ASR Analytics, LLC
Broadband Technology Opportunities Program (BTOP) Evaluation Study
Supplemental Information

Summary

In 2010, after a competitive procurement, National Telecommunications and Information Administration (NTIA) awarded a contract to research firm ASR Analytics, LLC (ASR) to conduct an independent analysis of the social and economic impacts of Recovery Act grants awarded under the Broadband Technology Opportunities Program (BTOP). The scope of work included an assessment of the impact of BTOP's grants on broadband availability and adoption, and the social and economic benefits of BTOP grants in areas served by the grantees. Over a four year period, ASR performed an extensive analysis of data from more than 200 grantees, and wrote 27 detailed case studies on individual BTOP projects based on site visits that included interviews, observations, and data collection. ASR produced a Final Report, two Interim Reports, Case Studies and a Short-Term Economic Impacts Report based on the analyses. A complete description of the methodology used in the evaluation study is available in the BTOP Evaluation Study Design.

Redactions to Performance Progress Report Data

All BTOP grantees, including Comprehensive Community Infrastructure (CCI), Sustainable Broadband Adoption (SBA), and Public Computer Center (PCC) projects, submitted Quarterly Performance Progress Reports (PPR) and Annual Performance Progress Reports (APR) to NTIA. These reports captured accomplishments, progress and planning data, budget information and key milestone indicator information. NTIA used the report information to assess the project's overall health, to monitor progress made against milestones, and to identify and mitigate areas of concern or risk to project completion and success. Federal staff also reviewed the budget and cost information to assess the overall financial management of each project, to ensure that BTOP expenditures were consistent with the recipient's anticipated progress, and to monitor the rate of matching expenditures.

As these reports and data are publically available, all BTOP recipients had the opportunity to redact any PPR and APR data for legal or security purposes. The following files are the NTIA-created PPR and APR raw data files that contain post-redaction data and are publically released as part of this ASR study:

- *CCI Data Dictionary with Data.xlsx*
- *PCC Data Dictionary with Data.xlsx*
- *SBA Data Dictionary with Data.xlsx*

Additional ASR Data

NTIA is also releasing the ASR data and an explanation of how the evaluation study team arrived at the results presented in the *Final Report*. The *Final Report* included the following types of analysis:

- Summaries of grant budgets and project activities, both cumulatively and showing outcomes over time. This data can be found in the above mentioned *Data Dictionaries with Data*.
- Estimated short-term economic impacts based on budget data and expenditures. This data can be found in the above mentioned *Data Dictionaries with Data*.
- Estimated intermediate quantitative impacts of PCC and SBA grants based on applied findings in the broadband literature, noted in Appendix B of the *Study Design*, to grantee-reported and publicly available data.
- Estimated broadband cost reductions for community anchor institutions (CAIs) based on pricing and subscription speed data in the evaluation study sample and applying changes to all connected CAIs.
- Estimated effects of CCI grants on broadband availability based on National Broadband Map (NBM) and publicly available data.

- Estimated effects of CCI grants on broadband availability to extrapolate the long-term quantitative benefits of BTOP.

ASR prepared two files, the *Raw Data Delivery.pdf* file and the *Raw Data File List and Descriptions.xlsx*, to describe the data used and how ASR arrived at the results presented. The *Raw Data Delivery.pdf* file describes the processes used to create the results presented in the Final Report. The *Raw Data File List and Descriptions.xlsx* is an Excel spreadsheet listing all individual files provided to NTIA. Below is the table of contents noted in the *Raw Data File List and Descriptions.xlsx* file.

Sheet Name	Description	Directory Name	Raw Data Section	Final Report Section
Shared Source Code	Snippets of code that are referenced by all R scripts used to perform any kind of data management or analysis for the Final Report	Shared Source Code	Section 2	N/A
Input Files	Disaggregated, underlying data used in the Final Report, provided to the extent practical and extent allowed by terms of use	Input Files	Section 3	N/A
Prepared Data	Data derived by ASR from "Input Files" to provide consistent methods of using primary data for multiple purposes. All provided "Prepared Data" are derived from provided "Input Files." Note: The Excel versions of "Prepared Data" are provided for users to visually inspect or interact with the data. Therefore, ASR includes descriptive grant variables (e.g., recipient name, grant name, grant type) in the Excel versions of "Prepared Data" that describe grants, grant activities, or grant service areas. The descriptive grant variables for all grants are provided in the "Grants" "Prepared Data." Instead of repeatedly listing these descriptive variables, Excel files which contain them have "All variables in "Grants" in their variable lists. These descriptive variables are not included in the RDA versions of "Prepared Data," but can be retrieved by joining data with "Grants" by award number.	Prepared Data	Section 4	N/A
Statistical Analysis	Results of long-term statistical analyses performed by ASR. Statistical analyses are saved, then loaded when required to avoid unnecessary re-estimation	Statistical Analysis	Section 5	N/A
0. Executive Summary	Tables and figures created for Final Report Executive Summary and all programs used to generate them	0. Executive Summary	Section 6	Executive Summary
1. Introduction	Tables and figures created for Final Report Section 1. Introduction and all programs used to generate them	1. Introduction	Section 7	Section 1
2. Short-Term Impacts	Tables and figures created for Final Report Section 2. Short-Term Impacts and all programs used to generate them	2. Short-Term Economic Impacts	Section 8	Section 2

Sheet Name	Description	Directory Name	Raw Data Section	Final Report Section
4. Long-Term Impacts	Tables and figures created for Final Report Section 4. Long-Term Impacts and all programs used to generate them	4. Long-Term Impacts	Section 9	Section 4
6. Progress towards Goals	Tables and figures created for Final Report Section 6. Conclusions and all programs used to generate them	6. Progress towards Recovery Act Goals	Section 10	Section 6
C. Quant Intermediate Impacts	Summaries of the quantitative intermediate impacts of BTOP for the Final Report, particularly Final Report Appendix C. Quantitative Intermediate Impacts, and all programs used to estimate them	C. Quantitative Intermediate-Term Impacts	Section 11	Appendix C
D. Long-Term Quant Analysis	Tables and figures created for Final Report Appendix D. Long-Term Quantitative Analysis and all programs used to generate them; and summaries of the long-term benefits due to BTOP for the Final Report, particularly Final Report Appendix D. Long-Term Quantitative Analysis, and all programs used to extrapolate them	D. Long-Term Quantitative Analysis Methodology and Data	Section 12	Appendix D

Removed Files

NTIA removed the files listed below from the upload of publically available files, as these files are duplicative of the NTIA-created PPR and APR raw data files and contain sensitive information:

Folder	File Name	
Input	• CCI Annual PPR Data.xlsx • CCI Categorized Connected Locations.xlsx • CCI Evaluation Study Sample Service Areas.xlsx • CCI Quarterly PPR Data.xlsx • PCC Annual PPR Data.xlsx • PCC Quarterly PPR Data.xlsx	• PCC, SBA, and CCI Quarterly Budget Data.xlsx • SBA Quarterly PPR Data.xlsx • Training Activities – APR.xlsx • Training Activities – PCC.xlsx • Training Activities – SBA.xlsx
Prepared	• Budgets: Budgets.R, Budgets.rda, Budgets.xlsx • CCI CAIs by Category: CCI CAIs by Category.R, CCI CAIs by Category.rda, CCI CAIs by Category.xlsx	• CCI CAIs Passed: CCI CAIs Passed.R, CCI CAIs Passed.rda, CCI CAIs Passed.xlsx • CCI Progress: CCI Progress.R, CCI Progress.rda, CCI Progress.xlsx

Please note that due to the removal of the above, some of the R scripts and R data files will require edits before running.