

**QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS**

**General Information**

<b>1. Federal Agency and Organizational Element to Which Report is Submitted</b>  Department of Commerce, National Telecommunications and Information Administration	<b>2. Award Identification Number</b>  NT10BIX5570017	<b>3. DUNS Number</b>  188655898
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**4. Recipient Organization**  
  
 Executive Office of the Commonwealth of Pennsylvania (Office of Administration) 225 Capitol Building, Harrisburg, PA 17120-0001

<b>5. Current Reporting Period End Date (MM/DD/YYYY)</b>  12-31-2011	<b>6. Is this the last Report of the Award Period?</b>  <input type="radio"/> Yes <input checked="" type="radio"/> No
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**7. Certification:** I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.

<b>7a. Typed or Printed Name and Title of Certifying Official</b>  Holly Caudill	<b>7c. Telephone (area code, number and extension)</b>  7174257650
	<b>7d. Email Address</b>  hcaudill@state.pa.us

<b>7b. Signature of Certifying Official</b>  Submitted Electronically	<b>7e. Date Report Submitted (MM/DD/YYYY):</b>  02-27-2012
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**Project Indicators (This Quarter)**

**1. Please describe significant project accomplishments completed during this quarter (600 words or less).**

As of Q4, 2011, the Commonwealth of Pennsylvania has completed 42 of the 71 microwave radio connections resulting in 656 miles of upgraded network. 100% of the new tower and shelter structures have been constructed on their respective sites. 100% of the compound expansions have been completed. Final engineering on the switching equipment was made within Q4 allowing for configuration and implementation to commence within Q1 and Q2.

The Commonwealth of Pennsylvania began the selection process to hire an additional resource with technical networking knowledge in working with MPLS networks. We expect that the selected person will begin working on the project in Q1, 2012.

The Commonwealth of Pennsylvania began development of an RFI (Request for Information) during Q4 to be implemented as a procurement tool to aid in connecting to last mile service providers in 2012 and beyond. The RFI will not only raise commercial awareness of the project but also encourage appropriate businesses to share information with the Commonwealth promoting potential business relationships.

Final details were determined for a WiMax pilot project with a last mile service provider which will commence in Q1 2012. This WiMax pilot will provide significant understanding of the middle mile/last mile connectivity challenge facing us, and all BTOP middle mile infrastructure recipients.

**2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).**

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2a.	Overall Project	42	The project, when measured by expenditure alone, is behind due to the safeguards built into the Commonwealth's payment system. Goods and/or services must be provided and approved, then quality assurance checked and invoiced. Project progress based upon completion of work is on schedule at 72% of completion. Upon payment of invoicing for the equipment installation and integration services, expenditure based progress will make a dramatic surge towards agreement with the baseline report which is expected to occur in the third quarter of 2012.
2b.	Environmental Assessment	100	This milestone is complete.
2c.	Network Design	72	The project remains on schedule with the exception of the final determination for the last mile connections. With the issuance of a Request for Information in Q1, 2012, we anticipate finalizing the remaining design work within the first half of 2012.
2d.	Rights of Way	0	N/A. This milestone does not apply to our project.
2e.	Construction Permits and Other Approvals	0	N/A. This milestone does not apply to our project.
2f.	Site Preparation	68	This milestone remains on schedule.
2g.	Equipment Procurement	39	54% of microwave equipment expenditures have been realized. 14% of MPLS switching equipment invoices have been received and paid. 0% of invoices for WiMAX equipment has been paid to date. The project remains on schedule. Engineering and configuration of switching equipment continued allowing for the deployment in Q2, 2012.
2h.	Network Build (all components - owned, leased, IRU, etc)	95	This milestone remains on schedule.
2i.	Equipment Deployment	8	8% of invoices for the services to install equipment have been received and paid to date. On this project, the payments for services at the network sites are contingent upon both microwave and switching equipment to be installed prior to payment; therefore, invoices have not been submitted. Due to the scheduled installation of switching equipment to be performed in Q2, 2012, it is expected that expenditures will catch up to the baseline report in Q3, 2012.
2j.	Network Testing	50	This milestone remains on schedule.

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2k.	Other (please specify): <b>Customer Acquisition, Support and Billing</b>	39	Payment for an asset management system to track the assets procured as part of this project has been made. The Service Portal application to provision bandwidth and priority rating on the network has also been invoiced and paid. The Billing portion of the project remains in progress as we await customers to test the application. Upon receipt and payment of an invoice for the billing portion of the project, our expenditure based progress will catch up to the baseline. It is expected that the invoice for this portion will be paid in Q3, 2012.

**3. To the extent not covered above, please describe any challenges or issues faced during this past quarter in achieving planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).**

Installation of the switching equipment was delayed due to engineering necessary to incorporate box redundancy at key locations in the network. While this slight change in equipment has delayed the roll out of MPLS on the network, it will allow for a significantly more robust and resilient infrastructure. The Commonwealth of Pennsylvania and its vendors have built cushions into the schedule for situations such as this. As a result, crews will be continuing to work during mild weather spells in Q1 where there was originally no work scheduled.

We are currently in discussions with the Pennsylvania Utility Commission (PUC) to determine if our middle mile project connections can be made without becoming a certified telecommunications provider.

**4. Please report the following information regarding network build progress. Write "0" in the Total column and "N/A" in the Narrative column if your project does not include this activity. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (600 words or less).**

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
New network miles deployed	0	No new network miles have been deployed.
New network miles leased	0	n/a for this project
Existing network miles upgraded	656	42 of 71 microwave radio connections have been upgraded by the close of Q4. The project is on schedule.
Existing network miles leased	0	n/a for this project
Number of miles of new fiber (aerial or underground)	0	n/a for this project
Number of new wireless links	42	Project is ahead of schedule with deployment of new microwave radio connections.
Number of new towers	5	This indicator is complete.
Number of new and/or upgraded interconnection points	0	Interconnection points will be added to the network as new customers and their requirements are determined. It is expected that the project will begin offering broadband services as the initial segments of switching enabled bandwidth are completed.

**For questions 5 and 6 please include information relating to agreements that you are negotiating or have entered into, or that your sub recipient, contractor or subcontractor is negotiating or entered into.**

**5a. If applicable, please provide the following information with regard to agreements with broadband wholesalers and/or last mile providers as a result of your project.**

Indicators	
Number of signed agreements with broadband wholesalers or last mile providers	0
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	1
Average term of signed agreements (in quarters)	0

**5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers:**  
 None at this time. Once the infrastructure build out and switching equipment installations are complete, the network will be available for sales of services. In the meantime, a Request for Information is being prepared for broadcast through the Commonwealth's procurement channels in order to raise awareness and foster communications with potential last mile service providers in Pennsylvania's un-served and under-served regions.

We will commence a "pilot" project with a last mile service provider during Q1 of 2012 which is expected to assist in providing valuable experience in building the connections necessary to bring our middle mile capacity to the northern tier communities of Pennsylvania.

**5c. What wholesale services are being provided by this project? Please describe below. As an attachment to this report, please provide pricing plans (in \$ per month) associated with each wholesale service provided by your product (100 words or less). Wholesale services description:**

While services and pricing models are still in development, the plan continues to be to offer Ethernet virtual circuits at 3, 6,10, 20, and 50 Mbps. Pricing is expected to be based upon Network Interface Access and possibly the number of microwave connections between ports. Standard features will include Layer 2 MPLS Ethernet ports and best effort routing with route protection in backbone connections. Base price shall include burst capability of up to 25% of contracted bandwidth at no cost if excess capacity is available. Agreement is expected to include tower site compound access but not tower space.

**5d. If you have designated a third party to operate all or a portion of your network, please provide the name and contact information for this third party, indicate if this entity is a sub recipient, contractor, and/or subcontractor, and describe with specificity the portion of your network this this third party operates (600 words or less).**

At this time, the Commonwealth does not intend to utilize a third party to manage broadband middle mile services.

**6. Please provide the data according to the type of subscriber. Write "0" in the Total column and "N/A" in the Narrative column if your project does not pass or serve a particular subscriber type. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (300 words or less).**

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Broadband Wholesalers or Last Mile Providers	Providers with signed agreements receiving new access	0	Network infrastructure continues to be built. No services have been offered to providers to date; however, a pilot project is planned within Q1 of 2012 with a last mile service provider. This pilot is expected to produce one of the first signed agreements.
	Providers with signed agreements receiving improved access	0	Network infrastructure continues to be built. No services have been offered to providers to date; however, a pilot project is planned within Q1 of 2012 with a last mile service provider. This pilot is expected to produce one of the first signed agreements.
	Providers with signed agreements receiving access to dark fiber	0	n/a dark fiber is not a part of the Commonwealth of Pennsylvania project
	Please identify the speed tiers that are available and the number of subscribers for each	0	The actual speed tiers available as well as the number of subscribers will be determined at the time of the first connections to the network; however our baseline identified that we would offer our customers Ethernet virtual circuits at 10, 20 and 50 Mbps. We anticipate the first connections to be made within Q2, 2012.
Community Anchor Institutions (including Government institutions)	Total subscribers served	0	Network infrastructure continues to be built, and no services have been offered to providers to date. It is anticipated that most, if not all community anchor institutions that connect will be reached through a last mile service provider. We anticipate that the first community anchor institutions will be connected within Q2, 2012 as a result of our pilot projects.
	Subscribers receiving new access	0	Network infrastructure continues to be built, and no services have been offered to providers to date. It is anticipated that most, if not all community anchor institutions that connect will be reached through a last mile service provider. We anticipate that the first community anchor institutions will be connected within Q2, 2012 as a result of our pilot projects.
	Subscribers receiving improved access	0	Network infrastructure continues to be built, and no services have been offered to providers to date. It is anticipated that most, if not all community anchor institutions that connect will be reached through a last mile service provider. We anticipate that the first community anchor institutions will be connected within Q2, 2012 as a result of our pilot projects.
	Please identify the speed tiers that are available and the number of subscribers for each	0	Network infrastructure continues to be built, and no services have been offered to providers to date; however our baseline identified that we would offer our customers Ethernet virtual circuits at 10, 20 and 50 Mbps. We anticipate the first connections to be made within Q2, 2012.
Residential / Households	Entities passed	0	N/A. This middle-mile infrastructure project does not and will not connect to any residence or households directly.

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
	<b>Total subscribers served</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any residence or households directly.
	<b>Subscribers receiving new access</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any residence or households directly.
	<b>Subscribers receiving improved access</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any residence or households directly.
	<b>Please identify the speed tiers that are available and the number of subscribers for each</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any residence or households directly.
<b>Businesses</b>	<b>Entities passed</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any businesses directly.
	<b>Total subscribers served</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any businesses directly.
	<b>Subscribers receiving new access</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any businesses directly.
	<b>Subscribers receiving improved access</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any businesses directly.
	<b>Please identify the speed tiers that are available and the number of subscribers for each</b>	0	N/A. This middle-mile infrastructure project does not and will not connect to any businesses directly.

**7. Please describe any special offerings you may provide (600 words or less).**

We noted on our application that we plan to offer discounts to Government and Public Safety organizations.

**8a. Have your network management practices changed over the last quarter?**  Yes  No

**8b. If so, please describe the changes (300 words or less).**

Our network management practices have not changed. More information is publicly available on our website.

**9. Community Anchor Institutions:**

Using the table below, please provide a list by service area of the community anchor institutions (including Government institutions) connected to your network as a result of BTOP funds. Figures should be reported for the most recent reporting quarter only (NOT cumulatively). Also indicate whether your organization is currently providing broadband service to the anchor institution. Finally, provide a short narrative description with examples of how institutions are using BTOP-funded infrastructure (300 words or less).

Institution Name	Service Area (town or county)	Type of Anchor Institution (as defined in your baseline)	Are you also the broadband service provider for this institution? (Yes / No)	Narrative description of how anchor institutions are using BTOP-funded infrastructure
to be determined	to be determined	to be determined	No	There are no CAIs to report at this time. The network infrastructure continues to be built to date. We anticipate the first CAIs to connect late in the second quarter of 2012.

**Project Indicators (Next Quarter)**

**1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).**

In Q1, 2012, we are on-schedule to complete an additional six microwave radio connections, taking the number of completed links to 48, or 67% of the total (71). This percentage completion far exceeds the expenditure metric at the same time and completes a total of 742 miles of microwave upgrades.

Significant engineering on the MPLS switching portion of the project will also occur, enabling switching equipment installations in Q2, 2012.

Also in Q1, 2012, we anticipate completion of the WiMax pilot project with a last mile service provider. This pilot will yield valuable experience with middle mile backhaul and will give this potential customer a first-hand and detailed understanding of our network's capabilities. We also expect to commence an additional pilot project with a government entity to provide middle mile capacity into some of the more remote regions of the state. These pilot projects are expected to yield the first signed agreements and bring the first one or two Community Anchor Institutions onto the network. Since we anticipate that our CAIs will be connected through a last mile provider, we believe that we will also have at least one agreement signed with a last mile provider by the end of the second quarter as well.

Lastly, we will issue a Request for Information (RFI) in the first quarter, which will provide significant exposure to last mile providers (a large portion of our customer base) and begin a broad, non-discriminatory, sales process.

**2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Planned Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the next reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).**

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2a.	Overall Project	48	The project, when measured by expenditure alone, is anticipated to remain behind the baseline due to the safeguards built into the Commonwealth's payment system. Goods and/or services must be provided and approved, then quality assurance checked and invoiced. Project progress based upon completion of work; however, is expected to remain on schedule at approximately 78% complete. The difference between actual progress and that based upon expenditures accounts for the vendor having not invoiced for the installation and integration of equipment until not only the microwave radios have been installed/integrated but also the MPLS switching equipment as well.
2b.	Environmental Assessment	100	This milestone is complete.
2c.	Network Design	77	The only remaining element in the network design milestone is in regard to WiMAX. Once the pilot with a last mile service provider begins and the Request for Information (RFI) is completed, it is expected that the engineering for WiMAX will be completed.
2d.	Rights of Way	0	N/A. This milestone does not apply to our project.
2e.	Construction Permits and Other Approvals	0	N/A. This milestone does not apply to our project.
2f.	Site Preparation	73	This milestone is on schedule.
2g.	Equipment Procurement	49	It is anticipated that 67% of microwave equipment expenditures will have been realized. Engineering and configuration of switching equipment will continue allowing for the deployment in Q2, 2012.
2h.	Network Build (all components - owned, leased, IRU, etc.)	100	This milestone is anticipated to be complete.
2i.	Equipment Deployment	9	On this project, the payments for services at the network sites are contingent upon both microwave and switching equipment to be installed prior to payment; therefore, invoices have not been submitted. The roll-out of switching equipment in Q2, 2012 will bring the first invoices for the services of installation of microwave and switching equipment allowing this milestone to show significant progress at that time.
2j.	Network Testing	64	This milestone is on schedule.
2k.	Other (please specify): Customer Acquisition, Support and Billing	57	The Billing portion of the project remains in progress as we await customers to test the application. It is anticipated that payment for the Reporting Analysis Manager and other elements of the operational support system may be realized. It is anticipated that this milestone will catch up to the expenditure based baseline report in the third quarter of 2012.

**3. Please describe any challenges or issues anticipated during the next quarter that may impact planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).**

The weather will be key to progress attained during Q1, 2012 on the project due to the location in Northern Pennsylvania. While much of the work intended to be completed during the first quarter is engineering in nature, any opportunity to take advantage of mild weather will be used to advance the microwave radio installations.

**Infrastructure Budget Execution Details**

**Activity Based Expenditures (Infrastructure)**

1. Please provide details below on your total budget, cumulative actual expenditures (for the period ending the current quarter), and cumulative anticipated expenditures (for the period ending next quarter) for each line item, including detailed disbursements of both matching funds and federal funds from project inception through end of this quarter (actual) or next quarter (anticipated). Actual and anticipated figures should be reported cumulatively from award inception to the end of the applicable reporting quarter.

Budget for Entire Project				Actuals from Project Inception through End of Current Reporting Period			Anticipated Actuals from Project Inception through End of Next Reporting Period		
Cost Classification	Total Cost (plan)	Matching Funds (plan)	Federal Funds (plan)	Total Cost	Matching Funds	Federal Funds	Total Costs	Matching Funds	Federal Funds
a. Administrative and legal expenses	\$2,881,250	\$0	\$2,881,250	\$1,156,039	\$0	\$1,156,039	\$1,976,341	\$0	\$1,976,341
b. Land, structures, right-of-ways, appraisals, etc.	\$5,497,900	\$5,303,410	\$194,490	\$5,125,890	\$5,125,890	\$0	\$5,146,440	\$5,146,440	\$0
c. Relocation expenses and payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Architectural and engineering fees	\$2,997,474	\$0	\$2,997,474	\$1,142,536	\$0	\$1,142,536	\$1,315,199	\$0	\$1,315,199
e. Other architectural and engineering fees	\$495,125	\$0	\$495,125	\$347,710	\$0	\$347,710	\$347,710	\$0	\$347,710
f. Project inspection fees	\$1,763,200	\$0	\$1,763,200	\$742,644	\$0	\$742,644	\$958,412	\$0	\$958,412
g. Site work	\$7,603,022	\$0	\$7,603,022	\$0	\$0	\$0	\$0	\$0	\$0
h. Demolition and removal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
i. Construction	\$2,414,984	\$560,077	\$1,854,907	\$1,523,938	\$498,463	\$1,025,475	\$1,585,551	\$560,076	\$1,025,475
j. Equipment	\$12,327,062	\$1,332,516	\$10,994,546	\$4,990,307	\$706,104	\$4,284,203	\$6,155,370	\$1,018,277	\$5,137,093
k. Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>l. SUBTOTAL (add a through k)</b>	\$35,980,017	\$7,196,003	\$28,784,014	\$15,029,064	\$6,330,457	\$8,698,607	\$17,485,023	\$6,724,793	\$10,760,230
m. Contingencies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>n. TOTALS (sum of l and m)</b>	\$35,980,017	\$7,196,003	\$28,784,014	\$15,029,064	\$6,330,457	\$8,698,607	\$17,485,023	\$6,724,793	\$10,760,230

2. Program Income: Please provide the program income you listed in your application budget and actuals to date through the end of the reporting period.

a. Application Budget Program Income: \$1,567,257      b. Program Income to Date: \$0