Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
	)	

MEMORANDUM OPINION AND ORDER

Adopted: November 5, 2014 **Released: November 12, 2014**

By the Commission: Commissioner O'Rielly approving in part, concurring in part, and issuing a statement.

I. INTRODUCTION AND BACKGROUND

1. In this Memorandum Opinion and Order (Order), we deny an application for review filed by the American Cable Association (ACA) challenging two aspects of the Wireline Competition Bureau's (Bureau) April 2014 decision regarding the cost model to be used to determine support amounts for Phase II of the Connect America Fund for the reasons set forth below.[1]

2. In the *USF/ICC Transformation Order*, the Commission concluded that it would use a combination of competitive bidding and a new forward-looking cost model to "efficiently support deployment of networks providing both voice and broadband service" in price cap areas, and delegated to the Bureau the task of selecting a specific engineering cost model and associated inputs, consistent with the parameters set forth by the Commission, to determine support amounts.[2] Among other things, the Commission determined that the forward-looking cost model should be used to estimate the support necessary to serve areas where costs are above a specified funding benchmark, but below a second extremely high-cost benchmark.[3] Each price cap carrier will be offered a model-derived support amount in exchange for a commitment to serve locations in its service territory in a state that, based on the model, fall within the benchmarks and are not served by a competing, unsubsidized provider.[4] In areas where the price cap carrier declines the state-level commitment, support will be determined through a competitive bidding mechanism.[5]

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[1] *Connect America Fund, High-Cost Universal Service Support*, WC Docket Nos. 10-90, 05-337, Report and Order, 29 FCC Rcd 3964 (Wireline Comp. Bur. 2014) (*CAM Inputs Order*); Application for Review of the American Cable Association, WC Docket Nos. 10-90, 05-337 (filed June 20, 2014) (ACA Application for Review). The United States Telecom Association filed an Opposition. Opposition of the United States Telecom Association to Application for Review, WC Docket Nos. 10-90, 05-337 (filed July 7, 2014) (USTelecom Opposition). ACA filed a Reply. Response to Opposition to Application for Review of the American Cable Association, WC Docket Nos. 10-90, 05-337 (filed July 17, 2014) (ACA Reply).

[2] *See Connect America Fund et al*., WC Docket No. 10-90 et al., Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, 17673, para. 23, 17725, para., 156, 17735, para. 187 (2011) (*USF/ICC Transformation Order and/or FNPRM*), *aff'd sub nom. In re FCC 11-161*, 953 F.3d 1015 (10th Cir. May 23, 2014).

[3] *Id*. at 17725, para. 156.

[4] *Id*.

[5] *Id*.

3. On April 22, 2014, the Bureau finalized decisions regarding the engineering assumptions contained in the Connect America Cost Model (CAM) and adopted inputs necessary for the model to calculate the cost of serving census blocks in price cap areas.[6] Throughout the more than two-year model development process, the Bureau solicited public comment on a variety of topics related to the cost model and its inputs through public notices, an in-person workshop, "virtual workshop" questions, and numerous ex parte meetings with stakeholders. Of the hundreds of inputs adopted for use in the model, ACA challenges two—the cost of money, i.e., the interest cost of debt and equity, and the "take rate," i.e., the expected subscription rate, used in establishing the funding benchmark.

4. First, in the *CAM Inputs Order*, the Bureau adopted an 8.5 percent cost of money for use in the model.[7] In determining a reasonable return for price cap carriers accepting model-based support, the Bureau relied on the methodology previously developed by Bureau staff to establish a zone of reasonableness between 7.84 percent and 9.20 percent for purposes of selecting a model input for the cost of money for price cap carriers.[8] The Bureau adopted a value at approximately the midpoint of the range, rather than a figure at the lower end of the zone of reasonableness to recognize "that this number will effectively be locked in for the next five years, and to account for the fact that the data used to calculate the zone of reasonableness reflects a time of historic lows."[9] In its Application for Review, ACA updated its prior analysis to estimate that the cost of money for price cap carriers ranges between 7.14 and 8.27 percent and argues that the Commission should select the midpoint of this range—7.72 percent.[10]

5. Second, the Bureau adopted a subscription rate of 70 percent for the purpose of estimating the amount of revenues that a carrier may reasonably recover from end-users which, in turn,

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[6] *See generally CAM Inputs Order*, 29 FCC Rcd 3964; *see also Connect America Fund, High-Cost Universal Service Support*, Report and Order, WC Docket Nos. 10-90, 05-337, 28 FCC Rcd 5301 (Wireline Comp. Bur. 2013) (*CAM Platform Order*).

[7] *CAM Inputs Order*, 29 FCC Rcd at 4011-12, paras. 104-109.

[8] A 2013 Bureau staff report developed for the Commission's rate represcription proceeding explained that a reasonable analytical approach would establish a zone of reasonableness for the cost of capital between 7.39 percent and 8.72 percent for rate-of-return carriers. *See Prescribing the Authorized Rate of Return: Analysis of Methods for Establishing Just and Reasonable Rates for Local Exchange Carriers*, WC Docket No. 10-90, Staff Report, 28 FCC Rcd 7123 (Wireline Comp. Bur. 2013) (*Represcription Staff Report*). The staff report used data from a wide spectrum of carriers, including Regional Bell Holding Companies, mid-size companies, and publicly-traded rural local exchange carriers (RLECs). A Public Notice seeking comment was released in conjunction with the staff report. *See Wireline Competition Bureau Seeks Comment on Rate of Return Represcription Staff Report*, WC Docket No. 10-90 et al., Public Notice, 28 FCC Rcd 7120 (Wireline Comp. Bur. 2013). Based on that analysis and other factors, the staff report recommended that the authorized rate of return should be selected in the upper half of this range, between 8.06 percent and 8.72 percent. *See Represcription Staff Report*, 28 FCC Rcd at 7124, 7176, para. 143 (Wireline Comp. Bur. 2013). This suggested range is lower than the Commission's existing 11.25 percent rate of return for incumbent rate-of-return local exchange carriers (LECs), which was adopted in 1990. *See Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers*, CC Docket No. 89-624, Order, 5 FCC Rcd 7507 (1990).

In the model development proceeding, the Bureau found that the methodology used in this 2013 staff report was a helpful tool for determining a reasonable return for price cap carriers accepting model-based support. Applying this methodology solely to data from the price cap carriers yielded a zone of reasonableness for a cost of money for price cap carriers between 7.84 percent and 9.20 percent. *See CAM Inputs Order*, 29 FCC Rcd at 4011, paras. 106-107.

[9] *CAM Inputs Order*, 29 FCC Rcd at 4012, para. 107.

[10] ACA Application for Review at 5. *See also* Letter from Thomas Cohen, Counsel for ACA, to Marlene Dortch, Secretary, FCC, WC Docket Nos. 10-90, 05-337 at Attach. 1 (filed Mar. 7, 2013); Letter from Thomas Cohen, Counsel for ACA, to Marlene Dortch, Secretary, FCC, WC Docket Nos. 10-90, 05-337 (filed May 2, 2013); Letter from Thomas Cohen, Counsel for ACA, to Marlene Dortch, Secretary, FCC, WC Docket Nos. 10-90, 05-337 (filed June 26, 2013).

determines the funding benchmark.[11] In light of varying estimates of subscription rates in the record, and taking into account both broadband and voice subscriptions, in the Bureau's predictive judgment, it found that an expected subscription rate of 70 percent is appropriate for estimating revenue available from end users. The Bureau also adopted an average revenue per user (ARPU) of $75.[12] Applying an assumed ARPU of $75 and the 70 percent expected subscription rate results in a funding benchmark of $52.50.[13] In its Application for Review, ACA argues that the 70 percent subscription rate is "clearly too low," noting that it previously had proposed 90 percent, but conceding that may be "too high."[14]

II. DISCUSSION

6. We find the Bureau's selection of the input values for the cost of money and the subscription rate to be reasonable, clearly reflecting the Bureau's consideration of the record before it, its own analysis, and its predictive judgment of future conditions. We further find nothing in the record before us that persuades us to modify the Bureau's decisions as in "conflict with statute, regulation, case precedent, or established Commission policy," nor do we find merit in ACA's claim that the Bureau's "errors amount to an erroneous finding as to a material question of fact." [15] The input values that ACA challenges reflect predictions regarding future events, not facts. We therefore uphold the Bureau's decisions with respect to these two input values for the cost model.

7. We are not persuaded by ACA's argument that the cost of money selected by the Bureau is unreasonably high.[16] ACA claims that the Bureau's basis for adopting a value of 8.5 percent, at the midpoint of the Bureau's range, is in error because interest rates have not risen yet from historic lows, despite frequent commentary to the contrary.[17] ACA assumes that interest rates will remain low, and argues that 8.5 percent is too high.[18] Using its methodology, ACA estimates an alternative range of values, and claims its approach is conservative, while conceding the "difficulty of predicting these factors."[19] Nothing in the record before us leads us to conclude that ACA's predictions regarding future interest rates are more valid than the Bureau's well-reasoned predictive judgment. We are not persuaded that we should substitute ACA's forecast regarding the cost of money over the next five years for the reasoned analysis of the Bureau.[20] Use of the midpoint of the range of reasonableness, as compared to the

[11] *CAM Inputs Order*, 29 FCC Rcd at 4039-40, paras. 177-79.

[12] *Id*. at 4036, para. 172.

[13] $75 x .7 = $52.50.

[14] *See* ACA Application for Review at 8.

[15] ACA Application for Review at 1 n.1. ACA asserted that Commission review was warranted for the reasons described in section 1.115(b)(2)(iv) of the Commission's rules, as well as section 1.115(b)(2)(i). *See id*.; 47 C.F.R. § 1.115(b)(2)(i), (iv).

[16] We note that at earlier stages of this proceeding, the ABC Coalition advocated a nine percent cost of money and the Puerto Rico Telephone Company argued that it should be 11.25 percent. The first versions of the model included a cost of money default value of nine percent; subsequent versions provided the option of assuming either eight or nine percent. *See CAM Inputs Order*, 29 FCC Rcd at 4011-12, paras. 102-109.

[17] ACA Application for Review at 4-5.

[18] *See* USTelecom Opposition at 2 (arguing that ACA presents no data to justify its conclusions that, since a rise in interest rates has not occurred recently it will not occur in the future, and that its expertise outweighs that of market observers).

[19] ACA Application for Review at 5 & n.16.

[20] As USTelecom states in its Opposition, "ACA substitutes its expertise for that of the economic analysis of the Commission and assures us that for the next five years, there is little basis to assume that interest rates will rise." USTelecom Opposition at 2. USTelecom also argues that, although the support term for CAF-II model-based support currently is set at five years, the capital costs associated with meeting the associated obligations extend beyond the five-year funding period. *Id*. at 3-4.

top, for example, is relatively conservative; even ACA concedes that "rates may be at or near historic lows."[21] Moreover, as explained in the *CAM Platform Order*, the model calculates the average, levelized cost of constructing and operating a broadband and voice network over time.[22] Even if we were to agree with ACA that interest rates may remain low in the near term, it is unrealistic to assume rates will remain that low over time.

8. We also are not persuaded that using a slightly lower cost of money would have a material impact on achievement of the Commission's universal service goals. The high end of ACA's range, 8.27 percent, is only .23 lower than the 8.5 percent value selected by the Bureau. Using ACA's midpoint, which is only .78 lower than the Bureau's selected input value, reduces total network costs over time by only 1.2 percent. Moreover, contrary to ACA's claim,[23] using 7.72 percent for the cost of money results in fewer supported locations. Bureau staff analyzed the model results using ACA's cost of money. With lower costs, the supported locations are somewhat higher on the cost curve (i.e., fewer, more costly locations). Many more locations drop below the $52.50 funding benchmark than locations that either move from being just above the original extremely high-cost threshold ($207.81) or are below the revised threshold ($215.93).[24] The net effect of these changes is that approximately 78,000 fewer locations would be eligible for support.[25]

9. Nor are we persuaded by ACA's argument that it was an error to use different take rates for computing costs (80 percent) and estimating revenues (70 percent). ACA challenges the Bureau's decision to use a subscription rate lower than the 80 percent take rate, i.e., customer drop rate, used to estimate costs, and suggests this was an error because it is based on current, not forward-looking, adoption rates.[26] Although commenters, including ACA and USTelecom, supported the use of a single take rate for both computing costs and estimating revenues, the Bureau found that "different uses require rates tailored to their purpose."[27] The Bureau reasoned that, for the purpose of a customer drop rate, a

[21] ACA Application for Review at 4.

[22] *See CAM Platform Order*, 28 FCC Rcd at 5309, para. 19 n.37 ("[T]he average monthly costs derived from a green-field model over a five period do not approach the full costs of constructing an all-new network; instead, it approximates the *average* cost of providing service over time, consistent with the costs of a provider that provides ongoing service."); *id*. at 5310, para. 21 n.41 ("Because costs incurred at different points in time are discounted back to the present, costs incurred many years in the future have little impact on the cost estimate relative to the errors inherent in cost estimation. Consequently, in practice cost models only look forward a limited number of years. The current version of CAM, version 3.0, stops estimating future costs after sixty years."); *see also* USTelecom Opposition at 3 ("The capital costs associated with meeting the obligation extend far beyond the 5-year funding period.").

[23] In particular, ACA estimates that using 7.72 percent for the cost of money instead of the Bureau's 8.5 percent "would result in approximately 140,000 additional locations being served, 80,000 of which would be very-high cost locations." Letter from Thomas Cohen, Counsel for ACA, to Marlene Dortch, Secretary, FCC, WC Docket No. 10-90 at 2 (filed Oct. 1, 2014) (ACA Oct. 1, 2014 Ex Parte Letter).

[24] Overall, costs fall slightly with the lower cost of capital, while the $52.50 benchmark remains unchanged. There are many locations near the $52.50 benchmark, so there are many locations that shift from being just above the benchmark to just below it (118,602 locations lose eligibility for funding due to lower cost). Offsetting this, there are locations that move from being just above the original extremely high-cost threshold to just below it (14,216 locations become newly eligible due to lower cost). The extremely high-cost benchmark is adjusted to maintain the $1.8 billion budget (due to savings from fewer low-cost locations). Moving the threshold up to $215.93 adds another 26,377 locations. In total, 40,593 locations are newly eligible for support from these two effects.

[25] In total, there is a net decrease in the number of locations eligible for support (add 40,593, subtract 118,602 for a net reduction of 78,009). A relatively large number of locations each with low support become ineligible, and a relatively small number of locations each with high support become eligible.

[26] ACA Application for Review at 6-8.

[27] *CAM Inputs Order*, 29 FCC Rcd at 4039, para. 178.

location may have customer premises equipment without having a revenue-producing subscriber. For the purpose of estimating the amount of revenue that can reasonably be recovered from end user revenues, on the other hand, the Bureau found that it was appropriate to use a subscription rate that reflects the percentage of locations with paying customers.[28]

10. ACA concedes that the Bureau makes a valid point,[29] but argues that using a lower rate for estimating revenues than used for costs will inevitably over-compensate funding recipients, because the model does not allocate customer-related operating expenses on a per-customer basis.[30] ACA is mistaken, as the model's input values for customer-related operations marketing and service operating expenses are allocated on a per-subscriber basis.[31] We do not agree, however, with ACA's apparent contention that General and Administrative (G&A) expenses, as well, should be allocated on a per-subscriber basis.[32] As the Bureau explained in the *CAM Inputs Order*, G&A expenses "are expenses of the day-to-day operations of a carrier. These include such expenses as accounting and financial services, insurance, utilities, legal expenses, procuring materials and supplies, and performing administrative activities."[33] This category of expenses does not fluctuate significantly based on the number of subscribers in the same way that customer operations and marketing do, and we see no reason to alter the Bureau's approach to calculating G&A factors based on company size.

11. We also do not agree with ACA's argument that the 70 percent subscription rate "is clearly too low and does not accurately reflect the expected take-rate during the time CAF support would be awarded to price cap LECs."[34] ACA does not acknowledge that the majority of locations eligible for Phase II funding do not currently have access to broadband.[35] It is reasonable to expect that it will take some time to upgrade facilities in these areas and, therefore, take time to achieve a 70 percent subscription rate for these newly built facilities. As USTelecom points out, estimates of take rates are generally provided relative to households, i.e., occupied housing units, while locations in the model

[28] *Id*.

[29] ACA Application for Review at 6 (agreeing that "the Bureau makes a valid point that the percentage of locations that will have drops, network interface devices, and customer premises equipment at the end of the five-year period will be higher than the number of subscribers at any given point, due to some customers at locations abandoning wireline broadband or locations becoming vacant").

[30] *Id*. at 6-7 (conceding "there is a case for allocating additional capital expenditures for these locations" but arguing "there is not a case for allocating operating expenditures—such as customer service and G&A expenses—for these locations, because at these specific locations, there are no current customers"); *see also* ACA Reply at 5.

[31] *See CAM Inputs Order*, 29 FCC Rcd at 4017, para. 121 & n.63 (explaining that the input value for customer operations marketing and service operating expenses was calculated using carrier data to derive a ratio that was multiplied by an assumed ARPU of $75, and then multiplied by an assumed 70 percent subscription rate); *id*. at 4018, para. 123 & n.368 (explaining that bad debt expense is calculated by applying an industry standard two percent of revenue derived bad debt factor to an assumed ARPU of $75, and then multiplying by the assumed 70 percent subscription rate).

[32] *See* ACA Application for Review at 7; ACA Reply at 5.

[33] *CAM Inputs Order*, 29 FCC Rcd at 4015, para. 115.

[34] ACA Application for Review at 8. In its Application for Review, ACA did not propose a specific input for the subscription rate, but argued that 70 percent was too low and conceded that 90 percent may be too high. *See id.* at 6-8. In a subsequent ex parte, ACA provided estimates of the impact of using a proposed 80 percent subscription rate. ACA Oct. 1, 2014 Ex Parte Letter at 2 (describing estimates using ACA's "proposed 80 percent take-rate").

[35] Sixty-four percent of eligible locations are in areas where no carrier currently provides at least 3 Mbps downstream and 768 kbps upstream as identified by the National Broadband Map. *See* Federal Communications Commission, *Adopted Connect America Cost Model Results*, http://www.fcc.gov/encyclopedia/connect-america-cost-model-illustrative-results (last visited Sept. 18, 2014).

include vacant housing units.[36] Vacancy rates vary over time but average about 10 percent. Thus, ACA's originally proposed 90 percent subscription rate would have assumed that 100 percent of households were paying customers at the outset of Phase II funding,[37] clearly an unrealistic assumption. An 80 percent subscription rate would assume that 90 percent of households subscribe in the first year of Phase II, again an unreasonable assumption given that it will take some time to construct facilities to provide broadband across the entire footprint. We conclude that the Bureau's prediction that 70 percent of locations will subscribe over five years is more reasonable than assuming an 80 percent subscription rate.

12. Using a higher subscription rate would reduce the number of eligible locations because the funding benchmark would increase from $52.50 to $60.[38] While ACA initially argued that its proposed changes would increase the number of funded locations, it subsequently acknowledged that using a higher subscription rate would result in fewer supported locations, but more supported very high-cost locations.[39] ACA concedes that this is a policy choice.[40] As discussed above, we are not convinced that ACA's prediction is more "accurate" than the Bureau's prediction, and we decline to overturn the Bureau's decision.[41]

13. Given that we find the adopted inputs reasonable for the reasons discussed above, we also conclude that the Bureau's selection of the input values for the cost of money and the subscription rate are consistent with our directive that "the costs and inputs of [the] model should ensure that the public interest obligations are achieved as cost-effectively as possible."[42] We are not persuaded by ACA's claim that the Bureau's "actions are inconsistent with the Commission's objective of ensuring universal support is not wasted and spent efficiently."[43]

14. For the forgoing reasons, we deny ACA's Application for Review.

III. ORDERING CLAUSES

15. Accordingly, IT IS ORDERED, pursuant to the authority contained in sections 1, 2, 4(i), 5, 214, 254, 303(r), and 405 of the Communications Act of 1934, as amended, and section 706 of the Telecommunications Act of 1996, 47 U.S.C. §§ 151, 152, 154(i), 155, 214, 254, 303(r), 405, 1302, and sections 1.115 and 1.427 of the Commission's rules, 47 C.F.R. §§ 1.115, 1.427, that this Memorandum

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[36] USTelecom Opposition at 4.

[37] ACA now concedes that its proposed subscription rate of 90 percent is too high. ACA Application for Review at 8.

[38] Using the higher take rate leads to a higher funding benchmark because the $75 ARPU is now multiplied by an 80 percent subscription rate, which results in a funding benchmark of $60.

[39] The Bureau could not reproduce ACA's estimates because ACA did not provide information regarding what, if any, other input changes it had made to the adopted input values. When the Bureau checked ACA's estimates using ACA's cost of money and 80 percent subscription rate, it found that 730,173 fewer locations would be supported, with 171,689 fewer locations above the extremely high-cost benchmark. To be consistent with an 80 percent subscription rate, the Bureau also modified the input values for customer operations and marketing and service operations expenses and bad debt expense. Because ACA was mistaken about how these expenses are allocated (i.e., on a per-subscriber basis), this change actually increases total network costs. The net result would be that support would be targeted to more costly locations, and the average support per location increases from $34.98 to $42.24.

[40] ACA Oct. 1, 2014 Ex Parte Letter at 2.

[41] *See supra* para. 11.

[42] *USF/ICC Transformation Order*, 26 FCC Rcd 17735, para. 187.

[43] ACA Application for Review at 1 n.1. ACA asserted that Commission review was warranted for the reasons described in section 1.115(b)(2)(i) of the Commission rules, as well as section 1.115(b)(iv). *See id*; 47 CFR §§1.115(b)(2)(i),(iv); *supra* note 15.

Opinion and Order IS ADOPTED, effective thirty (30) days after publication of the text or summary thereof in the Federal Register.

16. IT IS FURTHER ORDERED that, pursuant to the authority contained in section 5(c)(5) of the Communications Act of 1934, as amended, 47 U.S.C. § 155(c)(5), and section 1.115(g) of the Commission's rules, 47 C.F.R. § 1.115(g), the Application for Review filed by the American Cable Association on June 20, 2014, IS DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

STATEMENT OF
COMMISSIONER MICHAEL O'RIELLY,
APPROVING IN PART AND CONCURRING IN PART

Re: *Connect America Fund*, WC Docket No. 10-90, *High-Cost Universal Service Support*, WC Docket No. 05-337.

Today we take another important step to implement Connect America Phase II. With the model now confirmed and the challenge process well underway, I am hopeful that the Commission will be able to wrap up all decisions needed to make offers to price cap carriers by the end of this year, and will finalize the rest of the decisions for CAF Phase II in early 2015.

With respect to the order at hand, I recognize that the Commission previously delegated substantial authority to the Bureau to adopt the cost model. I do not think the Bureau has overstepped that authority or that its decisions are clearly in error. In fact, I agree with the Bureau that a 70 percent subscription rate over five years in these high-cost areas is more likely than ACA's 80 percent, and I approve that part of the order. On the other hand, I am sympathetic to ACA's arguments that a 7.72 percent cost of money would be a more accurate prediction of interest rates over five years (as well as a better reflection of these carriers' systematic risk) than the Bureau's 8.5 percent prediction. Based on a review of reasonable economic data, including inflationary projections, a lower level would seem to be justified, and it would stretch CAF Phase II to cover over 40,000 locations that are truly high-cost. Therefore, I can only concur with that part of the order.

Relatedly, I disagree with the assumption, implicit in the analysis, that the Connect America Fund should aim to support more locations even if they are lower cost. The purpose of the program is not to maximize the number of locations that receive a subsidy but to ensure broadband services in high-cost areas that would not be served absent support. I would prefer to focus support on locations that are truly high-cost and are in areas that are not served or are unlikely to be served by a competing provider. That way we minimize the market distorting effects of subsidizing investment. Targeting support to higher-cost locations does mean that fewer locations can be funded overall. But it is worth the tradeoff and, ultimately, is more consistent with our statutory obligation to ensure access in rural and other high-cost areas.