

13Q2_Supplemental Answers_Tennessee

Connected Nation, Inc.

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For Q2 2013, Connected Tennessee is reporting a non-federal match percentage of 11.81 percent. However, the program is working on a budget modification request for submission to the State Broadband Initiatives (SBI) program office. The request includes an additional \$770,564 in allowable pre-award, non-federal match expenditures. The inclusion of this match would increase the program's match percentage to 35.97%.

14 a_Project Attachment_Data Collection

2. Describe any additional project milestones that have been accomplished over this reporting period (Exp: updates to state broadband maps and websites, map outreach activities).

Connected Tennessee continues to maintain the interactive mapping web application called My ConnectView. The application is housed in a highly available, monitored, and managed environment. My ConnectView is publicly available on the program website (<http://www.connectedtn.org/interactive-map>). There were a total of 457 visits to the interactive map between April 1, 2013, and June 30, 2013.

During this quarter, the project received a total of 19 broadband inquiries. Additional information received through e-mail from consumers that can also be used for verification purposes totaled 4 for this quarter. Users can also request non-confidential mapping data produced for the SBI grant program; 1 such data request was received between April 1, 2013, and June 30, 2013.

For this reporting period, 1,081 field verification tests were conducted. From program initiation through this reporting period, field validation testing has been completed against 61 companies (out of a universe of 86 viable providers) totaling 70.93 percent within the State of Tennessee.

Several broadband maps were updated and published on the program website this quarter including:

- Broadband Growth
- Broadband Service Inventory
- Broadband Service Inventory (Advertised Speeds of at Least 3 Mbps Downstream and 768 Kbps Upstream)
- Broadband Service Inventory by Congressional District
- Density of Providers
- Density of Households Unserved by a Broadband Provider
- Maximum Advertised Download Speed
- Multiple/Single Platform
- Underserved Areas
- Underserved Areas with Mobile

Business park data collection information, a piece of the program's Broadband Capacity Building efforts, was added as a data layer to the interactive mapping application (My ConnectView) this quarter. In addition, a link to a spreadsheet containing business park data was added to the interactive map for users to download.

New research unveiled by Connected Tennessee during the second quarter showed that more than 80% of Tennessee households have access to broadband services of at least 100 megabytes per second (Mbps) download and 1.5 Mbps upload. The program asserts that the ability for 80% of Tennessee households to access 100 Mbps download speeds is important for more advanced uses like digital learning, telehealth, and telework opportunities, while the 6.39% of Tennessee households with access to broadband speeds of 1 gigabyte per second (Gbps) makes Tennessee a leader in Gigabit connectivity. This was the seventh comprehensive broadband availability data update since the State Broadband Initiatives program started in 2010.

4. Provide any other information or statistics that you think would be useful to NTIA as it assesses your broadband data collection, validation, and publication activities.

The use of Mobile Pulse as a performance measurement tool for mobile broadband was introduced as a field validation methodology in Q1 2013 and significantly expanded during Q2 2013. Of the 1,081 total field verifications conducted on all platforms across Tennessee, Mobile Pulse represented all 1,081 of these validations.

The Engineering and Technical Services (ETS) team has formulated a plan to conduct crowd sourcing and field validation testing to ascertain satellite broadband performance under specific conditions. With regard to crowd sourcing, an e-mail has been developed to respond to all broadband inquiries with known satellite connectivity to request they run speed tests on the program website during a specified window of time so we can capture and identify such tests.

In order to drive Community Anchor Institution (CAI) data collection, outreach and awareness staff conducted a Digital Learning campaign in order to recognize efforts across the state to encourage increased technology adoption.

14 b_Project Attachment_Capacity Building

2. Describe your progress meeting each major activity/milestone approved in the Project Plan for this project; any challenges or obstacles encountered and mitigation strategies you have employed; planned major activities for the next quarter; and any additional project milestones or information.

Capacity Building milestones for Year 4, Quarter 2 per approved project plan:

Milestone: Initiate collection and confirmation of addresses and GPS data.

This milestone was met. Partners from the Tennessee Department of Economic & Community Development (ECD) and the Tennessee Valley Authority (TVA) were contacted regarding business park connectivity data and were engaged in identification of additional priorities during Q1 2013. This

information was presented to stakeholders at the Connected Tennessee State Broadband Summit held in Nashville, Tennessee, on February 27 in the context of Tennessee business recruitment efforts with an emphasis on special target markets such as data centers. During Q2 2013, the database of business and industrial sites was geocoded and mapped via My ConnectView, the interactive map accessible at <http://www.connectedtn.org/interactive-map>. Site data are also available for download via the interactive map.

Milestone: Provide business park information to be posted on TVA website to be available to the public

This milestone was met. During Q2 2013, program staff produced a geographic information systems (GIS) data-layer for collected business park information which was incorporated and made available for public viewing and data file download via the My ConnectView Interactive mapping tool. This information was then supplied to TVA target-market specialists for consideration of TVA website display and distribution.

Capacity Building milestones outstanding from previous quarters:

Outstanding milestone from Year 4, Quarter 1: Review business park data collection from Year 3 with State and plan Year 4 other priority business sites and locations with State.

This milestone was met. During Q2 2013, Connected Tennessee met with the Tennessee Department of Economic & Community Development at which time the incorporation of economic development sites certified through the Select Tennessee Certified Sites Program (<http://www.selecttennessee.com/>) was established as a Year 4 priority. The first six certified sites were announced on June 25, 2013. The first six sites are as follows:

1. State Road 111 Industrial Park: Overton County (310 Oak Hill Rd., Livingston)
2. Centre 75 Business Park, Lot 7: Loudon County (1600 Centre Park Dr., Loudon)
3. Horizon Center, Development Area 6: Roane County (Renovare Blvd., Oak Ridge)
4. Langley Hall Industrial Site "East": Sumner County (Airport Road, Gallatin)
5. Langley Hall Industrial Site "West": Sumner County (Airport Road, Gallatin)
6. Timberlake Industrial Site: Henderson County (Kirby Drive, Lexington)

Capacity Building planned major activities for the next quarter:

Continue the collection and confirmation of business park information.

14 b_Project Attachment_Technical Assistance

2. Describe your progress meeting each major activity/milestone approved in the Project Plan for this project; any challenges or obstacles encountered and mitigation strategies you have employed; planned major activities for the next quarter; and any additional project milestones or information.

Technical Assistance milestones for Year 4, Quarter 2 per approved project plan:

Milestone: Select and initiate 3 to 6 local technical assistance projects based on State priorities for Year 4.

This milestone was met. Progress on the technical assistance projects was discussed during regularly held team meetings and periodic updates during the quarter include:

Program staff worked with Jackson Energy Authority (JEA) to complete a technology access assessment of the Madison County area. A webinar was provided during the quarter for the group wherein the Connected web portal used in completing the assessment was demonstrated.

On April 4, 2013, a community action meeting was organized by the City of Knoxville, the Knoxville Entrepreneur Center, and Connected Tennessee to address the issue of broadband connectivity available to residents and businesses within the Central Business Improvement District (CBID) footprint. Maps created through SBI data collection efforts provided reference for the group which allowed attendees and providers to see what availability was being reported and committed to assist the city in collecting the data from downtown entities via speed tests and broadband inquiry forms. A questionnaire was developed and distributed via e-mail to CBID members. From May 1 through June 1, 2013, 141 speed tests were conducted as a result. Results from all the speed tests were compiled and a map was provided to city officials and CBID leadership. Next steps have not been determined by the city. Progress from this project includes extended service to previously unserved buildings in downtown Knoxville and the engagement of a wireless provider.

As part of the efforts to provide information, resources, and support in expanding and improving broadband access and speed in downtown Martin, TN, in preparation for a local company expansion, program representatives met with the President & CEO of the Economic Development Board and Executive Director of the Chamber of Commerce in Weakley County on April 5, 2013, to discuss the Connected assessment program requirements and the community Connected certification process. The group discussed possible team members and received a Connected portal demonstration. As of the end of the quarter, they were in the process of forming a community team and identifying a champion who would lead the assessment efforts.

Staff met with officials from the Tennessee Department of Environment and Conservation to strategize solutions to mobile data coverage and visitor center Wi-Fi challenges in and around Tennessee's state parks and recreation areas. The scope and next steps for the project were still in development as of the end of the quarter.

Working with officials from the City of Morristown and Morristown/Hamblen County Chamber of Commerce, program staff helped to outline priorities in the telehealth and telework spaces. Priorities were identified to pursue a digital skills training and distributed workplace center tied to nursing and pharmacy partnerships with local colleges and community colleges.

Connected Tennessee worked with state, regional, and local education leaders to support the connectivity and education technology goals of Tennessee's public schools. Heightened emphasis exists in this sector due to the readiness challenges of being prepared for the implementation of online Partnership for Assessment of Readiness for College and Careers (PARCC) testing in alignment with the Common Core State Standards. The online testing in Tennessee's public schools will begin with the 2014-15 school year, and Connected Tennessee will work to support technical needs to encourage readiness in identified districts of significant need.

Milestone: Commence development of the 2013 residential survey script.

This milestone was met. The program team reached out to the Tennessee Department of Economic & Community Development in developing the 2013 residential survey. As of the end of the quarter, the survey script was being edited to incorporate recommendations from state stakeholders.

Milestone: Analyze 2013 business survey research results and present initial findings to stakeholders.

This milestone was partially met. The 2013 business survey results, methodology, and script were presented to Dr. Mingjie Sun of Iowa State University, who was in the process of reviewing those documents at the quarter's end. Once the review process is complete, the results will be first sent to the National Telecommunications and Information Administration (NTIA) and state stakeholders, and then be released to the public soon thereafter.

Technical Assistance milestones outstanding from previous quarters:

Outstanding milestone from Year 4, Quarter 1: Close out local technical assistance projects from Year 3.

This milestone was met. During Q1 2013, a Project Lessons Learned document was developed that outlined successes, opportunities, and lessons learned from working with technical assistance projects underway. Program field staff coordinated meetings with project stakeholders wherein minutes including action items were recorded. Staff worked with those stakeholders to complete tasks necessary to keep the project on track. A formal report was drafted and prepared for presentation to ECD and/or other stakeholders as needed; in-person review of technical assistance projects will be arranged at the direction of ECD. To close out the milestone, lessons learned from closed projects were evaluated and applied to the management of open projects. The broadband expansion projects in Dickson and Hardeman Counties were closed while the middle Tennessee fiber asset project remained stalled due to transitions among other key community partners. Work continued on other open Year 3 projects wherein progress will be tracked and formally presented to stakeholders as appropriate. Connected Tennessee staff met in person with the Department of Economic and Community Development on April 23, 2013, where topics included coordination and collaboration for activities and goals and specific technical assistance projects underway. Project successes will be shared via press releases, website updates, blog, or as required by stakeholders post-closing as appropriate.

Outstanding milestone from Year 4, Quarter 1: Initiate Year 4 Technical Assistance Project Selection with the State of Tennessee.

This milestone was met. Connected Tennessee staff met in person with the Department of Economic and Community Development on April 23, 2013, where topics included coordination and collaboration for activities and goals and the Connected program which will be used to identify new projects. Additionally, Year 4 projects were identified as needs were communicated to Connected Tennessee from various communities across the state as follows: Increase Wi-Fi and Broadband Access in State Parks, Downtown Knoxville Central Business Improvement District (CBID) Broadband Connectivity, Morristown Digital Skills Training Center, and Common Core and Partnership for Assessment of Readiness for College and Careers (PARCC) Implementation Preparation. Finally, technology assessments commenced for the communities of Chattanooga and Bristol.

Outstanding milestone from Year 4, Quarter 1: Initiate 2013 business survey peer review.

The milestone was met. The 2013 business survey results, the survey script, and a document outlining the methodology used for the survey were provided to Dr. Mingjie Sun of Iowa State University for review.

Technical Assistance planned major activities for the next quarter:

Perform 2013 analysis on targeted broadband growth areas.
Finalize and distribute 2013 statewide business survey research results.
Initiate 2013 non-adopter oversample peer review.
Initiate 2013 non-adopter oversample survey.
Initiate 2013 residential survey peer review.
Initiate 2013 residential survey.
Continue to support local technical assistance projects through execution of local projects for Year 4.

4. Provide any other information that you think would be useful to NTIA as it assesses this project's progress.

Connected Tennessee produced a white paper focusing on online education in Q2 2013. The report finds that in 2012, approximately 1.4 million adults, or more than one-third (36%) of adult Tennesseans with Internet access, take online classes or conduct research for schoolwork online, while approximately 272,000 adults, or 13%, of those who use a cell phone to access the Internet, conduct online education through these devices. In addition, more than one-half of parents (55%) report that their children use their home Internet service for schoolwork, while 60% say that their children use the Internet at their schools.

The 2013 business survey results will be released in Q3 2013 once the peer review process is complete. Both the 2013 residential and non-adopter surveys will be initiated in Q3 2013 once all recommendations from the state stakeholders have been incorporated. Once both the residential and non-adopter surveys are completed in the field, the results will then be sent to be peer reviewed.