Strengthening the Rural Economy - Strengthening Rural Infrastructure

IV. STRENGTHENING RURAL INFRASTRUCTURE

Strong infrastructure is critical to economic opportunity, standards of living, and social cohesion. But, because there are fewer people across whom to spread the costs, large infrastructure projects in rural areas tend to have much higher costs per household than comparable projects in urban areas. For that reason, the Federal government has a long history of supporting rural infrastructure. The Obama Administration is committed to continuing that support.

A. Background

The Federal government's traditional support of rural infrastructure has focused on transportation, telecommunications, and energy and water infrastructure. This support has played a crucial role in linking rural residents economically and socially with the rest of the country and the world and in providing them with important basic services.

1. Transportation

Of all the Federal efforts to tie Americans together, none is more tangible than the Federal-aid highway system. The Department of Transportation supports the construction and maintenance of important highway projects in all 50 states and has invested billions of dollars in highway construction and maintenance since the 1950s. About 65 percent of all interstate highway miles -- and 70 percent of all Federal-aid highway miles -- run through rural areas. These highways allow rural Americans to sell their products in key markets throughout the country and the world. Beyond highways, Federal programs also support the rail, barge, and ocean-going transportation infrastructures.

Without this key infrastructure, the crops grown in rural America could not as easily reach the domestic and international markets that sustain farm income. Since less than 1 percent of agricultural products are sold directly to consumers, farmers rely on Federal and state highways to access key processing and marketing/distribution networks. A recent study in Iowa indicated that meat and produce had to travel an average of more than 1,500 miles from production to consumption (Pirog et al. 2001).

2. Telecommunications

While the Postal Service has long been the primary vehicle for sending goods and written communications in the United States, the Federal government has also played a crucial role in ensuring access to telecommunications in rural areas, with the same goal of connecting Americans to one another. Today, all telecommunications carriers that provide interstate or international service contribute to the Universal Service Fund (USF), often through a service fee on their bills. Contributors paid about $7.3 billion into the Fund in 2009, and this revenue was used to support a range of programs designed to promote universal access to essential communications services at reasonable rates. For example, the USF's Rural Health Care program subsidizes telecom and internet services for rural health care providers. Additionally, the Department of Agriculture's Rural Utilities Service (RUS) provides loans to fund traditional telecommunications infrastructure and voice telephone service.

3. Energy and Water Infrastructure

As part of the New Deal, the Roosevelt Administration sought to bridge the urban-rural divide in access to electricity. In the early 1930s, according to one estimate, 90 percent of Americans in urban areas had access to electric power, while only 10 percent of rural America had access (Deller et al. 2009). The establishment of the Rural Electrification Administration (REA) in 1935 sparked a series of Federal investments that brought power to rural American homes over the coming years. By 1939, the REA had helped to establish more than 400 rural electric cooperatives, which

served nearly 300,000 households. Today, the RUS continues to provide credit and other assistance to help improve electric, water, and telecommunications services in rural areas. For example, between 2002 and 2009, the RUS invested $36 billion in electric systems and $14 billion in water and waste management systems throughout rural America.

The Federal government also has a long history of helping to build key water infrastructure projects in rural areas. For example, the Clean Water and Drinking Water State Revolving Funds provide matching grants for community and regional water systems. The two funds each have provided about $70 billion dollars over the last twenty years for wastewater treatment plants, estuary improvement projects, and drinking water treatment, storage, transmission and distribution infrastructure, many of which benefit rural areas. The Department of the Interior's Bureau of Reclamation also provides hydropower, and drinking water and irrigation services to rural America. Today, the Bureau is the nation's largest wholesaler of water, serving 31 million people, and provides irrigation to one out of five western farmers.

B. Continuing Infrastructure Investment

The Administration is committed to continued support of rural community infrastructure needs. As laid out in the proposed fiscal year 2011 budget, the Administration is pursuing a comprehensive region-based approach that coordinates infrastructure investments across transportation, housing, and other critical areas. The Administration is also supporting the build-up of the country's energy infrastructure – discussed in Section III – to facilitate the use of cleaner, bio-based fuels. In this section, we discuss two other areas of significant infrastructure investment: the expansion of broadband internet service to rural communities, and improvements in the efficiency and availability of water resources.

1. The Administration's Rural Broadband Strategy

Only about 70 percent of rural households with internet access had a high speed broadband connection in 2007, compared with 84 percent of urban households. This difference in broadband adoption is not just a consequence of income differences. Even when rural and urban households are matched by income, broadband connections are less prevalent among rural households. Much of the difference between rural and urban broadband subscribership reflects availability: residents of some rural areas have no terrestrial broadband internet service providers, and other areas are served by only a single provider and therefore have no competition.

The Administration has made a priority of accelerating the rollout of broadband internet service to rural America. The most important vehicles for accomplishing this goal are monies authorized in the Recovery Act for providing loans, grants, and loan-grant combinations to expand access to broadband in rural and underserved areas of America. For instance, the Department of Agriculture's Rural Utilities Service will use billions to support loans and grants that facilitate broadband deployment in rural areas, with the objective of funding projects that will support rural economic development and job creation beyond the immediate construction and operations of the broadband facilities. The Department of Commerce's National Telecommunications and Information Administration was given $4.7 billion for its Broadband Technology Opportunities Program to deploy broadband infrastructure in unserved and underserved areas (many of which are rural), expand public computer center capacity, and encourage sustainable adoption of broadband service. And the Administration intends to support broadband expansion in rural America beyond the Recovery Act. For instance, the Administration has included $690 million for direct loans in telecommunications and $418 million for loans and grants to help transition rural economies into the modern information economy in its proposed fiscal year 2011 budget.

There are several reasons that expanded broadband service is important for employment and income growth in rural areas. Most employment growth in the United States over the last several decades has been in the service sector, where jobs are particularly likely to benefit from broadband access. Broadband service may allow rural areas to compete for a range of service jobs, from call centers to software development. And even in non-service industries, internet tools can help businesses connect more efficiently with customers and suppliers. For instance, American farmers can use the internet to track product prices, obtain weather forecasts, buy and sell commodity futures, track the progress of supplies ordered or products shipped, and find markets for specialty farm products. Broadband internet connections also are increasingly useful as a substitute for business travel.

Broadband-enabled employment is valuable in rural areas not only for the income opportunities it provides, but also because it helps further diversify local economies. Broadband internet access enables employment that is both flexible and untethered to local economic conditions. One example of how broadband access can diversify income sources is through home businesses, which are substantially more common in rural areas than urban ones. Broadband service helps rural businesses find markets that otherwise might be unavailable to them, facilitates online ordering and billing, and integrates the rural economy with the rest of the country (and the world) more effectively than is possible over slow-speed internet connections. It also allows continued access to online training and education.

Finally, broadband service expands opportunities for improving the provision of medical and health services for rural populations. More accessible health information, products, and services confer real economic benefits to rural communities and their residents. One study of hospitals in 24 rural communities found that the benefits of

telemedicine include savings from outsourcing of procedures, transportation savings for patients who were able to obtain services electronically from their local hospital rather than traveling to a distant specialist, and income savings to patients from reductions in missed work (Whitacre 2008).

2. Increasing Water Efficiency and Availability

The Administration is committed to investing in infrastructure to improve the efficiency and availability of water in rural America. Rural areas suffer from multiple problems associated with their water infrastructure. First, aging infrastructure loses much of the water in transit, reducing availability and increasing cost. Second, water systems have been slow to adopt new technologies for the efficient allocation of water, such as tiered pricing or water trading mechanisms. Third, some rural areas lack access to clean, reliable drinking water.

Water availability is important for many reasons. In the agriculture sector, for instance, roughly 15 percent of U.S. farm land -- producing crops worth about $70 billion annually -- is irrigated. Many other industries also rely on clean water for manufacturing products or cooling machinery, making access to usable water an economic imperative for businesses. Investments in water and wastewater facilities also yield returns to public health and the environment by treating billions of gallons of wastewater each day before it is released into rivers, lakes, and oceans, making water safe for use by humans, wildlife, and plant life. Economic assistance to rural communities for investments in water availability is especially valuable, given the borrowing constraints that small or poor communities may face.

Recognizing these potential benefits, the Administration is making several efforts to upgrade and improve the efficiency of existing water infrastructure. Already, the Recovery Act has provided more than $130 million for high-priority infrastructure repair and replacement across Bureau of Reclamation sites. The WaterSMART Program, provided with $40 million by the Recovery Act and additional funding in the proposed fiscal year 2011 budget, invests in infrastructure that encourages a variety of market-based conservation measures, including water banks and the reuse of treated wastewater. Such initiatives ensure that those who most need the water receive it and can provide a source of revenue to farmers. Other projects will reduce leakage by, for example, lining canals with reinforced concrete. Furthermore, the Administration has invested in the reuse of wastewater and impaired waters with $135 million in the Recovery Act and additional funds in the proposed fiscal year 2011 budget. Finally, the Department of Agriculture's Office of Environmental Markets, which will encourage private investment in activities from carbon sequestration to biodiversity conservation, will support emerging markets for water quality.

In addition to regular appropriations, the Administration is addressing the unavailability of clean, safe drinking water in some rural areas through Recovery Act funding. The Recovery Act included approximately $3.7 billion in loans and grants for rural water and wastewater infrastructure through the Department of Agriculture's Rural Development Water and Waste Disposal loan and grant program. It also includes $290 million in funding across various agencies for construction of rural water projects, emphasizing water supply and water treatment plants; at least 30 percent of these funds are targeted to American Indian and Alaska Native communities. The result is that young children in rural areas in states such as Montana, North Dakota, and South Dakota will have increased access to safe water, improving their health and future life outcomes.

Continue to V. Improving American's Support of Agriculture

[20]The Department of Transportation's definition of urban differs from that o the CEA, so this statistic could not be calculated using CEA's definition of urban and rural.

[21]Estimate provided by the staff of the Department of Agriculture, April 2010.