REDACTED FOR PUBLIC INSPECTION

July 9, 2013

BY HAND DELIVERY

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street S.W.
Washington, D.C. 20554

Re: *Connect America Fund, High-Cost Universal Service Support,*
WC Docket Nos. 10-90, 05-337

Dear Ms. Dortch:

Pursuant to the Second Protective Order in the above-captioned dockets,[1] Alaska Communications Systems ("ACS"), as defined in the accompanying letter, hereby files certain information that is proprietary and highly confidential to ACS. ACS has marked each page of its Stamped Highly Confidential Documents with the legend required in paragraph 5 of the Second Protective Order, indicating it is Highly Confidential Information, and has indicated that the documents contain such sensitive information that the copying of the Stamped Highly Confidential Documents is restricted, as provided for in paragraph 6 of the Second Protective Order.

Please find herewith one copy of ACS's Stamped Highly Confidential Documents as defined in the Second Protective Order, and two copies redacted for public inspection (the redacted copy also is being filed electronically, via ECFS). ACS also provides herewith two copies of each Stamped Highly Confidential Document addressed to Katie King in the Wireline Competition Bureau. Because the entire contents of Exhibits B and C are Highly Confidential Information, no redacted copies are provided.

Please direct any questions regarding this matter to me.

Very truly yours,

Richard R. Cameron

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[1] *Connect America Fund; High-Cost Universal Service Support,* Second Protective Order in WC Docket Nos. 10-90 and 05-337, DA 12-192 (Wireline Competition Bur., rel. Feb. 10, 2012).

cc: Carol Mattey
Steve Rosenberg
Amy Bender
Alex Minard
Katie King
Danya Ayoubi
Talmage Cox
Mike Jacobs

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Re: *Connect America Fund, High-Cost Universal Service Support,*
WC Docket Nos. 10-90, 05-337

Dear Ms. Dortch:

In a June 28, 2013 meeting with members of the staff of the Wireline Competition Bureau ("Bureau") in the above-captioned dockets, Alaska Communications Systems ("ACS")[1] proposed certain adjustments to the inputs and logic of the Connect America Cost Model ("CAM") currently under development by the Bureau. In its previous advocacy, ACS has identified a number of deficiencies in the CAM as it pertains to price cap carriers serving outside the contiguous United States ("non-CONUS") in general, and to ACS in particular. The adjustments ACS now proposes are necessary if the CAM is accurately to capture the forward-looking costs of an efficient carrier building and operating broadband-capable networks in Alaska, and produce a sufficient amount of support for achievement of the Commission's goals for Phase II of the Connect America Fund ("CAF").[2]

With the changes ACS proposed, the Commission has the opportunity to achieve a truly historic policy victory, transforming Alaska from among the most underserved states in the nation into a vibrant leader in broadband availability, penetration, and usage. These changes, if accepted, could bring broadband meeting CAF Phase II standards to substantially all of ACS's customers located in road-system areas. Such support would

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[1] In this letter, ACS signifies the four incumbent local exchange carrier ("ILEC") subsidiaries of Alaska Communications Systems Group, Inc. (ACS of Alaska, LLC, ACS of Anchorage, LLC, ACS of Fairbanks, LLC, and ACS of the Northland, LLC).

[2] As of the Commission's most recent Broadband Report, nationwide broadband availability is about 94 percent, but broadband availability at 3 Mbps/768 kbps in Alaska is the lowest in the nation. *Eighth Broadband Progress Report*, 24 FCC Rcd 10352, 10502 (2012).

dramatically reshape the economic, educational, cultural, and social opportunities for hundreds of thousands of Alaskans, including large portions of its rural and Native Alaskan population, reduce the burden on the Remote Areas Fund in Alaska, and bring the Commission closest to achieving its stated policy goal of universal broadband availability.

Specifically, ACS proposed changes to the CAM or its underlying assumptions in five categories:

1. Changes to the plant mix inputs to reflect conditions in Alaska;
2. Changes to reflect Alaska-specific soil types, rather than national averages;
3. Incorporation of a CapEx adjustment to reflect the higher costs of purchasing and installing broadband capital equipment and facilities as well as transporting it to and within Alaska;
4. Reclassification of ACS as a "small" company for purposes of the CAM's OpEx calculation; and
5. Incorporation into the model of the costs of the undersea fiber optic cable systems necessary to connect Alaska to the lower 48 states.

In addition, in this letter, ACS requests that the Bureau grant ACS an extension of the CAF Phase II commitment period, from five years to ten years, and supplemental support to cover ACS's expenses of operating the broadband network during the additional five-year period, in order to enable it to complete the required buildout.

In a separate filing, ACS intends to request that the Bureau direct CostQuest to make a change to the support threshold for Alaska to reflect the presence of a subsidized broadband competitor that receives federal high cost support in ACS's markets, thereby reducing ACS' achievable take rate.

As discussed below, these changes do not fully close the wide gap between the current forward-looking costs ACS actually incurs, and the costs predicted by the CAM. Nevertheless, these changes are an essential step in correcting the current CAM's substantial understatement of ACS's costs and support needed to achieve the Commission's CAF Phase II goals.

I. CapEx Adjustments

A. Plant Mix

ACS has determined that the nationwide average plant mix figures used in the CAM do not reflect proportions of aerial, underground, and buried plant that should be

used in Alaska. In comments filed in response to the Bureau's October 1, 2012 Virtual Workshop questions regarding the plant mix data in the CAM, ACS explained:

> National defaults in general are not reasonable for predicting costs and thus support needs. The data used in a model to determine support amounts must be accurate in order to lead to accurate cost estimates and ultimately reasonable support levels . . . . In the case of insular areas such as Alaska . . . , producing useful data therefore would require an analysis be undertaken to develop company-specific values. This is especially critical in insular areas given the counter-intuitive results of the current version of the CQBAT model.[3]

ACS has now undertaken to produce Alaska-specific plant mix values for use in the CAM. With this letter, ACS provides additional support for its proposal that the CAM incorporate an appropriate Alaska-specific plant mix, and requests that the Bureau direct CostQuest to incorporate these revised plant mix figures for Alaska into the CAM.

As indicated in the chart below, the percentage of aerial plant should be adjusted downward, and the percentage of underground plant should be adjusted upward to reflect current and forward-looking plant mix ratios. In Anchorage, for example, which has nearly half of the state's total population, a local ordinance requires that, with limited exceptions, "all newly installed or relocated utility distribution lines shall be placed underground."[4] ACS therefore, is no longer permitted to construct aerial facilities in large sections of Anchorage.

Beyond this legal requirement, ACS has previously documented Alaska-specific conditions that augur in favor of modifying the Alaska plant mix to include a greater percentage of underground and buried plant.[5] Specifically, in response to the Bureau's request for comment on the benefits of incorporating state-specific plant mix figures to

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[3] WCB Cost Model Virtual Workshop, Comments of ACS (Oct. 2012), *available at* http://www.fcc.gov/blog/wcb-cost-model-virtual-workshop-2012-plant-mix.

[4] Anchorage Municipal Code § 21.90.020(A).

[5] Letter from Karen Brinkmann, Counsel to ACS, to Marlene Dortch, FCC Secretary, in WC Docket No. 10-90, Attachment at 8 (ACS no longer is permitted to deploy aerial plant in Anchorage or surrounding areas); Comments of Alaska Communications Systems Group, Inc. in WC Docket No. 10-90, filed June 18, 2013, at 2-3 (ACS must bury fiber more deeply than carriers do in the Lower 48 states).

improve the accuracy of the CAM,[6] ACS filed timely responses and noted that the cost of deploying broadband-capable plant in Alaska is significantly higher where wires must be buried or placed in conduit underground.[7]

The Bureau subsequently determined that the model would incorporate a matrix of three density zones (urban, suburban and rural) and three infrastructure types for wiring: aerial ("A"), buried ("B") and underground ("U").[8] The figures below show the Alaska-specific plant mix percentages ("AK") as well as the national average plant mix percentages ("NA") that the Bureau proposes to use where state-specific figures are unavailable.[9] The matrix further breaks down the plant mix according to three types of wiring: distribution wiring, feeder wiring and inter-office fiber.

	Distribution			**Feeder**			**Inter-Office**		
	A	**B**	**U**	**A**	**B**	**U**	**A**	**B**	**U**
Rural - AK	**25%**	**61%**	**14%**	**25%**	**61%**	**14%**	**28%**	**58%**	**14%**
Rural - National	27%	69%	4%	25%	61%	14%	28%	58%	14%
Suburban - AK	**24%**	**49%**	**28%**	**24%**	**49%**	**28%**	**24%**	**55%**	**21%**
Suburban - National	30%	64%	6%	24%	49%	28%	24%	48%	28%
Urban - AK	**20%**	**40%**	**40%**	**20%**	**40%**	**40%**	**15%**	**50%**	**35%**
Urban - National	38%	55%	7%	19%	40%	40%	20%	40%	41%

ACS believes that these changes to the plant mix data are essential to enable the CAM accurately to model the costs of delivering broadband meeting the Commission's CAF Phase II standards in Alaska.[10]

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6 *Wireline Competition Bureau Seeks Comment on Model Design and Data Inputs for Phase II of the Connect America Fund*, FCC Public Notice, DA 12-911, ¶¶ 94-97 (Wir. Comp. Bur. June 8, 2012); Reply Comments of Alaska Communications Systems Group, Inc. in WC Docket Nos. 10-90 and 05-337 (July 23, 2012), at 17.

7 *See generally* Reply Comments of Alaska Communications Systems Group, Inc. in WC Docket Nos. 10-90 and 05-337 (July 23, 2012).

8 *Connect America Fund; High-Cost Universal Service Support,* Report & Order, WC Docket Nos. 10-90, 05-337, DA 13-807, ¶64 (Wir. Comp. Bur., Apr. 22, 2013) ("CAM Framework Order").

9 CAM Framework Order ¶ 64.

10 See Declaration of Dale E. Patrick, attached hereto as **EXHIBIT A.**

B. Soil Types

The CAM aggregates the many types of soil and ground conditions present across the nation into four categories: normal, hard rock, soft rock, and water. The CAM then calculates facility construction costs in each state based on the national average proportion of each of these four soil type categories.

ACS has determined that the use of these national average soil type figures cause the CAM substantially to understate the costs of deploying broadband facilities in Alaska. To correct this error, ACS therefore requests that the Bureau direct CostQuest to incorporate changes to the CAM to classify all of Alaska within the "hard rock" category. While Alaska is not composed entirely of hard rock, ground conditions make it uniformly costly in which to build, and the "hard rock" category best captures these costs.

While the ground conditions in ACS's three most populous service areas, Anchorage, Fairbanks, and Juneau, differ markedly from one another, they all create costs that substantially exceed those that would be produced using the national average figures that the CAM currently uses. In and around ACS's service areas in Juneau and the Aleutian Islands, ground conditions do, in fact, consist of a large proportion of hard rock. Conditions in Anchorage and Fairbanks, although not rocky themselves, mimic the cost of constructing in hard rock for other reasons.

In and around Fairbanks, ACS's northern service areas experience permafrost conditions. As explained by the National Oceanographic and Atmospheric Administration ("NOAA"), "in Fairbanks, Alaska, the soil is frozen just some 30 to 40 centimeters below the surface, and in fact, has been frozen for the last several thousand years and maybe even longer. Only the upper 30 to 100 cm of soil (called the active layer) thaws every summer and then completely refreezes during the winter. Typical thickness of permafrost around Fairbanks is about 50 meters, but varies between a few meters and 150m and more."[11] These conditions raise the costs of placing underground, buried, or aerial plant, and require ACS to dig more deeply to place facilities at a level below the active layer and within the permanently frozen permafrost.[12]

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[11] NOAA, "Arctic Change – Land: Permafrost," available at: http://www.arctic.noaa.gov/detect/land-permafrost.shtml.

[12] *See, e.g.,* Arctic Slope Telephone Association Cooperative, Inc. And Copper Valley Telephone Cooperative, Reply Comments On Petition For Clarification Of Matanuska Telephone Association in WC Docket Nos. 10-90 And 05-337 (filed July

In and around ACS's service area in Anchorage, the ground is underlain by soft, marshy, muddy "goo," which creates a different set of difficulties and costs. That soil provides insufficient support for telecommunications plant; as a result, ACS must dig down to the bedrock, at a depth of between five and 20 feet, and then build the foundation for its facilities back up from that level. Thus, although the area is not particularly rocky and in fact is considered "soft rock" by the model, the costs of construction are comparable to those ACS experiences in hard rock elsewhere.

As ACS has previously stated in the record, in part due to these conditions, ACS's costs of laying fiber in Alaska are far higher than those that prevail in the lower 48 states.[13] For example, recent work orders show that ACS experiences costs, even in Anchorage, Fairbanks, and Juneau, of approximately **[BEGIN HIGHLY CONFIDENTIAL] ****** [END HIGHLY CONFIDENTIAL]** per foot to deploy fiber optic transport,[14] far higher than the cost currently estimated in the CAM. The CAM estimates that the investment per foot of placing fiber transport cable is **[BEGIN HIGHLY CONFIDENTIAL] ***** [END HIGHLY CONFIDENTIAL]** for ACS – far below the **[BEGIN HIGHLY CONFIDENTIAL] ****** [END HIGHLY CONFIDENTIAL]** per foot cost faced by ACS. Even when the soil type is set to reflect the cost of "hard rock" throughout Alaska, ACS's actual costs continue to exceed the CAM estimates.[15] Still, of the options available in the CAM, the change to "hard rock" will come closest to reflecting ACS's costs.

C. Increase in Baseline CapEx Figures for Alaska

The CapEx values contained in the current CAM substantially understate the cost of broadband equipment and materials, as well as the cost of placing that equipment and material that ACS faces in Alaska. Accordingly, ACS requests that the Bureau direct CostQuest to implement a 10 percent increase in the CapEx costs applicable to Alaska. Based on sample model runs, ACS believes that this could be achieved either by creating

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2, 2013), Attachment at 2 (deployment through solid rock), 4 (mud and "goo"), 6 (snow and ice conditions).

[13] Comments of Alaska Communications Systems in WC Docket No 10-90 (filed Jan. 28, 2013), at 16.

[14] See **HIGHLY CONFIDENTIAL EXHIBIT B**, attached.

[15] Alternatively, the same result may be achieved in a simpler fashion by setting the cost for placing cable in soft and medium soils types in Alaska at the hard rock level in the CAM's Structure Labor Tab of the CAPEX input file.

a set of Alaska-specific CapEx inputs, or by increasing the regional adjustment factor for Alaska by roughly 12 percent.[16]

This increase primarily would address two major elements of cost for Alaska that are not currently captured in the CAM. *First*, ACS is a small carrier serving a geographically remote state with the lowest population density and one of the lowest populations of any state in the nation, while the CapEx inputs in the CAM largely reflect the cost projections of the largest, nationwide and regional carriers in the lower 48 states. ACS simply cannot exert the level of purchasing power available to these large price cap carriers and, as such, it will never be offered the equipment purchase prices available to those large carriers.

The fact that ACS is faced with higher purchase prices than those available to larger carriers simply reflects the fact that an efficiently sized carrier in Alaska will inevitably be small. Alaska as a whole has only about 700,000 residents and few large businesses. The CAM shows roughly 360,000 Node 4 working customer locations in the state. Alaska borders Canada on one side, and open ocean on the others, effectively foreclosing ACS's ability to grow or expand its business beyond the state's borders. Further, history has shown that it is difficult to integrate insular carriers, like ACS, into the business operations of larger carriers. In recent years, large national carriers have owned two other insular carriers – Puerto Rico Telephone Company and Hawaiian Telcom, Inc. – and have sold both after concluding that continued ownership did not represent a good fit with their ongoing and expanding operations in the lower 48 states.

Second, ACS faces higher costs of transporting broadband equipment to deployment sites than other carriers in the lower 48 states. While the CapEx costs in the CAM incorporate freight costs to points within the lower 48 states, ACS must have its equipment shipped to Seattle, Washington, where it must be loaded onto barges for transport to Anchorage at an additional cost of approximately **[BEGIN HIGHLY CONFIDENTIAL] ***** [END HIGHLY CONFIDENTIAL]** per pound of freight. Once the equipment reaches Alaska, it must be unloaded again, transported to an ACS warehouse, and then distributed within Alaska to points in Anchorage, Fairbanks, Juneau, or more remote service areas, all creating yet further cost. While Fairbanks is connected to Anchorage by road, ACS must use air or sea transport to reach Juneau and island exchange areas, further multiplying its costs.

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[16] Experimental CAM runs by ACS indicate that the regional cost factor must be adjusted upward by 12 percent to achieve a 10 percent increase in cost. This is likely due to the fact that the regional cost factor is not applied equally to all input items found in the CAPEX input file.

Taken together, these two factors – ACS's small size and the additional freight costs necessary to reach its remote location – increase the cost profile of broadband equipment in Alaska above the level other carriers experience in the lower 48 states. Indeed, based on an examination of unbundled network element ("UNE") rates of large and small carriers, ACS believes that the 10 percent increase in the CAM's CapEx costs for Alaska likely understates the true differential it experiences. Like the costs modeled in the CAM, UNE rates are set based on a forward-looking cost methodology. According to a national survey, the average UNE loop rate among the Bell Operating Companies nationwide in 2006, at the time of one of the most recent comprehensive surveys, was $13.70.[17] That survey listed ACS's UNE loop rate in Anchorage $18.64, more than 36 percent higher.[18] Even within a single state, UNE loop rates for small independent ILECs typically exceed those charged by the larger Bell Operating Companies by a significant margin. In Texas, for example, at a time when SBC's UNE loop rates ranged from $12.14 to $18.98,[19] the Public Utility Commission of Texas approved an interconnection agreement negotiated by a smaller price cap ILEC, Valor Communications of Texas, LP, containing a UNE loop rate of $48.98, more than 2.5 times the most expensive BOC rate in the state.[20]

Thus, ACS believes that a significant upward adjustment in the CAM's CapEx inputs for Alaska is warranted. While the precise degree of this upward adjustment is difficult to quantify, ACS believes that a 10 percent adjustment would be a reasonably conservative estimate of the cost differential ACS faces. ACS therefore requests that the Bureau direct CostQuest to make this change, either by creating a separate CapEx input

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[17] Billy Jack Gregg Director, Consumer Advocate Division Public Service Commission of West Virginia, *A Survey of Unbundled Network Element Prices in the United States* (Mar. 2006), at Appendix 4, *available at*: http://warrington.ufl.edu/centers/purc/research/une.asp.

[18] *Id.* at Table 1.

[19] *Id.* These rates remained unchanged from 2003.

[20] *Joint Application of Valor Telecommunications of Texas, LP d/b/a Valor Telecom and NTS Communications, Inc. for Approval of Interconnection and Unbundling Agreement under PURA 1995 and the Telecommunications Act of 1996*, Docket No. 29052, Order No. 3, Notice of Approval of Interconnection Agreement (Jan. 16, 2004); "251/252 Agreement for Interconnection and Unbundled Loops between Valor Telecommunications of Texas, LP and NTS Communications, Inc., UNE Attachment, Appendix A (showing price for 2 wire analog loop (inclusive of NID) of $48.98), *available at*: http://interchange.puc.state.tx.us/WebApp/Interchange/application/dbapps/filings/pgSearch_Results.asp?TXT_CNTR_NO=29052&TXT_ITEM_NO=1

table for Alaska, or by adjusting the regional cost adjustment factor upward by 12 percent, which trial CAM runs by ACS show would have a similar effect.[21]

II. Reclassification of ACS as a "Small" Carrier

For purposes of estimating OpEx, the CAM classifies ACS as a "medium" carrier, defined as one that serves between 100,000 and 1 million access lines. Because ACS's line count is currently at the very low end of that range and continuing to fall, and because ACS shares many of the characteristics of a smaller carrier, ACS hereby requests that the Bureau direct CostQuest to reclassify ACS as a "small" carrier.

As of May 2013, ACS serves approximately 120,000 access lines in the state of Alaska, just above the 100,000-line threshold to be classified as a "medium" carrier for purposes of the CAM. ACS, like most ILECs, has experienced ongoing line loss over the past many years, averaging 6.7 percent over the past three years. Over the next five years, ACS expects that rate of line loss to accelerate, to between **[BEGIN HIGHLY CONFIDENTIAL] ********** [END HIGHLY CONFIDENTIAL].** Even at its historical rate of 6.7 percent, however, ACS forecasts that it will fall below the 100,000-line threshold in late 2015 or early 2016, roughly in the middle of the five-year CAF Phase II commitment period.[22]

Already, ACS shares many of the characteristics of carriers classified as "small" for purposes of the CAM. It serves a remote, largely rural, high-cost service area within a single state. It faces limited opportunities to grow and is heavily reliant on high cost universal service support to deliver services to its customers. As discussed above, ACS cannot bring the purchasing power of a larger carrier to bear when deploying new facilities. For these reasons, ACS believes that it should be classified as "small" for purposes of the CAM.

III. Incorporation of Alaska Submarine Cable Costs into the CAM As An Alaska-Specific Middle Mile Cost Category

As ACS has thoroughly documented in these proceedings, providing broadband Internet access service in Alaska presents unique challenges for the ACS operating companies because there is no Internet access point ("IAP") in the state. The nearest IAPs are in Seattle, Washington and Portland Oregon. The most efficient way to connect

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[21] See note 16 and accompanying text, above.

[22] As discussed below, ACS is requesting that the Bureau extend the five-year commitment period for ACS.

Alaska-based networks to those IAPs and provide reliable, affordable and high-performance Internet access service is via undersea fiber optic cable crossing thousands of miles of ocean.

As ACS has demonstrated in its prior filings, the CAM develops a hypothetical terrestrial network design linking customer locations to a nearby IAP.[23] The model assumes that the nearest IAP is located at a regional tandem switching office in the same LATA and is connected to local facilities via a regional terrestrial fiber ring. None of these are valid assumptions in Alaska, where there are no regional tandems, no LATAs, and no terrestrial links between the ACS LEC networks and the nearest IAP.

In fact, ACS is unique among all price cap carriers, even including the other carriers serving insular or non-CONUS areas, in that it has been required to build submarine cable capacity to ensure that it can reliably deliver broadband Internet access traffic to and from the nearest IAPs.[24] As a result, ACS is able to present current,

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[23] *See* Letter to Marlene H. Dortch, Secretary, Federal Communications Commission, from Karen Brinkmann, Counsel for Alaska Communications Systems, *Request for Connect America Fund Cost Models*, Public Notice in WC Docket Nos. 10-90 and 05-337, DA 11-2026 (Wireline Competition Bur., rel. Dec. 15, 2011), Submitted Pursuant to Second Protective Order in WC Docket Nos. 10-90 and 05-337, DA 12-192 (Wireline Competition Bur., rel. Feb. 10, 2012) (filed Feb. 13, 2012), submitting the ACS Methodology and Assumptions (*citing Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, ¶ 111 (2011) ("*USF/ICC Transformation Order*") ("ACS February 13 Methodology and Assumptions Filing").

[24] Every other price cap carrier territory is served by existing fiber-based middle-mile transport networks, and even the non-CONUS service areas requiring submarine cable connections for Internet traffic are located on routes served by multiple cables that are part of larger, multi-point networks, such as the Trans-Pacific Cable and the various Caribbean cables. In contrast, when ACS began carrying Internet access traffic, the only submarine cables serving Alaska were built for and consumed by *Alaska* voice and data traffic, not as part of larger interstate and international networks, and were price prohibitive to ACS. Thus, the fact that ACS has been required to construct dedicated undersea fiber optic cable capacity between Alaska and the lower 48 states provides the Commission a reliable source of forward-looking cost information for a facility specifically needed for broadband connectivity for Alaska.

forward-looking cost information based on ACS's recent construction of the AKORN cable and purchase of the NorthStar cable.[25]

ACS has completed a thorough analysis of its network and produced forward-looking cost estimates for linking its local facilities to the nearest IAPs. The cost of the ACS submarine cable system should be added to the CAM to yield a more complete and accurate estimate of the forward-looking costs of providing broadband in Alaska.

A. ACS Submarine Cable Cost Modeling Process

In January 2012, ACS completed a model of the forward-looking costs associated with submarine fiber optic cable-based middle mile transport between Alaska and the nearest IAPs.[26] To date, the Commission's model has not included submarine cable costs, but ACS has been working with CostQuest to demonstrate the basis of its cost figures as well as an appropriate percentage of the total cable costs allocable to the CAF II cost recovery mechanism.

As part of this effort, ACS has revised some of the calculations used to estimate the per-customer cost of the submarine cable system middle mile transport. These changes were made to bring the cost methodology in line with the Bureau's model. Specifically, ACS has reduced the cost of capital from 11.25 percent to 9 percent. It also has incorporated an allocation toggle to allow the user to change the percentage of submarine cable cost that is allocated to broadband. As discussed in more detail below, ACS believes that this toggle should be set at 70 percent.

ACS has modeled the entirety of the middle mile costs between its serving areas in Alaska and the nearest IAPs in Washington and Oregon. ACS's model includes the cost to provide submarine fiber optic cable transport from Alaska to landing stations in Florence and Nedonna Beach, Oregon. In addition, the cost of terrestrial transport linking the landing stations to the IAPs in Seattle and Portland are included.

ACS's modeling shows that the forward-looking middle mile costs for an efficient LEC to provide broadband in Alaska are greater than for carriers in the lower 48 states,

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[25] These two cables, together with an Alaska spur built by ACS and the southeast extension of the NorthStar cable to serve Juneau and surrounding points, constitute a complete submarine cable system (with necessary redundancy) suitable for broadband connectivity for the state. The costs presented herein encompass all of the elements of this system.

[26] *See* ACS February 13 Methodology and Assumptions Filing.

assuming backhaul to a point on a regional ring within the same LATA. The costs resulting from ACS's modeling range from **[BEGIN HIGHLY CONFIDENTIAL]** ********** ********** **[END HIGHLY CONFIDENTIAL]**. These cost estimates are based on the actual cost of purchasing and building the necessary cable system described above. The figure for Kodiak represents the requirement of an additional submarine cable to connect the island of Kodiak to Homer and the rest of the ACS fiber network.[27]

In a parallel effort, and in response to a request from CostQuest, ACS has analyzed the individual components of the cost of the AKORN cable and developed a set of inputs that could be used to incorporate Alaska undersea cable costs into the CAM. These costs are shown in **HIGHLY CONFIDENTIAL EXHIBIT B**, attached hereto.

B. ACS Proposal For A Submarine Cable Input In the CAM

ACS proposes that the Alaska-specific undersea cable cost input be incorporated into the model. The actual investment to build (AKORN and Kodiak to Homer) and to purchase (NorthStar) the undersea cable system was approximately [**BEGIN HIGHLY CONFIDENTIAL**] ********** [**END HIGHLY CONFIDENTIAL]**. Based on its recent experience in constructing the AKORN cable, ACS estimates the forward-looking investment required to meet these requirements exceeds [**BEGIN HIGHLY CONFIDENTIAL**] ********** [**END HIGHLY CONFIDENTIAL]**.

ACS requests that, if the Bureau determines not to use the previously-submitted ACS standalone undersea cable transport model, as modified to reflect the Bureau's ultimate decision on the cost of money to be used in the CAM, that it direct CostQuest to incorporate Alaska undersea cable costs into the CAM using the cost inputs provided in **HIGHLY CONFIDENTIAL EXHIBIT C** to model for the cost of the parallel AKORN and NorthStar cables, as well as the Kodiak spur and the Southeast Extension.

ACS believes the allocation factor of 70 percent is reasonable for the portion of submarine cable system costs that should be attributed to CAF II-eligible customer locations due to the unique circumstances faced in Alaska. The CAM employs a 50

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[27] The model covers all of ACS's approximately [**BEGIN HIGHLY CONFIDENTIAL**] ****** [**END HIGHLY CONFIDENTIAL**] customer locations used in the ACS standalone model, and assumes a monthly capacity limit of 10 GB of capacity per customer per month, the minimum reasonable allowance for users taking 4 Mbps service. *See USF-ICC Transformation Order* at ¶ 99.

percent allocation for terrestrial fiber-based middle mile facilities, which are used for interstate as well as intrastate communications of all types. The ACS undersea cable traffic is strictly interstate. As noted above, ACS's per-subscriber costs are based on the total customer locations in the ACS serving areas, with 70 percent of the submarine cable system costs allocated to broadband. ACS serves approximately 70 percent of the customers in the state. Based on ACS's modeling of its service areas, only [**BEGIN HIGHLY CONFIDENTIAL**] ********** [**END HIGHLY CONFIDENTIAL**] customer locations are business customers. Of those, the vast majority are small businesses.[28]

ACS's per-subscriber costs are based on the total customer locations in the ACS serving areas, with 70 percent of the submarine cable system costs allocated to broadband. This is based on the reasonable forward-looking projection that the percentage of residential and small business broadband traffic on the submarine cable system *will rise significantly* as the CAF Phase II program increases broadband availability and adoption rates, and as customers demand more capacity per location.[29] As discussed below, the changes ACS proposes herein increase the total number of supported locations covered by CAF Phase II support in Alaska **[BEGIN HIGHLY CONFIDENTIAL]** ********** **[END HIGHLY CONFIDENTIAL]**.

Thus, ACS expects CAF Phase II to cause a dramatic escalation in demand for transport of consumer and small business broadband data over its submarine cable system, resulting from: (1) the sharp expansion of locations where broadband is available; (2) increasing broadband speeds over time, which will accelerate customer browsing behavior and enable them to request and receive more broadband data; and (3) increasing data demands of customers subscribing to broadband, as they adopt new data-

[28] In the ACS model, the residential locations for each census block were taken directly from the Census Bureau's 2010 TIGERweb County based data files for Alaska, available at: http://tigerweb.geo.census.gov/tigerwebmain/TIGERweb_tabblock_census2010_ak.html. The business locations were derived from the number of establishments per county in the Census Bureau's County Business Patterns (CBP) annual survey for 2010, available at: http://www.census.gov/econ/cbp/index.html. The CBP's total number of establishments per county was reduced by the proportion of household units served by ACS in a specific county. The household units and the business locations were then added together to determine the total locations.

[29] Based on data published by the two largest broadband providers in the state, ACS and GCI, the broadband take rate in Alaska is approximately 50 percent.

intensive services in greater numbers. ACS believes that growth of such broadband traffic is likely to outstrip by far that of all others types in coming years. This dramatic acceleration makes the use of a 70 percent factor the most reasonable forward-looking estimate of the cost of the undersea cable to be attributed to consumer and small business voice and broadband use.

The CAM builds terrestrial transport under the assumption that all carriers in a state will "share" middle mile facilities. This assumption will not hold in the case of submarine cable transport between Alaska and the lower 48 states. There are no opportunities to connect to share fiber facilities with a neighboring ILEC, or connect to another undersea cable *en route*. As a result of these operational realities, it is not likely that more than 30 percent of the traffic on ACS undersea cable represents usage other than residential or small business fixed broadband or voice usage.

In addition, ACS assumes the most conservative per-customer usage amount of 10 GB per month. According to the Commission's own assumptions, it would not be reasonable to build into the model usage limits for CAF-supported locations that are not reasonably comparable to broadband offerings in urban areas.[30] In 2009, residential broadband users of speeds between 3 and 5 Mbps used, on average, 10 GB per month, and annual growth was expected to be 30 to 35 percent.[31] Four years later, 10 GB is no longer sufficient for broadband service that is "reasonably comparable" to that available in urban areas as required under the Communications Act.[32] If the growth rate predicted by the Commission is accurate, 31 GB per customer per month should be the minimum allowance today. In practice, ACS does not currently impose any data usage caps on its broadband offerings.

Thus, under ACS's model, 70 percent is not only reasonable but also conservative for allocation of the total costs of the submarine cable system to CAF-eligible locations.

IV. Impact of the Proposed ACS Input Adjustments on CAM Support Results for Alaska

Taken together these changes increase the total cost estimated by the CAM to deliver broadband meeting the Commission's CAF Phase II standards in Alaska.

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[30] In 2011, the Commission indicated that a monthly usage limit between 10 and 250 GB for CAF-funded broadband offerings would be adequate, but that anything below 10 GB would not be reasonable. *USF-ICC Transformation Order* at ¶ 99.

[31] *Id.*

[32] *See* 47 U.S.C. §254(b)(3).

Because of the interplay between estimated cost and the support calculation, ACS estimates that, in the aggregate, these changes would increase the support level the CAM produces for Alaska from roughly $9.49 million to approximately **[BEGIN HIGHLY CONFIDENTIAL]** ********** **[END HIGHLY CONFIDENTIAL]** based on a combination of CAM Version 3.1.4, scenario 2.1 and the results of ACS's undersea cable transport model.[33]

More importantly, the adjustments to the model that ACS proposes would increase the number of supported locations **[BEGIN HIGHLY CONFIDENTIAL]** ********** **[END HIGHLY CONFIDENTIAL]** from 33,770 to **[BEGIN HIGHLY CONFIDENTIAL]** ******* **[END HIGHLY CONFIDENTIAL]**. These locations represent **[BEGIN HIGHLY CONFIDENTIAL]** ********** **[END HIGHLY CONFIDENTIAL]**.

FCC Illustrative CAM v3.1.4 Scenario 2.1 $52 Lower Benchmark, $122.483 Alt Tech Cutoff, $174.483 Upper Benchmark 9% COM			
SS ID	Description	Funding	Locations
xx	CAM v3.1.4 Baseline	$ 9,490,569	33,770
52	CAM v3.1.4 w/ ACS Input Adjustments and Undersea Cable Costs based on ACS Model @ 70%	**[BEGIN HIGHLY CONFIDENTIAL]** ********** **[END HIGHLY CONFIDENTIAL]**	**[BEGIN HIGHLY CONFIDENTIAL]** ********** **[END HIGHLY CONFIDENTIAL]**

Thus, the adjustments ACS proposes would transform CAF Phase II from a support model that, today, would rob the state of needed support and consign broadband in Alaska to permanent second-class status into an engine for dramatically accelerating broadband deployment, availability, and speed, for thousands upon thousands of Alaskans. These changes would make Alaska a showcase of the power for transformative change that the Commission broadband policies can effect.

[33] Baseline figures from Solution Set: S20130620CAM314ACF9UnSubCompSBI6Voice. Results with ACS adjusted inputs from Solution Set: SS20130626PBAInputsSet52. Results calculated using CAM's Cost Investment Detail reports for each solution set.

V. Request for 10 Years to Complete the CAF Phase II Buildout

The Commission's CAF/ICC Transformation Order requires carriers that accept the right of first refusal of CAF Phase II support to complete the build out of broadband meeting the Commission's CAF Phase II standards as follows:

> By the end of the third year, ETCs must offer at least 4 Mbps/1 Mbps broadband service to at least 85 percent of their high-cost locations – including locations on Tribal lands – covered by the state-level commitment, as described below. By the end of the fifth year, price cap ETCs must offer at least 4 Mbps/1 Mbps broadband service to all supported locations, and at least 6 Mbps/1.5 Mbps to a number of supported locations to be specified.[34]

ACS requests that, to the extent necessary, the Bureau waive the requirements of the CAF/ICC Transformation Order to permit it a longer period – ten years – within which to complete the required buildout. As ACS has previously discussed in the record, the unique circumstances it faces in Alaska likely make it impossible for ACS to complete the required CAF Phase II buildout within five years. ACS faces a uniquely short construction season in Alaska, which in some locations offers only 3-4 months during which to pursue large-scale deployment projects. Further, ACS requires specialized engineers and contractors that have experience with telecommunications plant deployment in Alaska. Even experienced workers from the lower 48 states frequently face a significant learning curve to gain an understanding of the unique considerations associated with deploying plant in Alaska.

In addition, ACS anticipates substantial shortages of workers, equipment, fiber optic cable, and other broadband plant materials after the FCC finalizes CAF Phase II funding. As a small carrier with limited purchasing power, ACS believes that it may be extremely difficult for it to secure the materials necessary to undertake broadband deployment at the pace it would otherwise choose, even if adequate funding were available for planned deployment projects.

ACS proposes two specific modifications to the CAF Phase II support calculation and buildout rules in order to implement its longer, ten-year CAF Phase II commitment. *First*, because ACS's aim is to adjust the length of the buildout period and not to gain unwarranted support dollars ACS proposes that the Bureau provide support over the ten-year period that reflects the support the model would have provided under a five year

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[34] *CAF/ICC Transformation Order* at ¶ 160.

plan, plus limited support over years 6 through 10 that reflects solely the costs associated with additional operating expenses resulting from the buildout.

Under this proposal, ACS would forego the potential support it would qualify for under the Commission's auction mechanism in years six through ten and instead agree to meet its buildout obligations while receiving support equal to the model estimated operating expenses of the broadband network. ACS would receive annual support, levelized over the ten years, that reflects the net present value of five years of the full support amount produced by the CAM, and five additional years reflecting the portion of such support that is allocable to ACS's operating expenses.

For example, as indicated above, ACS's proposed adjustments to the CAM would produce annual support for ACS of **[BEGIN HIGHLY CONFIDENTIAL] ********** [END HIGHLY CONFIDENTIAL]**. In that run, the CAM estimates that the ratio of OpEx (*i.e.,* excluding depreciation, taxes, and return on capital) to total cost for ACS is **[BEGIN HIGHLY CONFIDENTIAL] *********** [END HIGHLY CONFIDENTIAL]**. Thus, ACS proposes that the Bureau determine the net present value, using the cost of money incorporated into the CAM, of the annual support figure the CAM produces in years 1 through 5, and a percentage of that figure (in this case, **[BEGIN HIGHLY CONFIDENTIAL] ***************** [END HIGHLY CONFIDENTIAL]** in years 6 through 10. ACS's support payment would be set equal to the annual payment for ten years that produces the same net present value. At a 9 percent cost of money, in this example, ACS would receive approximately **[BEGIN HIGHLY CONFIDENTIAL] ********** [END HIGHLY CONFIDENTIAL]** per year over the ten-year period.[35]

Second, if the Commission were to grant ACS 10 years for ACS to complete its CAF Phase II buildout, ACS would propose to establish reasonable milestones to govern the buildout period. For example, ACS would commit to offer 4/1 Mbps broadband service to at least 40 percent of its CAF Phase II supported locations by the end of year four, 80 percent by the end of year eight, and 100 percent by the end of year ten, with additional deployment milestones for 6/1.5 Mbps broadband to be determined.

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[35] In a separate filing, to be filed in the coming days, ACS will argue that the support threshold in Alaska should be lower than it is in the lower 48 states, because ACS, virtually uniquely, faces a broadband cable competitor in its markets that receives federal high cost support, making the Bureau's expected take rates unachievable for ACS in Alaska. ACS expects that the lower support threshold in Alaska would increase the CAF Phase II support figures discussed here.

VI. Conclusion

Taken together with the change to the support threshold for Alaska to reflect the presence of a subsidized competitor to be discussed in an upcoming filing, ACS expects the changes discussed herein to enable the CAM to produce support much closer to the level necessary to enable ACS to deliver broadband meeting the Commission's CAF Phase II standards in Alaska.

ACS believes that, with support in the range produced by these changes, the Commission could reshape the broadband landscape of Alaska. What today is one of the most underserved states in the nation could become a model of success, showcasing the power of broadband to transform people's lives by improving their economic, educational, cultural, civic, and social opportunities. Through these changes, the Bureau will place the Commission's goal of expanding broadband to unserved Americans, particularly including in the least-served areas such as Alaska, well within reach.

Please direct any questions regarding this matter to me.

Very truly yours,

Leonard A. Steinberg
General Counsel and Corporate Secretary
Richard R. Cameron
Assistant Vice President and Senior Counsel
ALASKA COMMUNICATIONS SYSTEMS GROUP, INC.
600 Telephone Avenue
Anchorage, Alaska 99503

cc: Carol Mattey
Steve Rosenberg
Amy Bender
Alex Minard
Katie King
Danya Ayoubi
Talmage Cox
Mike Jacobs

REDACTED FOR PUBLIC INSPECTION

Exhibit A

Declaration of Dale E. Patrick, Senior Manager, OSPE, Alaska Communications Systems

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

REDACTED FOR PUBLIC INSPECTION

DECLARATION OF DALE E. PATRICK

I, Dale Patrick, make the following declaration, under penalty of perjury, in support of the attached Ex Parte Letter filed by Alaska Communications Systems ("ACS") in the above-captioned proceedings:

1. I am Senior Manager, Outside Plant Engineering, for ACS. I have approximately twenty five years of experience in engineering outside telecommunications plant in Alaska, and sixteen additional years of experience in this field with carriers in the lower 48 states. As such, I am familiar with ACS's incumbent local exchange carrier ("ILEC") broadband network design and planning considerations, including ACS's current mix of outside plant types among aerial, buried, and underground facilities.

2. I have reviewed the plant mix figures presented in the attached *ex parte* letter. In my professional experience and judgment, they reflect the efficient, forward looking proportions of aerial, underground, and buried plant that ACS would construct to deliver broadband meeting the Connect America Fund, Phase II standards in Alaska.

3. The foregoing is true and complete as of the date hereof, to the best of my information, knowledge and belief.

Date: July 8, 2013

Dale E. Patrick, Senior Manager, OSPE

Highly Confidential Exhibit B

ACS Fiber Placement Costs in Various Alaska Markets

REDACTED FOR PUBLIC INSPECTION

Highly Confidential Exhibit C

AKORN Undersea Cable Forward Looking Cost Information for Use in the Connect America Cost Model