

Northern Tier Middle Mile Broadband Project



The Commonwealth of Pennsylvania has received a grant award of \$28.8 million under the American Recovery and Reinvestment Act (ARRA) to undertake deployment of “middle mile” broadband infrastructure in the 32-county region north of Interstate 80. The project aims to promote broadband service in these primarily rural counties. The funding agency is the U.S. Department of Commerce, National Telecommunications Information Administration (NTIA), Broadband Technology Opportunities Program (BTOP). The grant recipient is the Governor’s Office of Administration (OA), responsible for implementing the project.

BACKGROUND AND OVERVIEW

The commonwealth’s ARRA broadband project builds on the state’s existing microwave network, now used exclusively for radio traffic as part of the Pennsylvania Statewide Radio Network (PA-STARNET), supporting public safety and emergency communications by state agencies and first responders. The radio network operates in the 800 megahertz spectrum, and uses both high-profile sites and smaller microcell sites to provide 95% or more coverage of Pennsylvania’s land mass. The statewide microwave network carries voice and data traffic from sites to the core network.

The existing microwave network operates at 50 megabits per second (Mbps). Originally circuit-based, it is being upgraded to use of Multi-Protocol Label Switching (MPLS) for greater effective throughput, automatic rerouting in case of path failure, and quality of service control and tuning. A Network Operations Center (NOC) in Harrisburg monitors the network around the clock, contributing to its 99.999% record of reliability and availability.

BROADBAND PROJECT

The ARRA funding allows the commonwealth to add a parallel 150 Mbps to the current 50 Mbps of network capacity, making it available to “last mile” broadband providers, including telecommunications companies and Internet Service Providers (ISPs), as well as to anchor institutions such as schools, colleges, hospitals, libraries, and public safety agencies. The project schedule calls for substantial parts of the network to be ready for use by the end of 2011.

The northern region of the commonwealth includes many rural areas classified as unserved or underserved by broadband connectivity. Through development of a middle mile regional wireless system, the grant promotes extension of commercial broadband services to a large area of the commonwealth where distance, topography, or lack of population density currently inhibit the necessary investment.

The additional microwave network capacity makes it possible for last mile providers to connect to the Internet or other network points of presence without the prohibitive investment necessary to create this infrastructure themselves. With this barrier to service delivery removed, commercial providers can build out broadband systems to homes and businesses. Anchor institutions can apply the available bandwidth to applications such as distance learning, record sharing, diagnostic image transmission, remote patient consultations, and improved communication among public safety agencies.

COVERAGE AREA

The targeted coverage area in the northern tier of the commonwealth includes the following 32 counties:

Bradford, Cameron, Carbon, Centre, Clarion, Clearfield, Clinton, Columbia, Crawford, Elk, Erie, Forest, Jefferson, Lackawanna, Luzerne, Lycoming, McKean, Mercer, Monroe, Montour, Northumberland, Pike, Potter, Snyder, Sullivan, Susquehanna, Tioga, Union, Venango, Warren, Wayne, Wyoming

TOWER SPACE OPPORTUNITIES

OA leases space on its towers to support the broadband effort. Space may be available on approximately 150 towers owned by the commonwealth, many of them in the northern tier. Colocation of infrastructure on state towers for last mile providers helps limit the number of hops among external networks and accommodate more network traffic. OA’s Office of Public Safety Radio Services (OPRS) manages leasing of tower space through a contractor selected by competitive procurement.

CONTACTS

Broadband and Tower Services Information and Requests Office of Public Safety Radio Services
[Online Web Form for Requests](#)
RA-RadioSiteServices@pa.gov
 717.772.8005

Commonwealth Broadband Policy Sue Suleski, Director of Broadband Initiatives, OA
ssuleski@pa.gov
 717.705.5462

Middle Mile Broadband Grant Management Steven Kuller, Director, Public Safety Radio
skuller@pa.gov
 717.772.8006

Middle Mile Broadband Project Management Frank Yoder, Broadband Services Manager, OPRS
fryoder@pa.gov
 717.425.5432

Middle Mile Grant and Budget Administration Holly Caudill, Broadband Administrative Officer, OPRS
hcaudill@pa.gov
 717.425.7650

QUICK FACTS

Grant Award \$28,784,014
Award Number: NT10BIX5570017
Recipient: Commonwealth of Pennsylvania, Office of Administration
Awarding Agency: National Telecommunications Information Administration
Legislation: American Recovery and Reinvestment Act of 2009 (Public Law 111-5)
Grant Program: Broadband Technologies Opportunity Program
Catalog of Federal Domestic Assistance (CFDA) Number: 11.557

Broadband Project Commonwealth of Pennsylvania Broadband Middle Mile Project:
 Enhancing Connectivity in Northern Pennsylvania
 Total Estimated Cost: \$35,980,017
 Commonwealth Matching Funds: \$7,196,003
 Award Period: February 1, 2010–January 31, 2013

Middle Mile Broadband Project Goals Add parallel 150 Mbps microwave network capacity
Prospective Bandwidth Users: Last mile providers and anchor institutions in northern tier counties
Target Uses: Last mile provider backhaul and point-to-point networking
Target Results: Broadband delivery in unserved and underserved areas
Start of Service Availability: By end of 2011

Pennsylvania Microwave Network Part of Pennsylvania Statewide Radio Network (PA-STARNet)
 Switching Method: Multi-Protocol Label Switching (MPLS)
 Capacity: Originally 50 megabits per second (Mbps)
 Network Administration: Full-time Network Operations Center
 Reliability and Availability: 99.999%

Recovery Act Award Summary [Recovery.gov Track the Money Award Summary](#)