

## **13Q4\_Supplemental Answers\_Tennessee**

### **Connected Tennessee**

**Grant Number 47-50-M09041**

**Reporting Period End Date 12-31-13**

For Q4 2013, the program's match percentage based on total expenditures was 11.22%. Thus the program will fall short of the required match percentage by 8.94%. Connected Tennessee currently has a cost share waiver in place with its granting agency through Q4 2013. Moreover, in Q4 2013 and in conjunction with a submitted budget modification request, program staff sought approval of an extension to the cost share waiver through Q1 2014 in an effort to provide time for the budget modification to be considered and resolved.

### ***14a\_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).**

Updates to the following maps occurred, based on the newest semi-annual dataset submitted to the National Telecommunications and Information Administration (NTIA):

- a) Broadband Availability Maps
- b) Unserved Density Maps
- c) Broadband Availability at 3M/768K Maps
- d) Maximum Advertised Download Speed Maps
- e) Underserved Area Maps
- f) Multi-Single Platform Maps
- g) Provider Density Maps
- h) My ConnectView Interactive Map
- i) Broadband Growth Maps
- j) Congressional District Maps

The interactive mapping web application, called My ConnectView, continues to be maintained. The application is housed in a highly available, monitored, and managed environment. My ConnectView is publicly available on the program website ([www.connectedtennessee.org](http://www.connectedtennessee.org)). There were a total of 498 visits to the interactive map between October 1, 2013 and December 31, 2013.

During this quarter, the project received a total of 60 broadband inquiries. Additional information received through e-mail from consumers that was also used for verification purposes totaled 3 for this quarter. Users can also request non-confidential mapping data produced for the State Broadband Initiative (SBI) grant program. Two such requests were received between October 1, 2013 and December 31, 2013.

For this reporting period, 278 field verification tests were conducted. From program initiation through this reporting period, field validation testing has been completed against 72 companies (out of 87 viable providers) totaling 82.76 percent within the state of Tennessee.

Program staff worked in conjunction with City of Lakeland officials to assess broadband availability in the area, identify options for expansion, conduct citizen outreach, and aggregate demand data in an unserved area of the city. This information will allow city officials to evaluate its broadband options.

Program staff began outreach to the provider community regarding the April 2014 semi-annual data submission, both soliciting the data from providers for the upcoming submission, as well as outlining pertinent dates.

**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.**

In October, program staff reviewed provider challenges to the price-cap carrier filings to provide confirmation of the provider service area offering 3 megabytes per second (Mbps) download/768 kilobytes per second (Kbps) upload broadband within the challenged census blocks, or indicated the alternate situation as necessary. A copy of the filing can be found at the following link: [http://www.connectednation.org/sites/default/files/connected\\_nations\\_reply\\_comments\\_caf\\_phase\\_1\\_challenge\\_process.pdf](http://www.connectednation.org/sites/default/files/connected_nations_reply_comments_caf_phase_1_challenge_process.pdf). For convenience, this filing is also being presented within the "13Q4\_Project Attachment\_Question 5\_Tennessee" document.

In December, program staff created a statewide map of Connect America Fund authorization areas at the census block level; this was based on a Federal Communications Commission (FCC) dataset released on December 5, 2013, on the total number of locations authorized for funding and the total funding authorized based on location type. This map can be found at the following link: <http://www.connectednation.org/fcc-maps>. For convenience, this map is also being presented within the "13Q4\_Project Attachment\_Question 5\_Tennessee" document.

A broadband availability analysis of the latest mapping data was conducted this quarter illustrating the broadband availability in the state of Tennessee. A key finding of the analysis showed 82 percent of Tennessee households now have access to broadband service of at least 100 Mbps download speeds and 1.5 Mbps, an increase of 40.5 percentage points in just two years. The analysis and results were posted on the program website. A press release was issued, blog posts were written, and social media announcements were released to promote the analysis.

***14a\_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 4 per approved project plan:

**Milestone: Continue the collection and confirmation of business park address information.**

This milestone was met. During Q4 2013, additional business and industrial park data was collected, geocoded, digitized and added to the inventory. Eleven new “Select Tennessee Certified Sites” were announced by the Tennessee Department of Economic & Community Development. A Select Tennessee Certified Site has a minimum of 20 developable acres, has utilities on site or a formal extension plan in place, has a boundary survey and topographic maps completed, has documented environmental conditions and geotechnical analysis, has minimized risk factors for development, and is certified by Austin Consulting and Foote Consulting. These sites were added to the inventory during Q4 2013 and geocoded. Furthermore, a custom display layer for these locations was added to My ConnectView, the Tennessee SBI program’s interactive broadband map.

**Milestone: Incorporate broadband Information into other priority business sites and locations dataset.**

This milestone was met. During Q4 2013, information collected regarding the location of business/industrial parks, broadband data from the current map, and information gathered from providers, as part of the data collection process, was incorporated into the business park dataset. This data was incorporated as a custom display layer into My ConnectView, the program’s interactive broadband mapping application. The resulting display will illustrate known priority business sites along with broadband adoption, availability, and use data in Tennessee.

Annual Capacity Building outcomes per approved project plan:

**Year 4 Annual Outcome: Continue to create an inventory and map of available priority business sites and locations across the State of Tennessee as required by the State. Primary corresponding activities include determining project requirements for business park location mapping, creating a template for telecommunications information, beginning field work and geocoding, digitizing park information collected for mapping, incorporating broadband Information into industrial park dataset, and working with providers to add telecommunications information.**

This outcome was met. During Year 4, business parks and industrial site locations were identified and updated for mapping, geocoding, and broadband telecommunications information. This information was also collected for 22 additional locations identified as part of the Tennessee Department of Economic & Community Development’s new “Select Tennessee Certified Sites” program. A custom interactive mapping layer for these sites was developed for My ConnectView. This data layer overlay allows the business parks to be viewed with broadband adoption, availability, and use information gathered in Tennessee through the SBI program.

Outstanding Annual Capacity Building Outcomes:

**Year 3 Outstanding Annual Outcome: Create an inventory and map of available business parks across the State of Tennessee as required by the State. Primary corresponding activities include determining project requirements for business park location mapping, creating a template for telecommunications information, beginning field work and geocoding, digitizing park information collected for mapping, incorporating broadband Information into business park dataset, and working with providers to add telecommunications information.**

This outcome was met during Year 4. A statewide database of business parks and industrial locations was updated, mapped, geocoded, and matched with maximum advertised speeds available to the location based on the most recent semi-annual broadband data collection update. Information received from broadband providers was incorporated into a custom data layer, planned and created specifically for business park information, which was added to My ConnectView, along with an additional layer collected for 22 additional locations identified as part of the Tennessee Department of Economic & Community Development's new "Select Tennessee Certified Sites" program. This data layer overlay allows the business parks to be viewed with broadband adoption, availability, and use information gathered through the Tennessee SBI program.

Broadband Capacity planned major activities for the next quarter:

Review other priority business sites and locations data collection from Year 4 with state.

Reach out to providers, TVA, and other stakeholders for any updates to be made to the dataset on all collected priority location data including industrial parks, business parks, and other priority business sites and locations.

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

Outreach and awareness staff created and sent three monthly e-newsletters to subscribers and stakeholders providing updates on the progress to expand broadband access, adoption, and use in Tennessee.

Program representatives presented at the National Black Caucus of State Legislators 37th Annual Conference in Memphis this quarter. The session, "Preparing Our Youth to Take the Nation's Helm," was created to showcase the nation's best policy ideas for legislators to educate and prepare the new generation to achieve its potential. Staff discussed E-Rate reform and practical solutions for policymakers interested in the development of widespread technological advancement and access to broadband for youth in their states.

***14b\_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 4 per approved project plan:

**Milestone: Analyze 2013 non-adopter oversample survey results.**

This milestone was not met. While there was a minor scheduling delay in the planned data collection schedule, as of the end of Q4 2013 data collection was completed, and the results are being prepared to be weighted, analyzed, and presented to the peer reviewer. The data analysis, peer review, and presentation of the initial results to state stakeholders and NTIA are anticipated to begin in Q1 2014.

**Milestone: Analyze 2013 residential survey research results and present findings to stakeholders.**

This milestone was not met. Survey data collection was delayed due to a minor shift in scheduling; however, at the end of Q4 2013 data collection was completed and the results are being prepared to be weighted, analyzed, and presented to the peer reviewer. The data analysis, peer review, and presentation of the initial results to state stakeholders and NTIA are anticipated to begin in Q1 2014.

**Milestone: Commence development of the 2014 business survey script.**

This milestone was partially met. State stakeholders were given the opportunity to provide input and make requests related to the 2014 business survey. The creation of the survey instrument is underway, with received feedback in mind; however, the survey script was not completed during the quarter. Writing continues on the 2014 business survey script, which is expected to be finalized in Q1 2014.

**Milestone: Continue to provide support and guidance to local technical assistance projects in Year 4.**

This milestone was met. Program staff continued to track, document the progress, and provide support for local technical assistance projects. Updates to Q4 2013 projects in Tennessee include:

The Sullivan County team completed a community technology assessment and Technology Action Plan during Q4 2013. Sullivan County was subsequently recognized as a certified Connected community on October 9, 2013. Following a presentation of the community plan, program staff participated in a November 2013 meeting at the Bristol Public Library. The purpose of this meeting was to pursue Adult Digital Literacy academies at other county library branches, as recommended within the county's technology action plan as an area for technology expansion. The local project team will meet again in Q1 2014 after funding sources have been identified for such expansion.

The City of Morristown completed a technology assessment during Q4 2013 and subsequently its Technology Action Plan. Recognition of the city as a certified Connected community occurred on October 9, 2013. The Morristown project team is in the process of devising individualized teams to address its priority action items with the goal of having one project completed by Q2 2014. Action items identified within Morristown's Technology Action Plan include initiation of a community computer refurbishment and recycling program, developing a technology mentorship program, and developing a broadband training and awareness program for small and medium sized businesses.

Program staff worked with leaders in the Frayser Community in Memphis who would like to find resources for its community to improve the availability of broadband. State and local leaders were planning to conduct a community technology assessment as a beginning to these efforts. However, at this time they do not feel they have the resources for this project.

The Jackson/Madison County Community team is very close to completing a community technology assessment. The project team recently appointed a new community champion and is in the processing of bringing him up to speed on the assessment process. Currently, the team is waiting on information from the area school, and is targeting the end of March for completion.

Staff continued working with the team from the City of Martin which is approximately 50% complete with a community technology assessment. Meetings are scheduled to review the current information and to delegate responsibility for gathering of outstanding information needed in order to complete the

process. Thus far, developing enhanced broadband speeds in the downtown area has been identified as a priority.

With assistance from program staff, the City of Lakeland launched a campaign to collect information on the demand for broadband in the community in order to encourage broadband Internet providers to expand high-speed Internet services to unserved parts of the city. A wealth of feedback was received, primarily newly developed communities that are in need of broadband. Local leaders are in the process of putting together a project team.

Efforts to assist the Knoxville Entrepreneur Center (KEC) paused during Q4 2013 due to a change of leadership at KEC. Staff reached out to KEC's parent entity LaunchTN to offer assistance in other entrepreneurial accelerators across the state and for guidance on next steps with KEC. Program representatives met with the Director of Entrepreneurship for LaunchTN in October and December 2013 to discuss the KEC project and opportunities to expand assistance statewide.

Staff continued to work with the Executive Director of the Clinch-Powell Educational Cooperative regarding US Department of Agriculture (USDA), Rural Development funding opportunities to support the connectivity and education technology goals of Tennessee's public schools, and the implementation of an online Partnership for Assessment of Readiness for College and Careers (PARCC).

Greene County's project team began working on a community technology assessment in November 2013. Three meetings of the team have been held and 13 team members have participated in those meetings and in data gathering for the assessment. One of the priority projects already identified is creating applications (apps) for both the city and county through which citizens will have access to all pertinent information and a thorough review of underserved areas county-wide where broadband expansion is possible.

Washington County has held an initial informational meeting regarding local technology projects and the need to conduct an assessment. The team is in the process of identifying team members from a variety of sectors to participate.

#### Outstanding Technical Assistance milestones:

#### **Year 4, Quarter 3 Outstanding Milestone: Finalize and distribute 2013 statewide business survey research results.**

This milestone was met. The survey research results were finalized in the previous quarter; however, updates to the program website (designed to display the results and graphical information from the survey) were not completed as of the end of last quarter. During Q4 2013, updates to the website were completed and the results of the 2013 business survey, along with graphical information designed to highlight key findings of the survey, were released publicly. The survey results were presented to stakeholders during coordinated meetings. Data collected from businesses across the state show that more than three-fourths of businesses in Tennessee (76%) use broadband, leaving an estimated 31,000 businesses that aren't connected. Moreover, Tennessee's businesses earn over \$30 billion in online sales annually, making it an important driver for our state's economy. A press release was distributed, blogs posted, and social media announcements were conducted to raise awareness of the survey results.

**Year 4, Quarter 3 Outstanding Milestone: Initiate 2013 non-adopter oversample survey.**

This milestone was met. The survey instrument for the 2013 non-adopter oversample survey was written, with appropriate programming notes, and data collection began in Q3 2013. The survey data collection was completed in Q4 2013, resulting in a data file with the results from the survey. Initial data analysis, peer review, and presentation of the preliminary results to state stakeholders and NTIA are expected to begin in Q1 2014.

**Year 4, Quarter 3 Outstanding Milestone: Initiate 2013 residential survey peer review.**

This milestone has not been met. The data collection process for the 2013 residential survey, which was delayed slightly due to a schedule revision, has only recently finished. The initial data has not yet been analyzed or prepared for peer review, thus making the peer review of the survey questions impractical. The program's research team anticipates naming a peer reviewer and completing the peer review of the 2013 residential survey in Q1 2014.

**Year 4, Quarter 3 Outstanding Milestone: Initiate 2013 residential survey.**

This milestone was met. The spreadsheet with census-defined quotas has been created, the survey instrument has been written, the data collection has been completed, and the data file has been created. The initial data analysis, peer review, and presentation of the initial results to state stakeholders and the NTIA are anticipated to begin in Q1 2014.

**Year 4, Quarter 3 Outstanding Milestone: Initiate 2013 non-adopter oversample peer review.**

This milestone has not been met. The data collection process for the 2013 non-adopter oversample survey has only recently finished. The preliminary data has not yet been analyzed or prepared for peer review, thus making the peer review of the survey questions impractical. Staff anticipates naming a peer reviewer and completing the peer review of the 2013 non-adopter oversample survey in Q1 2014.

Annual Technical Assistance Outcomes for Year 4:

**Annual Outcome: Close out Year 3 technical assistance projects by planning and facilitating meetings with local project teams to evaluate lessons learned and best practices from Year 3 projects. Compile meeting notes, lessons learned, and best practices. Create formal report on best practices and lessons learned from Year 3 local projects and bring awareness to project successes via press releases, website updates, blog, or as required by stakeholders.**

This annual outcome was met. Connected Tennessee developed a Project Lessons Learned document that outlined successes, opportunities, and lessons learned from working with local project teams on technical assistance projects underway including: workforce project for communities within a 50-mile radius from airports, fiber assets branding campaign, collaboration with LaunchTN, support of the entrepreneur incubator in Knoxville, broadband expansion in Dickson County, broadband expansion in Hardeman County, and expansion of broadband access and speed in downtown Martin. The document was finalized on March 28. Meeting notes and best practices were documented and project successes were issued via media releases, blogs, and website updates.

**Annual Outcome: Collaborate with the State of Tennessee to develop criteria and priorities for technical assistance project selection for Year 4. Corresponding primary activities include planning, scheduling and developing an agenda for the meeting, documenting meeting notes, criteria and priorities for project selection. Based on State's guidance of criteria and priorities, 3 to 6 projects will be selected to be implemented in Year 4. Connected Tennessee will work with local project teams to develop project charters, kickoff the selected projects via press release or as instructed by State of Tennessee and continue to track and document project progress.**

This annual outcome was met. Technical assistance projects were selected and program staff worked with local project teams to develop charters. The identified technical assistance projects carrying over or planned for initiation in Year 4 included the community technology assessment for Sullivan County, the community technology assessment for the City of Morristown, the community technology assessment for Jackson/Madison County, the community technology assessment for the City of Martin, connectivity analysis in support of the Tennessee Department of Economic & Community Development's new "Select Tennessee Certified Sites" program, and technical assistance support for the Knoxville Entrepreneur Center. Staff supported the projects, documented the project progress, and issued press releases where warranted.

**Annual Outcome: Complete 2013 analysis of broadband build out for areas prioritized based on level of need by identifying areas with the largest need for broadband build out from existing maps and research data, conducting an analysis of available assets for build out, and conducting a build out analysis study and compiling a report.**

This annual outcome was partially met. The analysis of broadband build out for areas prioritized based on level of need and the analysis of available assets for that build out was completed in 2013. A report was drafted of the analysis but not yet finalized. The report was being peer reviewed by internal engineering professionals at the time of this report. Feedback from the review will be incorporated into the document and the report will then be finalized and distributed in early 2014.

**Annual Outcome: Finalize and distribute 2012 business survey research results. Incorporate stakeholder recommendations and create final report detailing results of 2012 business survey. Deliver in-person presentation of research results to ECD and other stakeholders. Announce the release of data via press release, website update, and meetings with stakeholders.**

This annual outcome was met. The 2012 business survey results were peer reviewed and finalized. The results were presented to stakeholders and publicly released on the program website. A press release, blog posts, and social media announcements were made to raise awareness of the release and distribution of survey results.

**Annual Outcome: Initiate the 2013 residential survey and the 2013 non-adopter oversample survey by creating spreadsheets with census-defined quotas and weights for 2013 and collect respondent data. After analysis and the review process that includes collaborating with the State, the 2013 residential survey and the 2013 non-adopter oversample survey will be delivered in-person to ECD and other stakeholders. Also survey results will be announced via press release, website update, and meetings with stakeholders.**

This annual outcome was partially met. The residential survey and non-adopter oversample surveys were initiated, spreadsheets were created with census-defined quotas, and respondent data was



collected. Because data collection ended in late Q4 2013, data analysis and peer review of preliminary survey results were not completed, and results were not provided to NTIA, state stakeholders, or a peer reviewer, all of which is anticipated to be completed in Q1 2014.

**Annual Outcome: Facilitate Year 4 peer review of survey results and resulting analysis for peer review. Review peer recommendation and update program as required.**

This annual outcome was not met. Because the data collection ended in late Q4 2013, data analysis and peer review of preliminary survey results were not completed, and results were not provided to the NTIA, state stakeholders, or a peer reviewer, all of which is anticipated to be completed in Q1 2014.

Outstanding Annual Technical Assistance Outcomes:

**Year 3 Outstanding Outcome: Collaborate with the State of Tennessee to develop criteria and priorities for technical assistance project selection for Year 3. Corresponding primary activities include planning, scheduling and developing an agenda for the meeting, documenting meeting notes, criteria, and priorities for project selection. Based on the State's guidance of criteria and priorities, 3 to 6 projects will be selected to be implemented in Year 3. Connected Tennessee will work with local project teams to develop project charters, kickoff the selected projects via press release or as instructed by State of Tennessee and continue to track and document project progress.**

This annual outcome was met. Staff developed a Project Lessons Learned document that outlined successes, opportunities, and lessons learned from working with local project teams on technical assistance projects underway including: workforce project for communities within a 50-mile radius from airports, fiber assets branding campaign, collaboration with LaunchTN, support of the entrepreneur incubator in Knoxville, broadband expansion in Dickson County, broadband expansion in Hardeman County, and expansion of broadband access and speed in downtown Martin. The document was finalized on March 28. Meeting notes and best practices were documented and project successes were issued via media releases, blogs and website updates.

**Year 3 Outstanding Outcome: Develop research plan for years 3 through 5 through collaboration with the State of Tennessee. Primary corresponding activities include developing research plan and seeking NTIA approval for Years 3 through 5.**

This annual outcome was met. An amended project plan was submitted to NTIA and accepted in Year 3. Research plans for Years 3 through 5 were developed and approved by NTIA via the amended project plan, which incorporated feedback received from state stakeholders. Per the approved project plan, one residential survey will be conducted annually in 2013 and 2014 and one business survey annually in 2012 and 2014. Stakeholder recommendations and guidance, particularly with regard to research topics, will be incorporated into the program's future surveys.

**Year 3 Outstanding Outcome: Upon approval from Tennessee stakeholders and NTIA, initiate the 2012 statewide residential survey research and the 2012 statewide business surveys by creating spreadsheets with census-defined quotas and weights for 2012, collecting respondent data and creating data file with weighted results from 2012. After analysis and the review process that includes collaborating with the ECD, the 2012 residential survey will be delivered in-person to ECD and other stakeholders. Also survey results will be announced via press release, website update, and meetings with stakeholders.**

This annual outcome was met. NTIA approval for the 2012 residential survey was received in Q3 2012. In the same quarter, the survey was initiated. Results of the residential survey were analyzed in Q4 2012. The business survey was conducted in 2013. Peer reviews for both surveys were completed in 2013 and the results were presented to stakeholders in person. The survey results were released publicly on the program website and announced via press release, blog posts, and social media updates.

**Year 3 Outstanding Outcome: Facilitate Year 3 peer review of survey results and resulting analysis. Review peer recommendation and update program as required.**

This annual outcome was met. The survey results were presented to the appropriate peer reviewer. Dr. John Horrigan of the Joint Center for Political and Economic Studies peer reviewed the 2012 residential survey results and Dr. Mingjie Sun of Iowa State University completed the peer review of the 2013 business survey.

Technical Assistance planned major activities for the next quarter:

Close out technical assistance projects from Year 4.

Finalize and distribute 2013 residential survey research results.

Finalize and distribute 2013 non-adopter oversample survey results.

Initiate 2014 business survey.

Initiate 2014 business survey peer review.

Initiate Year 5 Technical Assistance Project Selection with the State of Tennessee.

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

According to the business survey conducted by the program in 2013, 76% of businesses use broadband, and Tennessee businesses earn approximately \$31 billion annually in online sales. In addition, program research staff released a report on the need for digital literacy skills in Tennessee. This study found that 71% of Tennessee businesses say it is "important" or "very important" for potential employees to have digital skills, while two out of five Tennessee businesses (40%) say it is "difficult" or "very difficult" to find employees with the necessary technical skills.

Ten communities, a total of 37 active planning team members, are currently engaged, including two certified Connected communities, in the local technical assistance process. Through the end of Q4 2013, staff is well on its way to engaging all 95 counties in the state at some level.

Multi-sector technology project teams participating in the local technical assistance program have identified the following technology assets within their own communities:

Public computer centers: 24

Digital literacy programs: 28

Broadband awareness programs: 12

Broadband programs focused on vulnerable populations: 16

These assets are inventoried during each community's assessment of local broadband access, adoption, and use and can be leveraged to develop locally relevant digital inclusion strategies during the team's planning process.

A map that displays the status of each community engaged in the localized technology project team effort was maintained. This map shows the most current view of where each community is in the process of becoming a certified Connected community in Tennessee. The most current version of this map has been provided as an attachment via the "13Q4\_Project Attachment\_Question 5\_Tennessee" document.