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Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

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Internet: <https://www.fcc.gov>
TTY: 1-888-835-5322

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WIRELINE COMPETITION BUREAU RELEASES ALTERNATIVE CONNECT AMERICA COST MODEL VERSION 2.0 AND ILLUSTRATIVE RESULTS FOR POTENTIAL USE IN RATE-OF-RETURN AREAS

WC Docket No. 10-90

The Wireline Competition Bureau (Bureau) announces the release of the Alternative Connect America Cost Model (A-CAM) v2.0, which incorporates the results of the Bureau's study area boundary data collection and further updates the model in several respects, as described below. The Bureau also is releasing results that illustrate how different per-location funding caps used in calculating support impact the potential support calculated for a particular study area.¹ Given the number of changes that have been incorporated into A-CAM v2.0 that we describe below, including in particular the changes to the study area boundaries, it will be difficult to draw meaningful comparisons between results from A-CAM v2.0 and results from prior versions of A-CAM.²

Study Area Boundaries. In the *April 2014 Connect America Order and FNPRM*, the Commission proposed a transition framework for a voluntary election by rate-of-return carriers to receive model-based support and directed the Bureau to make the adjustments necessary to the Connect America Cost Model (CAM) so that it could be used for rate-of-return areas, including incorporating the results of the study area boundary data collection.³ The Bureau has been actively working on refining the model since the first version of A-CAM was released in December 2014.⁴ On April 10, 2015, the Bureau published an online, publicly accessible map based on the study area boundary and exchange data that were submitted to the Bureau by rate-of-return carriers and certain state utility commissions, summarized the process used to develop service areas for use in the model, and invited commenters to submit any proposed

¹ These illustrative results are produced using solution set SSACAM20151006ver2 and are available at https://transition.fcc.gov/wcb/ACAM_20_ILL_Rpt_Version3_0_FINAL_100615_Public.xlsx.

² A table showing for each study area the percentage change from A-CAM v1.1 to A-CAM v2.0 in locations, service areas, and investment will be made available at <https://www.fcc.gov/encyclopedia/rate-return-resources> shortly after A-CAM v2.0 is publicly released. Note that even if a study area shows a 0% change in the number of locations in aggregate from A-CAM v1.1 to A-CAM v2.0, there may be large changes in the geographic area associated with the study area code (i.e., significant numbers of locations removed from and added to the study area), and therefore changes in the network topology that is used to estimate costs.

³ *Connect America Fund et al.*, WC Docket No. 10-90 et al., Report and Order et al., 29 FCC Rcd 7051, 7074, para. 70, 7139-40, para. 276, 7143, para. 290 (2014) (*April 2014 Connect America Order and FNPRM*).

⁴ *Wireline Competition Bureau Announces Availability of Version 4.2 of the Connect America Fund Phase II Cost Model and the First Version of an Alternative Cost Model Being Developed for Potential Use in Rate-of-Return Areas*, WC Docket No. 10-90, Public Notice, 29 FCC Rcd 16157 (Wireline Comp. Bur. 2014) (*A-CAM v1.0 Public Notice*). Additional information about A-CAM is available at <http://www.fcc.gov/encyclopedia/rate-return-resources>.

corrections to interior service area boundaries and central office (Node0) locations.⁵ A-CAM v2.0 incorporates updated exterior study area boundaries, interior service area boundaries, and Node0 locations.⁶

Loop and Middle Mile. The network topology was updated to reflect the changes in study area boundaries, service areas, and Node0 locations.⁷ Because these changes may change the routing along roads, number of locations, or area served, there are resulting changes in costs calculated by the model. In addition to using updated Node0s, the middle mile network topology in this new version of A-CAM includes an undersea route for American Samoa and submarine routes for service areas not connected by roads within the continental United States.⁸ A-CAM v2.0 also adds two connections from each regional access tandem ring to an Internet access point to account for the cost of connecting to the public Internet.⁹

Small Service Areas. Although we previously consolidated small areas in developing the A-CAM map,¹⁰ there are a number of service areas with fewer than 250 locations. Previous versions of A-CAM included five size categories for investments related to land and buildings associated with central offices, and the smallest size central office was for those with fewer than 1,000 lines. The A-CAM v2.0 capital expenditures input table creates a new size category for central offices serving fewer than 250 locations, with lower land and building investment for these very small areas than exchanges with 250 to 1,000 locations.¹¹

Plant Mix. A-CAM v2.0 was modified to allow for the setting of plant mix input values by study area rather than by state. On July 29, 2015, the Bureau invited commenters to submit proposed corrections to the plant mix values for individual study areas by August 28, 2015.¹² Although A-CAM now has the capability to incorporate study-area specific plant mix values, because the Bureau is still reviewing these submissions, they are not reflected in this version of the model.¹³

⁵ *Wireline Competition Bureau Publishes Map of Study Areas for Use in Alternative Connect America Cost Model*, WC Docket No. 10-90, Public Notice, 30 FCC Rcd 2944 (Wireline Comp. Bur. 2015) (*A-CAM Map Public Notice*). A-CAM Service Area Development Process, <http://www.fcc.gov/wcb/ServiceAreaDevelopmentProcess.docx> (A-CAM Service Area Documentation); see also *Wireline Competition Bureau Revises A-CAM Study Area Map*, WC Docket No. 10-90, 30 FCC Rcd 4610 (Wireline Comp. Bur. 2015) (updating a small number of potential Node0 locations).

⁶ A table showing by study area code whether there were changes to exterior or interior boundaries and/or Node0 locations is available at https://transition.fcc.gov/wcb/A-CAM_v2_Boundary_Node0_Modifications_version_2.zip.

⁷ CostQuestLandLine (CQLL) and CostQuestMiddle Mile (CQMM) are the proprietary applications that create the network topology for CAM and A-CAM. See A-CAM Model Methodology at sections 4.2.3.1, 4.2.3.6, Appendix 1 & 2.

⁸ Submarine routes are connections typically through large bodies of water connecting coastal islands back to the main land mass within the continental United States. A table showing the submarine routes used in A-CAM v2.0 and their corresponding distances is available at https://transition.fcc.gov/wcb/ACAM_Submarine_distances_100815.zip.

⁹ CAM and previous versions of A-CAM had assumed that Internet peering occurred at the regional tandem ring; however more rural areas may in fact be a significant distance from Internet access points, leading to significant costs to physically connect to the Internet.

¹⁰ See *A-CAM Map Public Notice*, 30 FCC Rcd at 2946; A-CAM Service Area Documentation at 14.

¹¹ See A-CAM Capex Input Workbook, LandBuilding Worksheet.

¹² *Wireline Competition Bureau Announces Upcoming Modifications to the Alternative Connect America Cost Model*, WC Docket No. 10-90, Public Notice, 30 FCC Rcd 8191 (Wireline Comp. Bur. 2015). Proposed corrections to plant mix values were submitted for over 500 study areas.

¹³ Because earlier versions of A-CAM applied plant-mix values at a state level, moving to study-area level application may lead to slightly different costs. In order to support Plant Mix by Study Area Boundary (ACAM

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Support Module Reports. Support in A-CAM v2.0 is calculated using the average cost at the census block level for each study area (i.e., costs are averaged at the census block level.¹⁴ This version of the model calculates cost at the sub-block level only in cases where a census block crosses a study area boundary. In addition, support can be calculated and reported using either an extremely high-cost threshold or a funding cap.¹⁵

Other Updates. A-CAM v2.0 also updates the TelcoMaster table, revises the coverage slightly to coincide with new study area boundaries,¹⁶ and updates the property tax, regional cost adjustment, and state sales tax tables to include American Samoa and Guam.

The model methodology for A-CAM v2.0 will be made available at <https://www.fcc.gov/encyclopedia/rate-return-resources> shortly after A-CAM v2.0 is publicly released.¹⁷ For additional information on this proceeding, contact Katie King (Katie.King@fcc.gov) of the Wireline Competition Bureau, Telecommunications Access Policy Division, (202) 418-7400.

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v2.0) instead of Plant Mix by State (ACAM v1x), the method used to apply density zones (rural, suburban and urban) to feeder and distribution, changed slightly. This may affect calculated costs even when service area boundaries and plant mix values remain the same in A-CAM v2.0. See A-CAM Model Methodology at Appendix 9.

¹⁴ Previous versions of A-CAM calculated different costs within a block based on the splitter (Node2) serving that area.

¹⁵ Illustrative results for previous versions of A-CAM showed support using a per-location funding cap, but A-CAM users could only approximate the Bureau's estimates. See *Wireline Competition Bureau Releases Alternative Cost Connect America Cost Model Version 1.0.1 and Illustrative Results for Potential Use in Rate-of-Return Areas*, WC Docket No. 10-90, Public Notice, 30 FCC Rcd 2067 (Wireline Comp. Bur. 2015); *Wireline Competition Bureau Releases Alternative Cost Connect America Cost Model Version 1.1 and Illustrative Results for Potential Use in Rate-of-Return Areas*, WC Docket No. 10-90, Public Notice, DA 15-980 (Wireline Comp. Bur. Aug. 31, 2015) (*A-CAM v1.1 Illustrative Results Public Notice*).

¹⁶ The prior version of A-CAM (v1.1) updated the coverage with preliminary Form 477 data as of December 31, 2014. See *A-CAM v1.1 Illustrative Results Public Notice*.

¹⁷ Updated documentation related to A-CAM v2.0, including the user guide, frequently asked questions, and the model methodology will also be made available on the A-CAM website shortly after A-CAM v2.0 is publicly released. A-CAM is available at <http://www.fcc.gov/encyclopedia/caf-phase-ii-models> or <https://cacm.usac.org/>. In order to access the model, parties must execute the relevant acknowledgement of confidentiality, licensing, and nondisclosure documents released as attachments to a *Third Supplemental Protective Order*. See *Connect America Fund*, WC Docket No. 10-90, Third Supplemental Protective Order, 27 FCC Rcd 15277 (Wireline Comp. Bur. 2012).