for grants, to consider whether the project will provide the greatest broadband speed possible to the greatest population of users in the area. There are no specific speed thresholds that applicants must meet to be eligible for a grant. The Conferees acknowledged that while speed thresholds could have the unintended effect of thwarting broadband deployment in some areas, deploying next-generation speeds would likely result in greater job creation and job preservation. NTIA is instructed to "seek to fund, to the extent practicable, projects that provide the highest possible, next-generation broadband speeds to consumers."
- Defines entities eligible for grants as: a state or political division thereof; the District of Columbia; a territory or possession of the United States; an Indian tribe or native Hawaiian organization; a nonprofit foundation, corporation, institution or association; or any other entity, including a broadband service or infrastructure provider, that NTIA finds by rule to be in the public interest. It was the intent of the Conferees that as many entities as possible be eligible to apply for a grant, including wireless carriers, wireline carriers, backhaul providers, satellite carriers, public-private partnerships, and tower companies.
- Requires NTIA to consider whether a grant applicant is a socially and economically disadvantaged small business as defined under the Small Business Act.
- Directs NTIA to ensure that all awards are made before the end of FY2010.
 Grantees will be required to substantially complete projects within two years after the grant is awarded.
- Directs that the federal share of any project cannot exceed 80% unless the applicant petitions NTIA and demonstrates financial need.
- Directs that grant applicants must demonstrate that the grant project would not have been implemented during the grant period without federal grant assistance.

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⁵ See CRS Report RS22444, Net Neutrality: Background and Issues, by Angele A. Gilroy.

RUS/USDA

The \$2.5 billion appropriated to RUS is designated as additional amounts to the two existing RUS broadband programs: the Rural Broadband Access Loan and Loan Guarantee Program and the Community Connect Broadband Grants.

The ARRA does not specify how the \$2.5 billion is to be divided between the RUS grant and loan programs. Regarding projects applying for ARRA funding, the law states that:

- at least 75% of the area to be served by a project receiving these funds 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;
- priority shall be given to projects that will deliver end users a choice of more than one broadband service provider;
- priority shall be given to projects that provide service to the highest proportion of rural residents that do not have access to broadband service;
- priority shall be given to borrowers and former borrowers of rural telephone loans;
- priority shall be given to projects demonstrating that all project elements will be fully funded, that can commence promptly, and that can be completed; and
- no area of a project may receive funding to provide broadband service under the Broadband Technology Opportunities Program at NTIA/DOC.

Implementation of ARRA Broadband Programs

Broadband grants funded by the ARRA are competitive and applicants must apply directly to NTIA and RUS. Rules, regulations, and application guidelines for those interested in applying for broadband grants are in development by the agencies. Websites tracking the latest ARRA broadband program developments are located at NTIA, ⁶ RUS, ⁷ and the FCC. ⁸

Although grants are competitive and available directly from the federal agencies, the states will also play a role, particularly with respect to the BTOP at NTIA. The ARRA directs NTIA to consult with each state to identify unserved and underserved areas (with respect to access to broadband service) as well as the appropriate allocation of grant funds within that state. However, final award decisions reside with the federal agencies.

On March 10, 2009, a public meeting was held by NTIA, RUS, and the FCC. NTIA officials indicated that they anticipate holding three separate broadband grant rounds, the first between April and June 2009, the second between October and December 2009, and the third between April and June 2010. Preceding each round a Notice of Funding Availability (NOFA) will be released providing application details.

⁶ http://www.ntia.doc.gov/broadbandgrants/Broadband grants.

⁷ http://www.usda.gov/rus/telecom/index.htm.

⁸ http://www.fcc.gov/recovery/broadband/.

RUS officials indicated that they would use the budget authority provided by the ARRA to support a program of grants, loans, loan-guarantees, and possibly loan-grant combinations. RUS expects to issue its first NOFA (with several more to follow) between April and June.

Meanwhile, the FCC announced it plans to issue a Notice of Inquiry on April 8, 2009, to gather data, expertise, and public input in preparation for its effort to develop a national broadband strategy as mandated by the ARRA.

Issues Related to Implementation

The Broadband Technology Opportunities Program (BTOP) is newly authorized and established by the ARRA. The law gives NTIA considerable flexibility to implement the BTOP. According to the Conference Report:

The Conferees intend that the NTIA has discretion in selecting the grant recipients that will best achieve the broad objectives of the program. The Conferees also intend that the NTIA select grant recipients that it judges will best meet the broadband access needs of the area to be served, whether by a wireless provider, a wireline provider, or any provider offering to construct last-mile, middle-mile, or long haul facilities.

Implementation decisions made by NTIA could have a significant impact on how the program is shaped and targeted, and the extent to which the program meets the goals and purposes set forth by the ARRA. NTIA and RUS have prepared a joint request for information (RFI) and notice of public meetings designed to gather public input into many of the implementation decisions which the agencies will make as they develop rules and regulations for the grant program. A series of public meetings will be held in March 2009. The RFI is soliciting comments from all interested parties on the following topics:

- the purposes of the BTOP program;
- the role of the states;
- eligible grant recipients;
- the establishment of selection criteria for grant awards;
- grant mechanics;
- grants for expanding public computer center capacity;
- grants for innovative programs to encourage sustainable adoption of broadband service;
- broadband mapping;
- financial contributions by grant applicants;

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⁹ Department of Commerce, National Telecommunications and Information Administration, and Department of Agriculture, Rural Utilities Service "American Recovery and Reinvestment Act of 2009 Broadband Initiatives," 74 *Federal Register* 10716-10721, March 12, 2009.

- timely completion of proposals;
- coordination between BTOP and the RUS grant program;
- how terms set out in relevant sections of the ARRA should be defined;
- how the success of the BTOP program should be measured;
- any other issues NTIA should consider in creating the BTOP;
- the most effective ways RUS could offer broadband funds;
- how RUS and NTIA can best align their activities;
- how RUS can evaluate whether a particular level of broadband access and service is needed to facilitate economic development;
- how RUS should consider priorities set out in the ARRA in selecting applications; and
- what benchmarks should be used to determine the success of RUS ARRA broadband activities.

Below is a discussion of selected issues that will be addressed as implementation details of the ARRA broadband programs are developed.

Defining "Underserved" and "Unserved"

As specified in the ARRA, the purpose of BTOP is to provide broadband service to consumers residing in unserved and underserved areas of the United States. The issue of which areas should be defined as "underserved" with respect to broadband service has long been controversial. There is no generally accepted definition of "underserved." Factors such as a minimal number of existing providers, a lack of adequate market competition, unaffordable consumer prices for existing broadband service, or substandard download and upload available speeds may singularly or in combination lead some to define an area as "underserved." The definition of "unserved" is also not uniformly accepted. For example, should unserved be defined only as an area with no terrestrial (nonsatellite) broadband service, or should areas with some terrestrial but no mobile wireless service also be considered "unserved?"

The ARRA does not define either "unserved" or "underserved." The law directs NTIA to consider whether a grant application would increase broadband affordability and subscribership, and provide the greatest broadband speeds possible to the greatest population of users in the area served. The ARRA directs NTIA to consult with the states (plus the District of Columbia and the territories) to identify unserved and underserved areas within that state. The Conferees instructed NTIA to coordinate its understanding of the terms "unserved area" and "underserved area" with the FCC.

In approaching an understanding of these terms, the NTIA (and the states with which the NTIA will consult on this issue) must balance competing policy concerns, particularly when developing or embracing a definition of "underserved." For example, too narrow a definition may make it more difficult for rural areas in need of adequate broadband service to receive grants. On the other hand, too broad a definition of "underserved" may inappropriately confront existing

broadband providers with government-funded competitors and may divert funding from projects in unserved areas with no broadband service whatsoever. Both NTIA and the states will likely seek to strike a balance between those two competing concerns.

Defining "Non-Discrimination and Network Interconnection Obligations"

Congressional policymakers continue to debate and consider whether laws or regulations are needed to ensure the "openness" of the Internet with respect to both content and access. ¹⁰ The debate over nondiscrimination (also commonly referred to as "net neutrality," "open access," and "network management") has shifted to a debate over the extent to which nondiscrimination requirements or standards should be imposed on broadband networks funded by BTOP. The ARRA directs NTIA, in coordination with the FCC, to publish "non-discrimination and network interconnection obligations that shall be contractual conditions of grants awarded." The ARRA says that these obligations, at a minimum, should adhere to the principles contained in the FCC's broadband policy statement (FCC 05-15, adopted August 5, 2005) as follows:

To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to access the lawful Internet content of their choice.

To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement.

To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to connect their choice of legal devices that do not harm the network.

To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to competition among network providers, application and service providers, and content providers.¹¹

In developing nondiscrimination and interconnection obligations for funded projects, NTIA and the FCC face the challenge of ensuring the "openness" of federally funded broadband networks, while at the same time minimizing regulatory burdens on prospective grantees that, some say, ¹² may constitute a disincentive for some entities to apply. How NTIA and the FCC choose to balance these two considerations could prove highly controversial as the BTOP implementation rules and regulations are developed.

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¹⁰See CRS Report RS22444, Net Neutrality: Background and Issues, by Angele A. Gilroy.

¹¹ FCC, Policy Statement on Broadband Internet Access, FCC 05-151, adopted August 5, 2005, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-151A1.pdf. The FCC principles are not rules – rather they are intended as general principles to be incorporated in FCC's ongoing policymaking activities.

¹² Stephanie Condon, "Telecoms Oppose Tighter Net Neutrality Rules for Stimulus Funds," CNET News, February 26, 2009.

Defining Broadband

The term "broadband" is typically characterized or defined by minimum download and upload speeds, specific technologies (i.e., cable modem, fiber-to-the-home, wifi), or specific applications (e.g., telemedicine, distance learning). The ARRA broadband provisions do not specify minimum download/upload speed thresholds, are technology neutral, and cite a wide variety of applications eligible for funding.

The issue of speed thresholds is particularly controversial. While a high speed threshold has the benefit of encouraging the construction of next generation networks (such as fiber or next generation cable systems), it also runs the risk of excluding current generation technologies that may be uniquely suitable for some unserved or underserved areas. The Conferees acknowledged this dilemma, stating in the Conference Report that while speed thresholds could have the unintended effect of thwarting broadband deployment in some areas, deploying next-generation speeds would likely result in greater job creation and job preservation. The Conferees instructed NTIA to "seek to fund, to the extent practicable, projects that provide the highest possible, next-generation broadband speeds to consumers." Thus, NTIA has the flexibility to balance the sometimes competing goals of constructing next generation networks with providing broadband to unserved and underserved areas.

Role of the States

While the BTOP grants are competitive and will be awarded directly by NTIA, the states are expected to play a significant role. The ARRA directs NTIA to consult with each state to identify unserved and underserved areas (with respect to access to broadband service) as well as the appropriate allocation of grant funds within that state. States themselves (as well as municipalities) are eligible to apply for broadband grants, and the ARRA specifies that NTIA, to the extent practical, shall award not less than one grant to an entity within each state.

Regarding NTIA consultation with the states, the Conferees expressed the following:

The Conferees recognize that States have resources and a familiarity with local economic, demographic, and market conditions that could contribute to the success of the broadband grant program. States are encouraged to coalesce stakeholders and partners, assess community needs, aggregate demand for services, and evaluate demand for technical assistance. The Conferees therefore expect and intend that the NTIA, at its discretion, will seek advice and assistance from the States in reviewing grant applications, as long as the NTIA retains the sole authority to approve the awards. The Conferees further intend that the NTIA will, in its discretion, assist the States in post-grant monitoring to ensure that recipients comply fully with the terms and conditions of their grants. ¹⁴

An issue will likely be to what extent the NTIA follows the recommendations of the states with respect to award decisions. ¹⁵ States vary widely with respect to their own broadband programs

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¹³ U.S. Congress, Conference Report to Accompany H.R. 1, 111th Cong., 1st sess., February 12, 2009, H.Rept. 111-16 (Washington: GPO, 2009), p. 775.

¹⁴ Ibid.

¹⁵ Some states have already set up their own ARRA websites and have begun soliciting proposals for grant funding, including broadband projects. See http://www.recovery.gov/?q=content/state-recovery-page.

and initiatives. Some states have embarked on state-wide broadband strategies and have been extremely active in mapping broadband availability and identifying unserved and underserved areas, while other states have not yet begun such an effort.¹⁶

Coordination Between Agencies

Three federal agencies—NTIA, RUS, and the FCC—will be implementing the broadband provisions of the ARRA. Coordination between those agencies will likely be an important factor in ensuring that broadband programs meet the goals of the ARRA. Specific coordination challenges include ensuring that NTIA's BTOP grants and the RUS grant and loan programs are complementary and not duplicative; ensuring that the FCC has appropriate input into the design and implementation of broadband grant and data programs; and coordinating the FCC's national broadband plan (as required by the ARRA) with RUS and NTIA.

Broadband Data Gathering

There is widespread agreement that data regarding broadband deployment in the United States are inadequate and that policymakers have an incomplete picture of where broadband service is available (and at what speeds and prices). Broadband data are important, because the more detailed and granular broadband data are, the more effectively government can direct broadband assistance to areas with the greatest need.

The ARRA addressed broadband data by designating \$350 million for funding the Broadband Data Improvement Act (P.L. 110-385) and for the purpose of developing and maintaining a national broadband inventory map. The Broadband Data Improvement Act (P.L. 110-385) was signed into law on October 10, 2008, and requires the FCC to collect demographic information on unserved areas, data comparing broadband service with 75 communities in at least 25 nations abroad, and data on consumer use of broadband. The act also directs the Census Bureau to collect broadband data, the Government Accountability Office to study broadband data metrics and standards, and the Department of Commerce to provide grants supporting state broadband data, mapping, and planning initiatives.

Regarding the inventory map, the ARRA directs NTIA to develop and maintain a comprehensive nationwide inventory map of existing broadband service capability and availability in the United States that depicts the geographic extent to which broadband service capability is deployed and available from a commercial provider or public provider throughout each state. Not later than two years after enactment of the ARRA, the NTIA is directed to make the national inventory map available online to the public in a form that is interactive and searchable.

A continuing and controversial issue related to broadband data is striking a balance between making available broadband deployment data to the public that is sufficiently detailed to be useful, without revealing what some providers may consider to be proprietary information.

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¹⁶ For more information, see State Broadband Initiatives: A Summary of State Programs Designed to Stimulate Broadband Deployment and Adoption, A Joint Report of the Alliance for Public Technology and the Communications Workers of America, July 2008, 54 pages. State program database available at http://www.speedmatters.org/statepolicy.

Evaluation and Transparency

Given the large amounts of grant money to be awarded within tight deadlines (by September 30, 2010, for the BTOP grants), there is considerable interest in the issue of transparency and how the programs will be evaluated and monitored in order to avoid waste, fraud, and abuse. To address this issue, the ARRA:

- requires 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 (\$2.5 billion) for the RUS broadband programs not later than 90 days after enactment, and quarterly thereafter until all funds are obligated;
- transfers \$10 million to the Department of Commerce Office of Inspector General for audits and oversight of funds provided for the Broadband Technology Opportunities Program;
- directs NTIA 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;
- directs NTIA to require grant recipients to file quarterly reports (which will be publicly available) on the grantee's use of the grant money and progress on fulfilling the objectives for which the funds were granted;
- authorizes NTIA, if it chooses, to establish additional reporting and information requirements for any grant recipient;
- authorizes NTIA, in addition to other authority under applicable law, to
 deobligate awards to grantees that demonstrate an insufficient level of
 performance, or wasteful or fraudulent spending, as defined in advance by NTIA,
 and award these funds competitively to new or existing applicants; and
- directs NTIA to create and maintain a fully searchable database, accessible on the
 Internet at no cost to the public, that contains at least a list of each entity that has
 applied for a grant, a description of each application, the status of each
 application, the name of each entity receiving funds, the purpose for which the
 entity is receiving funds, each quarterly report submitted by the entity, and other
 information sufficient to allow the public to understand and monitor grants
 awarded under the program.

An issue is whether the transparency and evaluation requirements as set forth in the ARRA and other law are sufficient, or whether additional reporting and information requirements will be adopted.

Concluding Observations

The broadband programs in the ARRA, funded at \$7.2 billion, are unprecedented in scope and scale compared with previously existing federal broadband assistance programs. Policy decisions made by NTIA, RUS, and the FCC could have major impacts on the implementation of the

program and the extent to which it meets the goals set by Congress for short-term job creation and long-term improvement of the nation's broadband infrastructure.

The ARRA broadband provisions are only one component in the nation's overall broadband strategy. Among other issues which may be addressed as part of a national broadband policy (likely to be formulated by the Administration and the FCC) are universal service reform, tax incentives to encourage private sector broadband rollout, and spectrum policy to spur roll-out of wireless broadband services. As Congress continues to monitor broadband stimulus programs, while considering various additional options for encouraging broadband deployment and adoption, a key issue is how to strike a balance between providing federal assistance for unserved and underserved areas where the private sector may not be providing acceptable levels of broadband service, while at the same time minimizing any deleterious effects that government intervention in the marketplace may have on competition and private sector investment.

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