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November 19, 2015

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Rodger Woock
Suzanne Yelen
Industry Analysis and Technology Division
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: Connect America Fund, WC Docket No. 10-90, *et. al.*
Supplemental Data Filing

Dear Ms. Dortch, Mr. Woock and Ms. Yelen:

Pursuant to Federal Communications Commission (Commission) staff request, the National Exchange Carrier Association, Inc. (NECA) is filing an updated view of the Commission’s “bifurcated” approach for reform of rate-of-return universal service fund (USF) support mechanisms.¹ This information is being filed pursuant to the *Third Protective Order* issued in this proceeding.²

The previous filing compared the 2025 results of the Commission’s bifurcated concept to a view of legacy support for 2015. Based on staff request, NECA has developed a ten-year projection of legacy

¹ NECA has previously provided detailed and summary views pursuant to FCC staff request. *See* Letters from Regina McNeil, NECA, to Marlene H. Dortch, Secretary – Federal Communications Commission, Connect America Fund, Docket No. 10-90 (filed Nov. 17, 2015; Nov. 6, 2015, Nov. 13, 2015).

² *Connect America Fund*, WC Docket No. 10-90, *et. al.*, Third Protective Order, 27 FCC Rcd. 10276 (2012) (*Third Protective Order*). The public version of the filing has been redacted in its entirety because the co-dependent nature of the public and confidential data makes it possible to derive one given the other.

support, and the summary reports for the bifurcated mechanism now show the results comparing legacy and bifurcated support in year 2025.

It should be noted that this data is provided to aid in the identification and discussion of issues that may require further examination and does not represent any position on this concept by NECA. Additionally, NECA is continuing to analyze this data and refine its modeling methodologies and will make further refinements going forward. The results of these analyses will be provided in a further submission.

Summary information supplied by NECA is contained in Attachment I. Supporting data used in producing the summary information in Attachment I is contained on a CD-ROM accompanying this letter.

NECA seeks confidential treatment of the information provided on the CD-ROM under the *Third Protective Order*. Notwithstanding the *Third Protective Order*, the information provided on the CD-ROM is entitled to confidential, non-public treatment under the Freedom of Information Act (FOIA) and related provisions of the Commission's rules.³ The information satisfies the requirement of FOIA Exemption 4 (trade secrets or commercial/financial information).

NECA submits the following information pursuant to section 0.459 in support of its request for confidential treatment of the data on the CD-ROM.

- Identification of the specific information for which confidential treatment is sought:

NECA seeks confidential treatment for the study area specific information on the CD-ROM, which contains confidential and proprietary information related to total company and interstate revenue, demand, expense and investment for rate of return carriers.

- Identification of the Commission proceeding in which the information was submitted or a description of the circumstances giving rise to the submission:

This data is submitted in response to a Commission staff request for analysis related to an FCC bifurcated concept for rate of return USF support.

- Explanation of the degree to which the information is commercial or financial, or contains a trade secret or is privileged:

The information on the CD-ROM contains sensitive study area specific information. At the study area level, the data contains information that is granular and highly confidential.

³ 47 C.F.R. §§ 0.457 and 0.459; 5 U.S.C. § 552, et. seq. Section 0.457(d)(iii) specifically identifies information submitted in connection with audits, investigations, and examination of records pursuant to 47 U.S.C. 220 as material that has been accepted by the Commission on a confidential basis pursuant to 5 U.S.C. 552(b)(4).

The carrier data included on the CD-ROM should be treated as confidential trade secret information. NECA would not agree to submit the data in response to the Commission staff's request without assurances that the information will be kept confidential. It would be highly inappropriate for the data to be disclosed to the public or third parties.

- Explanation of the degree to which the information concerns a service that is subject to competition:

Rural telephone service has historically lent itself to “cherry picking” by competitors that choose to serve only the low cost areas within a study area. Detailed information about revenues and expenses may help prospective competitors to gain insight to incumbent LEC (ILEC) market strategies and gain competitive advantage.

- Identification of any measures taken by the submitting party to prevent unauthorized disclosure:

The information provided in the attached CD-ROM includes data that is made available only to NECA representatives on a need to know basis. Any public information is only made available on an aggregate basis.

- Identification of whether the information is available to the public and the extent of any previous disclosure of the information to third parties:

The calculations in the Excel spreadsheets on the CD-ROM are not publicly available.

- Justification of the period during which the submitting party asserts that material should not be available for public disclosure:

NECA requests that all of the data provided on the CD-ROM be treated as confidential indefinitely. Because of the sensitive nature of the data, it would not be appropriate for public disclosure at any time in the foreseeable future.

- Any other information that the party seeking confidential treatment believes may be useful in assessing whether its request for confidentiality should be granted:

By addressing the data request to NECA, the Commission avoided the burden of seeking out the data for 1000 plus rate of return carrier study areas... However, the Commission should take care to not deprive those ILECs of the opportunity to speak for themselves in the event of a FOIA request for access to data. NECA requests that the Commission notify carriers of any FOIA request and allow them to be given a reasonable opportunity to file detailed information supporting continued confidential treatment of their respective data.

Accordingly, NECA requests confidential treatment of the data provided on the attached CD-ROM pursuant to section 0.457 and 0.459 of the Commission's rules and paragraph 4 of the Protective

Order. Pursuant to the Protective Order, NECA has marked the Excel spreadsheets on the CD-ROM and each page of the non-redacted version of this filing as follows:

CONFIDENTIAL INFORMATION - SUBJECT TO PROTECTIVE ORDER IN WC DOCKET NOS 10-90, 07-135, 05-337, 03-109, GN DOCKET NO. 09-51, CC DOCKET NOS. 01-92, 96-45, WT DOCKET NO. 10-208 BEFORE THE FEDERAL COMMUNICATIONS COMMISSION

NECA has also complied with the requirement of the *Third Protective Order* for delivery of both the confidential and redacted copies of the filing.

A handwritten signature in cursive script that reads "Regina McNeil". The signature is written in black ink and is positioned to the left of the "Enclosures" text.

Enclosures

FCC Bifurcated Approach to Broadband Support for Rate-of-Return Regulated Companies (RLECS)

General Modeling Assumptions

Introduction

Modeling the FCC's proposed bifurcated approach for broadband funding requires making significant assumptions about a number of factors, including potential changes in loop investment, plant retirements, and overall changes in loop costs for more than 1,000 small rate-of-return local exchange carriers (RLECs) over time. The assumptions used can produce materially different model results.

The price out included in Attachment 5 of this filing compares the bifurcated results filed on November 17, 2015 to a projection of existing rate of return legacy support mechanisms, developed using the growth assumptions as described below and in Attachment 2.

The following analysis presents three scenarios intended to simulate, on an aggregate basis, potential effects of the concept under different potential investment growth assumptions.¹ This analysis includes growth in investment and operating expenses based on NECA's September 30, 2015 Annual High Cost Loop Data Submission and application of investment and operating expense limits and overall budget controls as requested by Commission staff. Average actual loop cost growth for the past two years for a consistent sample of 740 cost companies has been 0.95% (equivalent to approximately 10% over 10 years). The attached analysis assumes that future growth rates could change in three different ways:

- **Scenario 1** utilizes recent investment, expense and retirement loop cost trends. Growth and retirement rates for companies with the least depreciated plant (representing recent significant investment) are applied to companies with the most depreciated plant (representing companies most likely to begin material investment in future) and vice versa. This scenario assumes that companies who have built out broadband recently will reduce investment levels, and companies that have not yet built out broadband will invest at a rate similar to companies that have recently built out their networks.
- **Scenario 2** assumes each company's future investment equals the sum of its depreciation expense on old and new investment. With both Scenarios 2 and 3,

¹ Because these analyses are based on significant assumptions, NECA cannot state with any certainty the modeled results are representative of what would actually happen. Additionally, there are a number of issues still open in this proceeding that are not considered and could alter results (e.g. extent of changes to Parts 32, 36, 54, and 69, effects of benchmarks and cost controls on voice and broadband rates, and achievement of FCC broadband rate benchmarks). Further, while these summaries are intended to provide useful information on the potential aggregate effects of proposed reforms, underlying study area-specific calculations are not representative of any individual company's results.

expense growth has been applied using the aggregate two-year average growth rate (1.05%) of the 740 sample cost companies.

- **Scenario 3** assumes each company's future investment equals the sum of its depreciation expense on old and new investment, plus 20 percent. This scenario produces aggregate cost growth close to recent trends.

Summary of Growth Assumption Results

Scenario 1 results in a decrease in modeled aggregate loop costs over 10 years of 9%; Scenario 2 results in a reduction of 2% over the 10 years; and Scenario 3 results in an aggregate increase in loop costs of 6% over the same 10-year period.

At FCC staff's request, these price-outs include certain budget constraints. Benchmarks for the new mechanism for each scenario are set at \$45, and projected budget over-runs are eliminated by applying per-line and percent reductions to both the legacy programs and the new mechanism based on their pro-rata share of the projected funding requirement. A detailed explanation of these budget control methods and effects is included in the attached, along with detailed summaries of modeled results for each growth assumption.

General Modeling Assumptions

-Loop costs remain as defined in current rules. Operating expenses follow investment based on relative net investment in the new mechanism to total net investment. This represents a change from current rules where operating expenses follow total investment in service.

-Loop costs associated with investment in place by a "Date Certain" (assumed to be December 31, 2015 for modeling) remain in existing Interstate Common Line Support (ICLS) and High-Cost Loop Support (HCLS) mechanisms, except for costs associated with broadband-only services. These old loop costs will continue to be assigned 25% interstate for voice-only and voice-data services and 100% interstate for broadband-only services.

-Loop costs associated with investment after the Date Certain will go into the new support mechanism. This new investment will be considered 25% interstate for voice-only and voice-data services and 100% interstate for broadband-only services.

-Loop costs associated with investment in broadband-only services, regardless of the date the investment was placed in service, are assigned to the new support mechanism.

-The rate of investment going into the new mechanism will vary by company. For example, a company that completed Fiber-to-the-Premises (FTTP) deployment in 2015 will have little loop cost in the new mechanism, whereas a company just beginning its FTTP deployment in 2016 will have a more rapid increase in loop costs in the new mechanism.

-Service to customers will utilize a combination of old and new investment for a substantial period of time, and the mix of old vs. new will vary by company over time. This means that the amount of loop costs recovered from end users through subscriber line charges (SLCs), existing HCLS support, or the benchmark under the new mechanism must be prorated by company over

time, based on the percentage of loop costs a company has in the old mechanisms vs. the new mechanism.

-For example, in 2018 if a company has 80% of its loop cost in old and 20% in new, its 2018 SLCs will be 80% of current levels (i.e., \$5.20/\$7.36) and the National Average Cost Per Loop (NACPL) for that company will likewise be set at 80% of the current frozen level (i.e., \$518.30). Its benchmark for the new mechanism will be set at 20% of the new mechanism benchmark. If another company has 60% of its loop costs in old and 40% in new, in 2018 its SLCs will be \$3.90/\$5.52, its NACPL will be \$388.72 and its new mechanism benchmark will be at 40%. These results will vary by company depending on the company's investment levels going forward. For broadband only lines the total cost of these lines are being assigned to the new mechanism regardless of the plant mix between old and new, therefore the new mechanism benchmark will apply throughout the transition without proration.

-Imputed revenues associated with the new mechanism benchmark and added budget controls will be recovered via a combination of interstate SLCs, existing interstate special access rates and intrastate charges and support mechanisms. For price-out purposes, it is assumed all lines (including voice-only lines) will generate the required revenues from a combination of these revenue sources. However, it is unclear how budget cuts to ICLS (old and new) will be recovered given interstate SLCs are capped.

- New mechanism support, which will be estimated and trued up similar to current ICLS, will be calculated on a combined basis using all new loop investment costs plus costs of old investment associated with broadband-only services, then allocated among new interstate common line costs, interstate broadband-only loop costs and intrastate services. Interstate broadband-only support will be subtracted from interstate special access revenue requirement prior to setting rates. Attachment 1, Exhibit 1 displays potential effects on interstate broadband-only rates.

ESTIMATED EFFECT ON RURAL CONSUMERS OF PROVIDING OR NOT PROVIDING BROADBAND-ONLY INTERNET ACCESS

BASED ON FCC BIFURCATED SUPPORT CONCEPT - SCENARIO 1

Benchmark Component	Benchmark/Retail Rate/Other Amount Needed for Cost Recovery from Individual Consumer for 10/1 Mbps Service										Relevant Costs Covered	
	Provide Support Per FCC Proposal					Not Providing Support						
	25 th Percentile Rate Band ¹	Median Rate Band ²	75 th Percentile Rate Band ³	25 th Percentile Rate Band ¹	Median Rate Band ²	75 th Percentile Rate Band ³						
New Mechanism Benchmark Plus Budget Control = Total Effective Benchmark ⁴	\$45.00 plus \$4.09 = \$49.09	\$45.00 plus \$5.41 = \$50.41	\$45.00 plus \$8.12 = \$53.12	NA	NA	NA						
Wholesale Transmission Tariff Rate ⁵	\$18.14	\$28.14	\$38.13	\$101.49	\$134.90	\$188.98						Regulated Local Loop Costs and Facilities-Based Network Costs of Loop and Transmission to Enable Broadband Internet Access (developed on Title II basis pursuant to Parts 32, 36, 64 and 69)
Total Benchmark for Supported/Regulated Network Elements	\$67.23	\$78.55	\$91.25	\$101.49	\$134.90	\$188.98						
Middle Mile and Access Service Connection Point Costs ⁶	\$6.51	\$6.81	\$7.12	\$6.51	\$6.81	\$7.12						Regulated and unregulated network costs for transmission through the Broadband Access Service Connection Point and connections to Internet backbone
Approximate Consumer Rate for Retail Broadband Internet Access ⁷	\$73.74	\$85.36	\$98.37	\$108.00	\$141.71	\$196.10						Excludes unregulated non-network costs

Notes

- Rates are displayed for the approximate 25th, 50th (median), and 75th percentile rate band assignments based on NECA's Tariff No. 5 filed June 16, 2015 Filing (Transmittal No. 1455). The 25th percentile uses rate band 9 for DSL Voice-Data rate elements, and rate band 11 for DSL Data-Only rate elements.
- The median percentile uses rate band 13 for DSL Voice-Data rate elements and rate band 14 for DSL Data-Only rate elements.
- The 75th percentile uses rate band 17 for DSL Voice-Data rate elements and rate band 19 for DSL Data-Only rate element.
- The median percentile budget control of \$5.41 represents the Scenario 1, year 2025 priceout amount for the New Mechanism budget control variance on a per line per month basis. This represents the estimated additional charge to customers to recover loop costs resulting from the effects of the Bifurcated Support budget constraint.
- The wholesale transmission rate uses a sum of two rate elements, ETS One-Way Multimedia Virtual Circuit Channel (MM-VCC) with 10 Mbps Capacity and either DSL Voice-Data 1/6 Mbps, 3 Year Option (view with Support) or DSL Data-Only 1/6 Mbps, 3 Year Option (view with No Support). The ETS One-Way MM-VCC is added to enable internet access bandwidth of 10/1 Mbps.
- The middle mile cost of \$6.00 per broadband line is calculated using actual middle mile costs (from NECA's 2014 Company Services Questionnaire), divided by actual broadband lines. Additional cost per line for the Broadband Access Service Connection Point is based on an Ethernet Basic Port and Channel Termination rate with representative capacity in each illustrative rate band divided by the average number of broadband lines per company
- Total approximate consumer rate would also need to include the unregulated non-network costs that the typical ISP would incur to deliver a Broadband Internet Access product to a consumer. Such costs may include sales and marketing functions, help desk operations, etc.

ESTIMATED EFFECT ON RURAL CONSUMERS OF PROVIDING OR NOT PROVIDING BROADBAND-ONLY INTERNET ACCESS

BASED ON FCC BIFURCATED SUPPORT CONCEPT - SCENARIO 2

Benchmark Component	Benchmark/Retail Rate/Other Amount Needed for Cost Recovery from Individual Consumer for 10/1 Mbps Service										Relevant Costs Covered	
	Provide Support Per FCC Proposal					Not Providing Support						
	25 th Percentile Rate Band ¹	Median Rate Band ²	75 th Percentile Rate Band ³	25 th Percentile Rate Band ¹	Median Rate Band ²	75 th Percentile Rate Band ³						
New Mechanism Benchmark Plus Budget Control = Total Effective Benchmark ⁴	\$45.00 plus \$6.75 = \$51.75	\$45.00 plus \$9.34 = \$54.34	\$45.00 plus \$14.43 = \$59.43	NA	NA	NA						
Wholesale Transmission Tariff Rate ⁵	\$18.14	\$28.14	\$38.13	\$101.49	\$134.90	\$188.98						Regulated Local Loop Costs and Facilities-Based Network Costs of Loop and Transmission to Enable Broadband Internet Access (developed on Title II basis pursuant to Parts 32, 36, 64 and 69)
Total Benchmark for Supported/Regulated Network Elements	\$69.89	\$82.48	\$97.56	\$101.49	\$134.90	\$188.98						
Middle Mile and Access Service Connection Point Costs ⁶	\$6.51	\$6.81	\$7.12	\$6.51	\$6.81	\$7.12						Regulated and unregulated network costs for transmission through the Broadband Access Service Connection Point and connections to Internet backbone
Approximate Consumer Rate for Retail Broadband Internet Access ⁷	\$76.40	\$89.29	\$104.68	\$108.00	\$141.71	\$196.10						Excludes unregulated non-network costs

Notes

- Rates are displayed for the approximate 25th, 50th (median), and 75th percentile rate band assignments based on NECA's Tariff No. 5 filed June 16, 2015 Filing (Transmittal No. 1455). The 25th percentile uses rate band 9 for DSL Voice-Data rate elements, and rate band 11 for DSL Data-Only rate elements.
- The median percentile uses rate band 13 for DSL Voice-Data rate elements and rate band 14 for DSL Data-Only rate elements.
- The 75th percentile uses rate band 17 for DSL Voice-Data rate elements and rate band 19 for DSL Data-Only rate element.
- The median percentile budget control of \$9.34 represents the Scenario 2, year 2025 priceout amount for the New Mechanism budget control variance on a per line per month basis. This represents the estimated additional charge to customers to recover loop costs resulting from the effects of the Bifurcated Support budget constraint.
- The wholesale transmission rate uses a sum of two rate elements, ETS One-Way Multimedia Virtual Circuit Channel (MM-VCC) with 10 Mbps Capacity and either DSL Voice-Data 1/6 Mbps, 3 Year Option (view with Support) or DSL Data-Only 1/6 Mbps, 3 Year Option (view with No Support). The ETS One-Way MM-VCC is added to enable internet access bandwidth of 10/1 Mbps.
- The middle mile cost of \$6.00 per broadband line is calculated using actual middle mile costs (from NECA's 2014 Company Services Questionnaire), divided by actual broadband lines. Additional cost per line for the Broadband Access Service Connection Point is based on an Ethernet Basic Port and Channel Termination rate with representative capacity in each illustrative rate band divided by the average number of broadband lines per company
- Total approximate consumer rate would also need to include the unregulated non-network costs that the typical ISP would incur to deliver a Broadband Internet Access product to a consumer. Such costs may include sales and marketing functions, help desk operations, etc.

ESTIMATED EFFECT ON RURAL CONSUMERS OF PROVIDING OR NOT PROVIDING BROADBAND-ONLY INTERNET ACCESS

BASED ON FCC BIFURCATED SUPPORT CONCEPT - SCENARIO 3

Benchmark Component	Benchmark/Retail Rate/Other Amount Needed for Cost Recovery from Individual Consumer for 10/1 Mbps Service							Relevant Costs Covered
	Provide Support Per FCC Proposal			Not Providing Support				
	25 th Percentile Rate Band ¹	Median Rate Band ²	75 th Percentile Rate Band ³	25 th Percentile Rate Band ¹	Median Rate Band ²	75 th Percentile Rate Band ³		
New Mechanism Benchmark Plus Budget Control = Total Effective Benchmark ⁴	\$45.00 plus \$11.33 = \$56.33	\$45.00 plus \$15.69 = \$60.69	\$45.00 plus \$24.48 = \$69.48	NA	NA	NA	NA	
Wholesale Transmission Tariff Rate ⁵	\$18.14	\$28.14	\$38.13	\$101.49	\$134.90	\$188.98	Regulated Local Loop Costs and Facilities-Based Network Costs of Loop and Transmission to Enable Broadband Internet Access (developed on Title II basis pursuant to Parts 32, 36, 64 and 69)	
Total Benchmark for Supported/Regulated Network Elements	\$74.47	\$88.83	\$107.61	\$101.49	\$134.90	\$188.98		
Middle Mile and Access Service Connection Point Costs ⁶	\$6.51	\$6.81	\$7.12	\$6.51	\$6.81	\$7.12	Regulated and unregulated network costs for transmission through the Broadband Access Service Connection Point and connections to Internet backbone	
Approximate Consumer Rate for Retail Broadband Internet Access ⁷	\$80.98	\$95.64	\$114.73	\$108.00	\$141.71	\$196.10	Excludes unregulated non-network costs	

NOTES

- Rates are displayed for the approximate 25th, 50th (median), and 75th percentile rate band assignments based on NECA's Tariff No. 5 filed June 16, 2015 Filing (Transmittal No. 1455). The 25th percentile uses rate band 9 for DSL Voice-Data rate elements, and rate band 11 for DSL Data-Only rate elements.
- The median percentile uses rate band 13 for DSL Voice-Data rate elements and rate band 14 for DSL Data-Only rate elements.
- The 75th percentile uses rate band 17 for DSL Voice-Data rate elements and rate band 19 for DSL Data-Only rate element.
- The median percentile budget control of \$15.69 represents the Scenario 3, year 2025 priceout amount for the New Mechanism budget control variance on a per line per month basis. This represents the estimated additional charge to customers to recover loop costs resulting from the effects of the Bifurcated Support budget constraint.
- The wholesale transmission rate uses a sum of two rate elements, ETS One-Way Multimedia Virtual Circuit Channel (MM-VCC) with 10 Mbps Capacity and either DSL Voice-Data 1/6 Mbps, 3 Year Option (view with Support) or DSL Data-Only 1/6 Mbps, 3 Year Option (view with No Support). The ETS One-Way MM-VCC is added to enable internet access bandwidth of 10/1 Mbps.
- The middle mile cost of \$6.00 per broadband line is calculated using actual middle mile costs (from NECA's 2014 Company Services Questionnaire), divided by actual broadband lines. Additional cost per line for the Broadband Access Service Connection Point is based on an Ethernet Basic Port and Channel Termination rate with representative capacity in each illustrative rate band divided by the average number of broadband lines per company
- Total approximate consumer rate would also need to include the unregulated non-network costs that the typical ISP would incur to deliver a Broadband Internet Access product to a consumer. Such costs may include sales and marketing functions, help desk operations, etc.

FCC Bifurcated Approach to Broadband Support for RLECs

Technical Notes and Assumptions

In addition to the General Modeling Assumptions, the following are Technical Notes and Assumptions pertaining to the FCC's latest request to model its Bifurcated Mechanism:

Growth assumptions vary by scenario as follows:

Scenario 1: Investment is modeled for old and new mechanisms based on two year average growth and removal rates with higher growth rates applied to study areas with a higher percent of depreciated plant (growth rates based on data in Exhibit 1). Companies were stratified into four groups, and an annual investment growth amount was calculated based on the two-year average. This fixed amount is added annually to the new mechanism investment. In addition to investment growth, operating expenses were grown in the same manner as investment (based on data in Attachment 2, Exhibit 1).

Scenario 2: The old depreciation expense for the base year becomes the new Telecommunications Plant in Service (New TPIS) amount for 2016. For ensuing years, New TPIS is grown by the sum of depreciation expense amounts for both the old and new investment from the prior year. Operating expenses were grown at the two-year aggregate average expense growth rate for rate of return companies (1.05%).

Scenario 3: The old depreciation expense for the base year grown by 20 percent becomes the New TPIS for 2016. For the ensuing years, the New TPIS is grown by the sum of the depreciation expense amounts for both the old and new investment from the prior year, grown by 20 percent. Expenses were grown at the two-year aggregate average expense growth rate for RLECs (1.05%).

Common assumptions for all three scenarios:

1. Price-outs assume 100% of RLEC study areas currently on rate-of-return regulation remain on rate-of-return regulation.
2. Loop cost data is based on the HCLS definition for loop cost. Actual loop costs assigned to Interstate under current FCC rules include additional cost assignments required under other rules (e.g., costs related to land and buildings, customer service, etc.). For purposes of this price-out, in order to more closely simulate the Commission's overall cost allocation rules, an adjustment factor of 10% has been applied to the HCLS unseparated revenue requirement to capture accounts included in Interstate loop costs but not included for the HCLS loop cost calculation.

3. The 2015 and new mechanism cost amounts are based on calendar year 2014 HCLS Data contained in NECA's September 30, 2015 annual USF submission. (For the remaining assumptions the calendar year 2014 data in the NECA 2015 Submission is the "2015" data). Interstate Common Line data for 2015 reflects 2015-2016 projected test period amounts from the June 2015 Annual Tariff Filing.
4. Depreciation expense for old investment for all scenarios is based on the ratio by study area between 2015 depreciation expense and 2015 TPIS applied annually to the corresponding old TPIS amount.
5. Retirement is calculated as an annual fixed amount by applying two-year average removal factors to company-specific 2015 TPIS amounts and company-specific operating expense (OPEX) is grown by using two-year average OPEX growth factors. For the first scenario the removal factors and the OPEX growth factors are based on the stratified group data shown in Exhibit 1 with higher removal rates and higher OPEX growth applied to study areas with higher percent of depreciated plant and vice versa. For scenarios 2 and 3, retirement of old investment and OPEX growth are calculated using the two-year aggregate average of all companies, shown in Exhibit 1 rather than the stratified averages used in scenario 1.
6. For new mechanism investment, a 20-year life is assumed (average of longer Cable & Wire Facility (CWF) lives and shorter Central Office Equipment (COE) lives) resulting in an annual depreciation rate of 5% applied to New TPIS. It is assumed for all scenarios that no new investment is removed over the 10-year period.
7. For new investment support calculations, the assumed authorized rate of return is 9.5% per FCC direction.
8. Expenses, other than depreciation expense and accumulated depreciation reserve, are allocated between old and new mechanisms based on the relationship of new net loop investment to total loop net investment.
9. Bifurcated benchmarks, needed to reflect the use of both old and new investment to provide service, were calculated as follows:
 - a. The frozen NACPL and new mechanism benchmark were adjusted annually based on the percent of loop cost in old versus new by study area.
 - b. SLCs were adjusted annually by percent reduction in Common Line revenue requirements by study area.
 - c. The benchmark revenue for the new mechanism was set at \$45 per month for each scenario and held constant over the 10 years and adjusted to reflect the percent of loop cost in the new mechanism by year by study area, with the

exception of broadband only lines, for which the \$45 is applicable across the entire 10 years without proration.

- 10.** Broadband-only lines are based on lines reported by NECA Digital Subscriber Line (DSL) pool participants from June 2015 reported counts, extrapolated to the total population of RLECs. For purposes of estimating future broadband-only lines for all study areas, the percentage of broadband-only lines to total access lines for all study areas reporting broadband-only lines was applied to the access line counts for study areas not reporting broadband-only lines. Broadband-only line counts were then grown for all study areas at the rate of 5% per year. The line counts for voice-only and voice-data lines are grown based on the most recent two-year average change among NECA DSL pool participants. Voice-only line growth was -11.65% and voice-data and broadband-only combined growth was +2.49%. (For modeling purposes, the voice-data lines were determined residually by subtracting the calculated broadband-only lines from total voice-data and broadband-only lines grown at +2.49%.) Category 1.3 loop growth was assumed to be -3.25%.
- 11.** Broadband-only lines will be supported out of the new mechanism per FCC direction. Existing costs as well as new costs associated with broadband-only lines are included in the new mechanism with an assumed rate of return on existing investment of 11.25%. Existing broadband-only costs are estimated based on a ratio of broadband-only lines to total lines applied to total loop costs.
- 12.** Average Schedule companies' data was modeled based on aggregate cost company trends.
- 13.** RLEC CAF-ICC was based on trending data from the June 2015 NECA Annual Access Tariff Filing extrapolated to the total RLEC population.
- 14.** ICLS amounts were supplemented with USAC ICLS projected data for those study areas not in NECA's Common Line tariff. Common Line revenue requirements were reduced by the proportion of old loop costs to total (old plus new) loop costs.
- 15.** Consistent with the treatment for ICLS, lines and costs associated with acquired exchanges, treated separately for HCLS per section 54.305 of the Commission's rules, have been combined with the data for the acquiring study areas for purposes of determining the assignment of expenses between the legacy and new mechanisms based on net investment in the new mechanism of the combined entity to total net investment of the combined entity. HCLS for the acquired exchanges is phased down annually by the average annual percent change in loops of -3.25%.
- 16.** Frozen MAG amounts are transferred from the legacy ICLS mechanism to the new mechanism based on the ratio of new net plant to total net plant by study area.

- 17.** The corporate operations expense Limit is reflected in both old and new mechanism support calculations, applied to total expense prior to allocation to old and new.
- 18.** Operating expenses, including corporate operations expense and taxes, are limited based on a double-log regression methodology provided by the Commission and described further in Attachment 3.
- 19.** Capital expenditures associated with the new mechanism are limited based on the Capital Budget Mechanism methodology described in the Rural Associations' *ex parte* presentation in this proceeding, dated August 31, 2015.
- 20.** The \$3,000 annual cap on support is applied to the sum of old investment and new investment support divided by sum of 1.3 loops plus broadband-only lines.
- 21.** The overall budget control mechanism is then applied to HCLS, ICLS and the new mechanism support as required to achieve the loop support budget. See Attachment 4 for description of methodology used.
- 22.** Legacy support is projected to 2025 using same investment and line growth rates mentioned above. The legacy projection does not include Opex or capital budget mechanism limitations per FCC direction. The legacy projection is subject to the \$3,000 annual support cap per loop, corporate operations expense and budget control limitations.
- 23.** Safety Valve and Safety Net Support are not included in the modeling of support amounts.
- 24.** The effects of any potential competitive overlap adjustments are not reflected in the modeling of support amounts.

Loop Cost Growth/Removal Trends

Cost Company by % Depreciated (2015-1 HCL data - latest view of annual submission filed September 30, 2015)

Based on a consistent sample of 754 cost companies using High Cost Loop data (official view), excluding price cap affiliates

All companies (754)	Account	2012	2013	2014	Variance \$ 12-13	Variance % 12-13	Variance \$ 13-14	Variance % 13-14	Average Variance \$	Average Variance %	Average 2013-2014
	Depreciation Expense	808,604,480	807,541,118	820,161,096	(1,063,362)	-0.13%	12,619,978	1.56%	5,778,308	0.72%	813,851,107
	Accum. Depreciation	11,010,250,430	11,511,989,412	12,081,225,706	501,738,982	4.56%	569,236,294	4.94%	535,487,638	4.75%	11,796,607,559
	TPIS	16,902,310,102	17,447,463,808	18,147,664,990	545,153,706	3.23%	700,201,182	4.01%	622,677,444	3.62%	17,797,564,399
	Net Plant Invest.	6,063,725,352	6,103,864,458	6,248,433,851	40,139,106	0.66%	144,569,393	2.37%	92,354,250	1.52%	6,176,149,155
	Operating Expenses	1,467,504,695	1,459,656,138	1,498,133,932	(7,848,557)	-0.53%	38,477,794	2.64%	15,314,619	1.05%	1,478,895,035
	Taxes	161,170,863	161,213,802	157,477,693	42,939	0.03%	(3,736,109)	-2.32%	(1,846,585)	-1.15%	159,345,748
	Loop Cost RRQ	3,119,449,140	3,115,095,810	3,178,721,529	(4,353,330)	-0.14%	63,625,719	2.04%	29,636,194	0.95%	3,146,908,669
	TPIS - Accum.Dep.	5,892,059,672	5,935,474,396	6,066,439,284	43,414,724		130,964,888		87,189,806		6,000,956,840
	% Accum.Dep. of TPIS	65.14%	65.98%	66.57%							66.28%
	Avg. Plant Removal										-278,363,469
	Removal Factor										-1.53%

76 - 100% (Most Dep.)	Account	2012	2013	2014	Variance \$ 12-13	Variance % 12-13	Variance \$ 13-14	Variance % 13-14	Average Variance \$	Average Variance %	Average 2013-2014
	Depreciation Expense	121,414,952	111,913,225	107,374,394	(9,501,727)	-7.83%	(4,538,831)	-4.06%	(7,020,279)	-5.94%	109,643,810
	Accum. Depreciation	2,449,032,764	2,536,560,559	2,607,681,441	87,527,795	3.57%	71,120,882	2.80%	79,324,339	3.19%	2,572,121,000
	TPIS	2,851,647,804	2,885,194,220	2,916,924,517	33,546,417	1.18%	31,730,296	1.10%	32,638,357	1.14%	2,901,059,369
	Net Plant Invest.	421,843,021	367,615,633	328,837,375	(54,227,388)	-12.85%	(38,778,258)	-10.55%	(46,502,823)	-11.70%	348,226,504
	Operating Expenses	287,542,470	280,859,725	281,176,667	(6,682,744)	-2.32%	316,942	0.11%	(3,182,901)	-1.11%	281,018,196
	Taxes	26,392,712	26,905,848	27,004,752	513,136	1.94%	98,904	0.37%	306,020	1.16%	26,955,300
	Loop Cost RRQ	482,807,474	461,035,558	452,550,018	(21,771,916)	-4.51%	(8,485,540)	-1.84%	(15,128,728)	-3.17%	456,792,788
	TPIS - Accum.Dep.	402,615,040	348,633,662	309,243,076	(53,981,378)		(39,390,586)		(46,685,982)		328,938,369
	% Accum.Dep. of TPIS	85.88%	87.92%	89.40%							88.66%
	Avg. Plant Removal										-30,319,471
	Removal Factor										-1.04%

51 - 75%	Account	2012	2013	2014	Variance \$ 12-13	Variance % 12-13	Variance \$ 13-14	Variance % 13-14	Average Variance \$	Average Variance %	Average 2013-2014
	Depreciation Expense	241,447,803	238,188,429	234,888,039	(3,259,374)	-1.35%	(3,300,390)	-1.39%	(3,279,882)	-1.37%	236,538,234
	Accum. Depreciation	3,850,215,143	4,014,908,949	4,201,247,499	164,693,806	4.28%	186,338,550	4.64%	175,516,178	4.46%	4,108,078,224
	TPIS	5,211,558,159	5,326,508,951	5,478,066,156	114,950,792	2.21%	151,557,205	2.85%	133,253,998	2.53%	5,402,287,553
	Net Plant Invest.	1,421,882,168	1,371,654,735	1,342,291,129	(50,227,433)	-3.53%	(29,363,606)	-2.14%	(39,795,519)	-2.84%	1,356,972,932
	Operating Expenses	468,145,928	460,632,071	473,521,077	(7,513,857)	-1.61%	12,889,006	2.80%	2,687,574	0.60%	467,076,574
	Taxes	52,030,143	47,013,189	41,395,429	(5,016,955)	-9.64%	(5,617,760)	-11.95%	(5,317,357)	-10.80%	44,204,309
	Loop Cost RRQ	921,585,618	900,144,846	900,812,297	(21,440,772)	-2.33%	667,450	0.07%	(10,386,661)	-1.13%	900,478,571
	TPIS - Accum.Dep.	1,361,343,017	1,311,600,002	1,276,818,657	(49,743,015)		(34,781,345)		(42,262,180)		1,294,209,329
	% Accum.Dep. of TPIS	73.88%	75.38%	76.69%							76.04%
	Avg. Plant Removal										-61,022,056
	Removal Factor										-1.11%

26 - 50%	Account	2012	2013	2014	Variance \$ 12-13	Variance % 12-13	Variance \$ 13-14	Variance % 13-14	Average Variance \$	Average Variance %	Average 2013-2014
	Depreciation Expense	235,818,670	241,999,238	248,671,445	6,180,568	2.62%	6,672,208	2.76%	6,426,388	2.69%	245,335,341
	Accum. Depreciation	2,915,589,072	3,074,652,397	3,280,907,915	159,063,325	5.46%	206,255,518	6.71%	182,659,422	6.08%	3,177,780,156
	TPIS	4,729,435,777	4,886,971,443	5,186,963,251	157,535,666	3.33%	299,991,808	6.14%	228,763,737	4.73%	5,036,967,347
	Net Plant Invest.	1,867,509,891	1,865,494,871	1,965,369,469	(2,015,020)	-0.11%	99,874,598	5.35%	48,929,789	2.62%	1,915,432,170
	Operating Expenses	401,669,647	404,435,508	416,604,797	2,765,861	0.69%	12,169,289	3.01%	7,467,575	1.85%	410,520,153
	Taxes	48,129,082	50,801,516	48,025,708	2,672,434	5.55%	(2,775,808)	-5.46%	(51,687)	0.04%	49,413,612
	Loop Cost RRQ	895,712,261	907,104,435	934,406,016	11,392,174	1.27%	27,301,581	3.01%	19,346,877	2.14%	920,755,225
	TPIS - Accum.Dep.	1,813,846,706	1,812,319,047	1,906,055,336	(1,527,659)		93,736,290		46,104,315		1,859,187,191
	% Accum.Dep. of TPIS	61.65%	62.92%	63.25%							63.09%
	Avg. Plant Removal										-62,675,920
	Removal Factor										-1.21%

0 - 25% (Least Dep.)	Account	2012	2013	2014	Variance \$ 12-13	Variance % 12-13	Variance \$ 13-14	Variance % 13-14	Average Variance \$	Average Variance %	Average 2013-2014
	Depreciation Expense	209,923,055	215,440,226	229,227,217	5,517,171	2.63%	13,786,992	6.40%	9,652,081	4.51%	222,333,722
	Accum. Depreciation	1,795,413,452	1,885,867,507	1,991,388,851	90,454,056	5.04%	105,521,344	5.60%	97,987,700	5.32%	1,938,628,179
	TPIS	4,109,668,363	4,348,789,194	4,565,711,067	239,120,831	5.82%	216,921,873	4.99%	228,021,352	5.40%	4,457,250,130
	Net Plant Invest.	2,352,490,273	2,499,099,220	2,611,935,878	146,608,947	6.23%	112,836,659	4.52%	129,722,803	5.37%	2,555,517,549
	Operating Expenses	310,146,650	313,728,834	326,831,391	3,582,184	1.15%	13,102,557	4.18%	8,342,371	2.67%	320,280,112
	Taxes	34,618,926	36,493,249	41,051,804	1,874,323	5.41%	4,558,555	12.49%	3,216,439	8.95%	38,772,527
	Loop Cost RRQ	819,343,787	846,810,971	890,953,199	27,467,184	3.35%	44,142,228	5.21%	35,804,706	4.28%	868,882,085
	TPIS - Accum.Dep.	2,314,254,911	2,462,921,686	2,574,322,216	148,666,775		111,400,529		130,033,652		2,518,621,951
	% Accum.Dep. of TPIS	43.69%	43.37%	43.62%							43.49%
	Avg. Plant Removal										-124,346,022
	Removal Factor										-2.72%

Notes:
 (1) Based on HCL Algorithm
 (2) Operating Expenses incl. C&WF & COE Maintenance, Network Support, General Support, Network Operations, Corporate Operations, Rents & Benefits

FCC Bifurcated Approach to Broadband Support for RLECs

Double Log Operating Expense (OPEX) Regression Methodology

- OPEX costs are to be limited by comparing companies’ monthly OPEX costs per location to regression model-generated monthly expenses per location, plus two standard deviations. Adding two standard deviations to regression results is a common practice for identifying outliers. This method has been applied by the FCC in constructing voice and broadband rate ceilings.
- **OPEX Limits Regression Model According to FCC Specifications**
 - The OPEX per location variable is related in a regression to locations and density.
 - Locations include housing units and business units and correspond to Total Locations reported in the ACAM V.2 illustrative model results.
 - Density is defined as locations per square mile. Square miles are calculated based on study area boundary maps submitted to the FCC and used in ACAM.
 - OPEX costs are taken from the 2015 USF data submission and they reflect the Corporate Operations Expense Limit.
 - Both the dependent and the independent variables are used in regression in their logarithmic forms.
 - The square of the logarithm of density is also included as an independent variable to better capture the effect of density on costs, characterized by initial economies followed by diseconomies of density for very high density areas.
 - All observations in the regression are equally weighted, including potential outliers.
- The preliminary limit formula is constructed by adding two standard deviations to the exponentiated regression results. The same standard deviation is used for all study areas.
- The preliminary limit formula is shown below.

Monthly Limit per Location =

$$EXP \{6.182459 - 0.228153 \times \ln \text{Locations} - 0.270978 \times \ln \text{Density} + 0.026398 \times [\ln \text{Density}]^2\} + 94.8694$$

- **Year-to-Year Limit Adjustments**
 - Monthly per location OPEX limits calculated based on the final formulas would be adjusted each year for inflation, based on the annual percentage change in the United States Department of Commerce's Gross Domestic Product-Chained Price Index (GDP-CPI).

FCC Bifurcated Approach to Broadband Support for RLECs

Budget Control Process

Background:

The FCC has indicated that a maximum of \$2.0 billion will be made available for high cost support on an annual basis. For purposes of this price-out the FCC requested use of an overall budget control mechanism whereby support reductions would be accomplished through a combination of per line and pro rata adjustments, similar to the approach suggested for the new mechanism in the Associations' Data Connection Support (DCS) proposal previously submitted in this proceeding. Unlike the DCS proposal, which applied reductions solely to the new mechanism, per staff request this approach reduces support across all programs, legacy and new, to satisfy budgetary constraints. Expansion of the budget control methodology contained in the DCS proposal to incorporate HCLS and ICLS is discussed below.

FCC Budget Control Methodology:

Assuming the total high cost support budget is \$2 Billion, RLEC CAF-ICC was based on trending data from the June 2015 NECA Annual Access Tariff filing extrapolated to the RLEC population with the balance of support (\$2.0 Billion less projected CAF ICC per year) available for distribution to HCLS, ICLS and the new mechanism for broadband loop support.

To illustrate the application of this method: in year 1 Scenario 1, projected support amounts, after taking into consideration limits to new capital investment and operating expenses as well as existing corporate operations expense limits and the annual \$3,000 cap on high cost support, the budget variance in 2016 is \$72.4 million. Individual company payments will therefore need to be reduced to satisfy budget constraints. HCLS is targeted to be funded at \$710.8 million, ICLS is projected to be \$795.0 million, and the new mechanism requires \$199.5 million. Collectively, the three programs require \$1,705.3 million while the available loop support budget is \$1,632.9 million, resulting in a budget variance of \$72.4 million. The following two-step process is used to reduce individual study area support amounts to satisfy budgetary constraints:

Step 1: Each program would have its support reduced by a pro-rata share of the total and then each program would be adjusted by a per line and percent reduction to satisfy the budget constraint.

In the above example, HCLS accounts for 41.7 percent of the total support requirement (\$710.8m/\$1,705.3m), ICLS 46.6 percent with the remaining 11.7 percent being attributable to the new mechanism. Thus, the budget overrun of \$72.4 million would be prorated among the three programs using the derived percentages:

HCLS - \$30.2 million (from \$710.8 to \$680.6 million)

ICLS - \$33.7 million (from \$795.0 to \$761.3 million)

New - \$9.5 million (from \$199.5 to \$190.0 million)

Step 2: Each of the three mechanisms would then utilize the proposed DCS Budget Control methodology for determining the reductions needed to satisfy the budgetary constraints.

Using HCLS as an example, the \$30.2 million would be divided by 2 to determine the amount for which the per line reduction is to apply. The resulting \$15.10 million would be divided by the number of Category 1.3 lines for study areas eligible to receive HCLS to determine the per line reduction to be applied to each study area’s Category 1.3 lines. (For display purposes, this amount is divided by 12 to produce a monthly reduction per line). The impact on each study area’s support would then be determined by multiplying the per line amount by each study area’s Category 1.3 lines. Each study area’s preliminary adjusted support would then be determined by subtracting the reduction from the original support amount. (Since a study area cannot receive negative support, if the adjusted support is less than zero it is set to zero.) The preliminary adjusted support amounts for all study areas are then summed and compared to total amount of support available for distribution to determine the pro rata adjustment factor.

For example, in Year 1, Scenario 1, after application of the per line reductions, the HCLS preliminary fund size was reduced to \$695.7 million. The budget control amount of \$680.6 million was then divided by this amount to determine the pro rata adjustment factor. In this instance, the pro rata adjustment for HCLS would be .9782 applied to the preliminary support amount to determine the study area’s budget-controlled HCLS amount. Together the per line reductions applied to the original support amounts and the pro rata adjustment applied to the preliminary amount of \$695.7 million produce the reductions necessary to meet the budget control amount.

The methodology described above for the HCLS budget control adjustment is used to determine budget controlled amounts for both ICLS and the new mechanism. Table 1 below displays year 1 impacts of the budget control mechanism for each of the three scenarios.

Table 1 Budget Control Impacts Year 1

	Scenario 1	Scenario 2	Scenario 3
Total Support Adjustment Amount	\$72.4 M	\$98.2 M	\$119.1 M
HCLS	-\$30.2M	-\$40.3 M	-\$48.2 M
Per Line per Month	-\$0.59	-\$0.78	-\$0.94
Percent	97.82 %	97.05%	96.44%
ICLS	-\$33.7 M	-\$44.3 M	-\$51.7 M
Per Line per Month	-\$0.40	-\$0.52	-\$0.61
Percent	97.83%	97.08%	96.48%
New	-\$8.5 M	-\$13.7 M	-\$19.1 M
Per Line per Month	-\$0.12	-\$0.19	-\$0.26
Percent	97.81%	97.05%	96.44%

Table 2 displays the budget control impacts for year 10.

Table 2 Budget Control Impacts Year 10

	Scenario 1	Scenario 2	Scenario 3
Total Support Adjustment Amount	\$281.2 M	\$442.3 M	\$725.2 M
HCLS	-\$39.1 M	-\$56.6 M	-\$81.4 M
Per Line per Month	-\$1.25	-\$1.62	-\$2.28
Percent	91.82%	87.35%	80.72%
ICLS	-\$22.1 M	-\$20.2 M	-\$25.6 M
Per Line per Month	-\$0.65	-\$0.58	-\$0.73
Percent	92.48%	88.70%	82.66%
New	-\$220.0 M	-\$365.6 M	-\$618.2 M
Per Line per Month	-\$2.76	-\$4.73	-\$7.79
Percent	92.38%	88.55%	82.36%

Attachment 5

Scenarios 1-3

REDACTED – FOR PUBLIC INSPECTION

FCC Bifurcated Mechanism - Preliminary Modeling
 Scenario 1: Growth factors stratified by depreciation levels; Benchmark = \$45
 Work in Progress Draft for Discussion Only
 Subject to Change Based on Further Analysis

Base Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Legacy Support Mechanisms - Existing Investment											
High Cost Loop Support Cap	\$ 735,165,218	\$ 718,696,728	\$ 700,566,166	\$ 682,892,983	\$ 665,665,642	\$ 648,872,895	\$ 632,503,778	\$ 616,547,605	\$ 600,993,959	\$ 585,832,684	\$ 571,053,883
High Cost Loop Support with Frozen NACPI after Adjustment Factor	\$ 732,584,114	\$ 710,800,256	\$ 691,212,003	\$ 655,390,315	\$ 627,101,474	\$ 587,551,379	\$ 537,690,543	\$ 482,366,976	\$ 417,938,611	\$ 351,776,555	\$ 281,707,723
Adjustment Factor	0.90	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ICLS	940,244,722	795,020,949	705,212,279	621,605,717	541,977,389	467,202,199	395,993,846	329,017,337	262,632,140	209,670,067	159,118,422
New Mechanism Support											
Percent of Revenue Requirement Assigned to New Mechanism	16.74%	27.39%	37.06%	45.95%	54.17%	61.99%	69.17%	75.95%	81.25%	86.18%	
Loop Cost Assigned to New Mechanism	\$ 631,309,444	\$ 1,044,851,522	\$ 1,423,307,725	\$ 1,763,676,508	\$ 2,072,437,582	\$ 2,354,629,137	\$ 2,614,781,601	\$ 2,832,297,974	\$ 3,037,568,058	\$ 3,221,121,184	
Benchmark Revenue	\$ 430,987,917	\$ 647,766,648	\$ 827,472,765	\$ 984,422,492	\$ 1,120,933,676	\$ 1,246,052,154	\$ 1,354,153,890	\$ 1,460,307,421	\$ 1,537,211,055	\$ 1,612,930,770	
New Mechanism Support	\$ 199,476,460	\$ 395,095,262	\$ 592,312,241	\$ 773,126,997	\$ 941,731,698	\$ 1,095,413,745	\$ 1,246,081,722	\$ 1,355,156,341	\$ 1,479,329,801	\$ 1,584,796,859	
Total Loop "Old" Investment High Cost Support	\$ 1,672,828,836	\$ 1,505,821,205	\$ 1,396,424,282	\$ 1,276,996,032	\$ 1,169,078,863	\$ 1,054,753,578	\$ 933,684,389	\$ 811,384,313	\$ 680,570,751	\$ 561,446,622	\$ 440,826,145
Total Loop High Cost Support Old plus New	\$ 1,672,828,836	\$ 1,705,297,665	\$ 1,791,519,544	\$ 1,869,308,273	\$ 1,942,205,860	\$ 1,996,485,276	\$ 2,029,098,134	\$ 2,057,466,035	\$ 2,035,727,092	\$ 2,040,776,423	\$ 2,025,623,004
CAF ICC	\$ 367,130,130	\$ 345,608,109	\$ 337,556,906	\$ 329,295,424	\$ 317,985,311	\$ 304,355,080	\$ 291,319,957	\$ 278,869,011	\$ 266,952,578	\$ 255,561,553	
Total RLEC High Cost Support Budget	\$ 1,632,869,870	\$ 1,654,391,891	\$ 1,662,443,094	\$ 1,670,704,576	\$ 1,682,014,689	\$ 1,695,644,920	\$ 1,708,680,043	\$ 1,721,130,989	\$ 1,733,047,422	\$ 1,744,438,447	
Budget Variance	\$ 72,427,795	\$ 137,127,653	\$ 206,865,179	\$ 271,501,284	\$ 314,470,587	\$ 333,453,214	\$ 348,785,992	\$ 314,596,103	\$ 307,729,001	\$ 281,184,557	
Budget Variance per Line per Month	\$1.62	\$3.15	\$4.86	\$6.50	\$8.17	\$8.60	\$7.77	\$6.92	\$6.60	\$6.25	
HCLS adjusted for Budget Variance	\$ 680,610,984	\$ 638,304,804	\$ 582,862,185	\$ 539,438,854	\$ 495,004,928	\$ 449,328,804	\$ 400,595,106	\$ 353,351,438	\$ 298,732,112	\$ 242,602,785	
\$ per line per month	\$0.59	\$1.06	\$1.46	\$1.72	\$1.80	\$1.74	\$1.46	\$1.38	\$1.25		
%	97.82%	95.96%	94.02%	92.23%	91.00%	90.49%	90.18%	90.86%	91.26%	91.82%	
ICLS adjusted for Budget Variance	\$ 761,254,636	\$ 651,233,462	\$ 552,816,326	\$ 466,214,279	\$ 393,612,200	\$ 330,917,929	\$ 273,241,623	\$ 222,045,635	\$ 178,053,884	\$ 137,030,579	
\$ per line per month	\$0.40	\$0.65	\$0.87	\$1.02	\$1.10	\$1.06	\$0.94	\$0.84	\$0.65		
%	97.83%	96.01%	94.09%	92.41%	91.29%	90.84%	90.56%	91.53%	91.74%	92.48%	
New Mechanism adjusted for Budget Variance	\$ 191,004,250	\$ 364,853,624	\$ 526,764,584	\$ 665,051,444	\$ 793,397,561	\$ 915,398,187	\$ 1,034,843,314	\$ 1,145,733,916	\$ 1,256,261,426	\$ 1,364,805,083	
\$ per line per month	\$0.12	\$0.39	\$0.83	\$1.38	\$1.87	\$2.28	\$2.64	\$2.80	\$2.80	\$2.76	
%	97.81%	95.98%	94.09%	92.36%	91.23%	90.77%	90.50%	91.44%	91.66%	92.38%	
Total RLEC High Cost Support Budget Adjusted for Budget Overage	\$ 1,632,869,870	\$ 1,654,391,891	\$ 1,662,443,094	\$ 1,670,704,576	\$ 1,682,014,689	\$ 1,695,644,920	\$ 1,708,680,043	\$ 1,721,130,989	\$ 1,733,047,422	\$ 1,744,438,447	

FCC Bifurcated Mechanism - Preliminary Modeling
Scenario 1: Growth factors stratified by depreciation levels;
 Work in Progress Draft for Discussion Only
Subject to Change Based on Further Analysis
 Impacts Compared to Legacy Support

	All Study Areas				Study Areas Losing Support				Study Areas Gaining Support							
	Count	Loops	2025 Legacy Support	2025 Bifurcated Support	\$ Change	% Change	SARs Losing More Than 50% Support	Average Loss per Loop per Month	Max Loss per Loop per Month	Count	Loops	% Gain of Support	SARs Gaining More Than 50% Support	Average Gain per Loop per Month	Max Gain per Loop per Month	
All Study Areas	1095	3,761,691	\$1,525.9 M	\$1,744.4 M	\$218.5 M	14.3%	96	\$7	\$98	669	2,176,125	32.4%	197	\$13	\$80	
Groups By Loop Count																
0 - 500	172	49,716	\$37.0 M	\$40.0 M	\$3.0 M	8.2%	6	\$8	\$98	90	28,602	22.6%	18	\$14	\$73	
501 - 1000	203	146,443	\$101.4 M	\$115.9 M	\$14.5 M	14.3%	82	\$8	\$59	121	88,381	29.1%	34	\$19	\$66	
1001 - 2500	303	482,607	\$268.9 M	\$321.2 M	\$52.3 M	19.5%	106	\$7	\$43	197	319,567	31.5%	53	\$17	\$80	
2501 - 5000	210	746,477	\$367.9 M	\$429.8 M	\$61.9 M	16.8%	70	\$8	\$43	140	491,309	33.1%	47	\$15	\$61	
5001 - 10000	130	906,786	\$348.1 M	\$413.9 M	\$65.8 M	18.9%	47	\$8	\$36	83	562,109	36.9%	35	\$14	\$65	
10001 - 20000	56	759,754	\$257.5 M	\$274.8 M	\$17.4 M	6.7%	27	\$7	\$21	29	392,298	29.4%	8	\$10	\$34	
> 20000	21	669,908	\$145.2 M	\$148.8 M	\$3.6 M	2.5%	12	\$5	\$12	9	293,859	29.2%	2	\$7	\$19	
Groups By CPL Percentile																
10%: \$0 - \$542	110	631,777	\$73.6 M	\$74.9 M	\$1.3 M	1.8%	44	\$5	\$16	66	284,000	71.2%	50	\$7	\$36	
25%: \$542 - \$656	164	798,336	\$140.3 M	\$144.0 M	\$3.8 M	2.7%	97	\$6	\$16	67	308,424	64.5%	39	\$11	\$46	
50%: \$656 - \$886	274	843,870	\$264.1 M	\$299.3 M	\$35.2 M	13.3%	120	\$7	\$26	154	488,788	40.7%	47	\$11	\$65	
75%: \$886 - \$1,351	274	934,783	\$482.8 M	\$568.8 M	\$86.1 M	17.8%	107	\$8	\$98	167	625,753	33.3%	40	\$15	\$65	
90%: \$1,351 - \$2,115	163	421,545	\$350.8 M	\$419.2 M	\$68.4 M	19.5%	25	\$10	\$53	138	362,397	24.6%	19	\$17	\$80	
95%: \$2,115 - \$2,898	55	69,456	\$97.4 M	\$111.8 M	\$14.4 M	14.8%	9	\$23	\$43	46	62,501	18.9%	2	\$22	\$60	
>95%: > \$2,898	55	61,924	\$117.0 M	\$126.3 M	\$9.3 M	8.0%	24	\$13	\$43	31	44,262	15.0%	0	\$23	\$63	
Groups By Settlement Type																
A/S	310	701,082	\$135.9 M	\$93.2 M	-\$42.7 M	-31.4%	216	\$7	\$98	94	114,672	12.0%	4	\$3	\$21	
Cost	785	3,060,609	\$1,390.0 M	\$1,651.2 M	\$261.2 M	18.8%	210	\$7	\$59	575	2,061,453	33.1%	193	\$14	\$80	
Groups By Density																
Less than 1	70	144,009	\$150.9 M	\$185.1 M	\$34.2 M	22.7%	18	\$6	\$98	52	130,533	26.2%	12	\$22	\$65	
1 - 3	146	439,143	\$309.6 M	\$361.3 M	\$51.7 M	16.7%	33	\$8	\$19	113	325,621	25.4%	18	\$16	\$73	
3 - 10	321	644,747	\$332.4 M	\$399.0 M	\$66.6 M	20.1%	117	\$7	\$59	204	451,907	34.1%	56	\$15	\$80	
10 - 20	242	696,700	\$261.8 M	\$309.1 M	\$47.3 M	18.1%	95	\$6	\$30	147	446,192	35.1%	46	\$12	\$65	
20 - 50	227	1,234,490	\$338.1 M	\$361.1 M	\$23.0 M	6.8%	105	\$6	\$21	122	606,077	37.2%	51	\$10	\$48	
More than 50	89	602,602	\$133.1 M	\$128.7 M	-\$4.3 M	-3.3%	58	\$7	\$36	31	215,795	42.9%	14	\$11	\$62	
Groups by ACAM 10/1 Deployment																
0% Deployed	70	70,040	\$50.58 M	\$65.75 M	\$15.2 M	30%	21	\$8	\$48	49	56,606	36%	15	\$24	\$65	
1% to 25%	242	625,048	\$260.49 M	\$333.04 M	\$72.5 M	28%	79	\$7	\$59	163	437,986	42%	60	\$17	\$80	
25% to 50%	104	385,633	\$154.6 M	\$173.4 M	\$18.8 M	12.1%	38	\$8	\$21	66	238,751	30.1%	26	\$12	\$63	
50% to 75%	135	535,178	\$199.9 M	\$232.9 M	\$33.0 M	16.5%	48	\$7	\$98	87	299,180	39.4%	35	\$14	\$73	
75% to 99%	386	1,553,804	\$622.0 M	\$702.3 M	\$80.3 M	12.9%	167	\$6	\$53	219	905,013	29.3%	48	\$12	\$66	
100% Deployed	158	591,988	\$238.3 M	\$237.0 M	-\$1.3 M	-0.5%	73	\$8	\$43	85	238,589	21.4%	13	\$11	\$63	
Groups By Census Region																
Northeast	81	246,559	\$46.6 M	\$52.3 M	\$5.7 M	12.3%	36	\$5	\$98	45	117,030	53.3%	23	\$9	\$38	
Midwest	572	1,312,634	\$566.2 M	\$603.5 M	\$37.3 M	6.6%	263	\$7	\$59	309	706,373	24.1%	67	\$11	\$66	
South	263	1,643,641	\$562.0 M	\$668.3 M	\$106.3 M	18.9%	80	\$7	\$36	183	942,732	41.2%	76	\$14	\$80	
West	179	558,857	\$351.1 M	\$420.3 M	\$69.2 M	19.7%	47	\$7	\$48	132	409,990	29.2%	31	\$16	\$65	

Note: Northeast: ME, NH, VT, MA, RI, CT, NY, PA, NJ; Midwest: WI, MI, IL, IN, OH, MO, ND, SD, NE, KS, MN, IA; South: DE, MD, DC, VA, WV, NC, SC, GA, FL, KY, TN, MS, AL, OK, TX, AR, LA; West: ID, MT, WY, NV, UT, CO, AZ, NM, AK, WA, OR, CA, HI, GU, AS

FCC Bifurcated Mechanism - Preliminary Modeling
Scenario 2: Growth equals depreciation expense in new and old; Benchmark = \$45
 Work in Progress Draft for Discussion Only
 Subject to Change Based on Further Analysis

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Legacy Support Mechanisms - Existing Investment											
High Cost Loop Support Cap	\$ 735,165,218	\$ 718,696,728	\$ 700,566,166	\$ 682,892,983	\$ 665,665,642	\$ 648,872,895	\$ 632,503,778	\$ 616,547,605	\$ 600,993,959	\$ 585,832,684	\$ 571,053,883
High Cost Loop Support with Frozen NACPI after Adjustment Factor	\$ 732,584,114	\$ 709,648,515	\$ 687,801,104	\$ 653,229,802	\$ 624,815,018	\$ 582,802,058	\$ 529,710,400	\$ 473,279,799	\$ 410,027,842	\$ 348,418,284	\$ 279,573,508
Adjustment Factor	0.90	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ICLS	940,244,722	780,299,722	667,219,341	560,998,398	462,575,227	375,174,460	298,566,653	233,891,658	175,217,483	133,443,637	99,783,003
New Mechanism Support											
Percent of Revenue Requirement Assigned to New Mechanism	17.76%	17.76%	30.14%	41.33%	51.32%	60.03%	67.76%	74.34%	80.34%	84.70%	88.34%
Loop Cost Assigned to New Mechanism	\$ 675,734,636	\$ 1,174,070,274	\$ 1,639,293,354	\$ 2,057,209,153	\$ 2,423,810,958	\$ 2,742,228,563	\$ 3,015,137,464	\$ 3,233,208,760	\$ 3,414,938,020	\$ 3,568,472,377	\$ 3,568,472,377
Benchmark Revenue	\$ 432,677,493	\$ 679,688,244	\$ 889,751,727	\$ 1,070,570,091	\$ 1,221,405,484	\$ 1,350,883,974	\$ 1,456,363,559	\$ 1,553,456,718	\$ 1,618,369,244	\$ 1,673,278,396	\$ 1,673,278,396
New Mechanism Support	\$ 241,152,643	\$ 489,081,391	\$ 739,356,652	\$ 969,225,480	\$ 1,175,023,094	\$ 1,352,024,300	\$ 1,507,909,103	\$ 1,615,991,943	\$ 1,720,926,356	\$ 1,807,425,414	\$ 1,807,425,414
Total Loop "Old" Investment High Cost Support	\$ 1,672,828,836	\$ 1,489,948,237	\$ 1,355,020,445	\$ 1,214,228,200	\$ 1,087,390,245	\$ 957,976,518	\$ 828,277,053	\$ 707,171,457	\$ 585,245,325	\$ 481,861,921	\$ 379,356,511
Total Loop High Cost Support Old plus New	\$ 1,672,828,836	\$ 1,731,100,880	\$ 1,844,101,836	\$ 1,953,584,852	\$ 2,056,615,725	\$ 2,132,999,612	\$ 2,180,301,353	\$ 2,215,080,560	\$ 2,201,237,268	\$ 2,202,788,277	\$ 2,186,781,925
CAF ICC	\$ 367,130,130	\$ 345,608,109	\$ 337,556,906	\$ 329,295,424	\$ 317,985,311	\$ 304,355,080	\$ 291,319,957	\$ 278,869,011	\$ 266,952,578	\$ 255,561,553	\$ 255,561,553
Total RLEC High Cost Support Budget	\$ 1,632,869,870	\$ 1,654,391,891	\$ 1,670,704,576	\$ 1,682,014,689	\$ 1,695,644,920	\$ 1,708,680,043	\$ 1,721,130,989	\$ 1,733,047,422	\$ 1,744,438,447	\$ 1,744,438,447	\$ 1,744,438,447
Budget Variance	\$98,231,010	\$189,709,945	\$291,141,758	\$385,911,149	\$450,984,923	\$484,656,433	\$506,400,517	\$480,106,279	\$469,740,855	\$442,343,477	\$442,343,477
Budget Variance per Line per Month	\$2.20	\$4.36	\$6.84	\$9.24	\$10.94	\$11.87	\$12.48	\$11.86	\$11.60	\$10.88	\$10.88
HCLS adjusted for Budget Variance	\$ 669,379,637	\$ 617,044,323	\$ 555,879,296	\$ 507,572,366	\$ 459,578,903	\$ 411,961,744	\$ 365,080,964	\$ 320,597,709	\$ 274,118,677	\$ 223,021,221	\$ 223,021,221
\$ per line per month	\$0.78	\$1.42	\$1.97	\$2.34	\$2.48	\$2.42	\$2.23	\$1.95	\$1.81	\$1.62	\$1.62
%	97.05%	94.46%	91.74%	88.31%	87.73%	86.87%	85.85%	86.36%	86.86%	87.35%	87.35%
ICLS adjusted for Budget Variance	\$ 736,021,754	\$ 598,579,886	\$ 477,393,092	\$ 375,775,862	\$ 295,850,477	\$ 232,198,649	\$ 180,420,530	\$ 137,001,242	\$ 104,987,008	\$ 79,598,841	\$ 79,598,841
\$ per line per month	\$0.52	\$0.83	\$1.06	\$1.17	\$1.20	\$1.09	\$0.99	\$0.86	\$0.75	\$0.58	\$0.58
%	97.08%	94.57%	91.88%	89.54%	88.08%	87.23%	86.88%	87.49%	87.91%	88.70%	88.70%
New Mechanism adjusted for Budget Variance	\$ 227,468,480	\$ 438,767,682	\$ 629,170,706	\$ 787,356,347	\$ 926,585,309	\$ 1,051,484,527	\$ 1,163,178,549	\$ 1,263,532,038	\$ 1,353,941,737	\$ 1,441,818,385	\$ 1,441,818,385
\$ per line per month	\$0.19	\$0.64	\$1.38	\$2.31	\$3.22	\$3.90	\$4.50	\$4.60	\$4.79	\$4.73	\$4.73
%	97.05%	94.48%	91.75%	89.34%	87.93%	87.19%	86.81%	87.50%	87.85%	88.55%	88.55%
Total RLEC High Cost Support Budget Adjusted for Budget Overage	\$ 1,632,869,870	\$ 1,654,391,891	\$ 1,670,704,576	\$ 1,682,014,689	\$ 1,695,644,920	\$ 1,708,680,043	\$ 1,721,130,989	\$ 1,733,047,422	\$ 1,744,438,447	\$ 1,744,438,447	\$ 1,744,438,447

FCC Bifurcated Mechanism - Preliminary Modeling
Scenario 2: Growth equals depreciation expense in new and old;
 Work in Progress Draft for Discussion Only
Subject to Change Based on Further Analysis
 Impacts Compared to Legacy Support

	All Study Areas				Study Areas Losing Support				Study Areas Gaining Support							
	Count	Loops	2025 Legacy Support	2025 Bifurcated Support	\$ Change	% Change	SARs Losing More Than 50% Support	Average Loss per Loop per Month	Max Loss per Loop per Month	Count	Loops	% Gain of Support	SARs Gaining More Than 50% Support	Average Gain per Loop per Month	Max Gain per Loop per Month	
All Study Areas	1095	3,761,691	\$1,553.6 M	\$1,744.4 M	\$190.8 M	12.3%	162	\$7	\$103	593	1,707,196	35.1%	125	\$18	\$93	
Groups By Loop Count																
0 - 500	172	49,716	\$36.7 M	\$40.7 M	\$4.0 M	10.8%	6	\$9	\$103	92	29,214	26.9%	9	\$18	\$93	
501 - 1000	203	146,443	\$102.2 M	\$117.2 M	\$15.0 M	14.6%	19	\$8	\$37	112	79,960	32.2%	25	\$22	\$63	
1001 - 2500	303	482,607	\$268.9 M	\$316.0 M	\$47.1 M	17.5%	42	\$7	\$22	176	282,754	30.9%	28	\$19	\$67	
2501 - 5000	210	746,477	\$376.0 M	\$440.7 M	\$64.7 M	17.2%	97	\$7	\$58	113	398,372	37.1%	35	\$20	\$62	
5001 - 10000	130	906,786	\$359.7 M	\$422.6 M	\$62.9 M	17.5%	38	\$7	\$21	69	473,283	38.4%	21	\$18	\$63	
10001 - 20000	56	759,754	\$266.1 M	\$296.5 M	\$30.4 M	11.4%	12	\$7	\$15	28	373,769	33.8%	6	\$14	\$35	
> 20000	21	669,908	\$144.0 M	\$110.7 M	-\$33.3 M	-23.1%	7	\$6	\$9	3	69,844	40.4%	1	\$13	\$33	
Groups By CPL Percentile																
10%: \$0 - \$542	110	631,777	\$72.5 M	\$12.1 M	-\$60.4 M	-83.3%	93	\$8	\$17	4	15,173	13.7%	1	\$3	\$10	
25%: \$542 - \$656	164	798,336	\$138.5 M	\$87.6 M	-\$50.8 M	-36.7%	55	\$7	\$21	23	104,240	30.7%	4	\$4	\$24	
50%: \$656 - \$886	274	843,870	\$257.9 M	\$251.3 M	-\$6.7 M	-2.6%	139	\$5	\$58	135	343,013	23.6%	16	\$6	\$47	
75%: \$886 - \$1,351	274	934,783	\$487.2 M	\$607.8 M	\$120.6 M	24.8%	2	\$6	\$103	201	748,317	34.1%	41	\$15	\$43	
90%: \$1,351 - \$2,115	163	421,545	\$371.7 M	\$526.7 M	\$155.0 M	41.7%	8	\$4	\$38	155	403,968	43.6%	53	\$32	\$63	
95%: \$2,115 - \$2,898	55	69,456	\$101.7 M	\$135.1 M	\$33.4 M	32.9%	1	\$12	\$12	54	68,597	33.6%	10	\$41	\$93	
>95%: > \$2,898	55	61,924	\$124.2 M	\$125.9 M	-\$3.3 M	-0.2%	0	\$11	\$26	21	23,888	10.5%	0	\$16	\$42	
Groups By Settlement Type																
A/S	310	701,082	\$144.8 M	\$104.3 M	-\$40.5 M	-28.0%	43	\$7	\$103	104	121,288	13.1%	5	\$4	\$21	
Cost	785	3,060,609	\$1,408.8 M	\$1,640.2 M	\$231.3 M	16.4%	119	\$7	\$58	489	1,585,908	36.0%	120	\$19	\$93	
Groups By Density																
Less than 1	70	144,009	\$149.9 M	\$193.2 M	\$43.3 M	28.9%	2	\$9	\$103	51	129,825	36.0%	14	\$29	\$60	
1 - 3	146	439,143	\$318.7 M	\$404.4 M	\$85.7 M	26.9%	3	\$10	\$58	112	384,745	34.8%	24	\$20	\$63	
3 - 10	321	644,747	\$338.7 M	\$416.6 M	\$77.9 M	23.0%	16	\$6	\$40	210	445,604	34.6%	40	\$17	\$93	
10 - 20	242	696,700	\$269.0 M	\$315.5 M	\$46.4 M	17.3%	40	\$6	\$37	118	368,843	37.1%	21	\$16	\$67	
20 - 50	227	1,234,490	\$343.5 M	\$307.8 M	-\$35.6 M	-10.4%	68	\$7	\$26	80	298,429	28.3%	12	\$11	\$52	
More than 50	89	602,602	\$133.8 M	\$107.0 M	-\$26.9 M	-20.1%	33	\$7	\$21	22	79,750	56.6%	14	\$20	\$62	
Groups by ACAM 10/1 Deployment																
0% Deployed	70	70,040	\$48.56 M	\$59.07 M	\$10.5 M	22%	6	\$7	\$38	40	45,743	38%	11	\$23	\$60	
1% to 25%	242	625,048	\$247.1 M	\$287.34 M	\$40.2 M	16%	38	\$7	\$40	123	314,232	37%	21	\$17	\$55	
25% to 50%	104	385,633	\$159.0 M	\$170.1 M	\$11.1 M	7.0%	31	\$8	\$19	43	147,446	31.9%	11	\$19	\$61	
50% to 75%	135	535,178	\$198.7 M	\$213.9 M	\$15.1 M	7.6%	60	\$9	\$103	75	234,797	38.3%	19	\$17	\$93	
75% to 99%	386	1,553,804	\$636.0 M	\$700.3 M	\$64.4 M	10.1%	170	\$6	\$29	216	649,073	33.8%	40	\$17	\$63	
100% Deployed	158	591,988	\$264.3 M	\$313.7 M	\$49.5 M	18.7%	15	\$6	\$37	96	315,905	35.7%	23	\$18	\$67	
Groups By Census Region																
Northeast	81	246,559	\$45.5 M	\$28.6 M	-\$16.9 M	-37.1%	36	\$7	\$103	12	18,566	32.7%	2	\$9	\$26	
Midwest	572	1,312,634	\$600.0 M	\$715.7 M	\$115.7 M	19.3%	64	\$8	\$40	321	806,245	35.0%	56	\$17	\$93	
South	263	1,643,641	\$553.7 M	\$586.7 M	\$33.0 M	6.0%	47	\$6	\$24	116	586,687	36.3%	40	\$16	\$61	
West	179	558,857	\$354.4 M	\$413.4 M	\$59.0 M	16.7%	66	\$7	\$58	66	263,159	-19.7%	27	\$23	\$61	

Note: Northeast: ME, NH, VT, MA, RI, CT, NY, PA, NJ; Midwest: WI, MI, IL, IN, OH, MO, ND, SD, NE, KS, MN, IA; South: DE, MD, DC, VA, WV, NC, SC, GA, FL, KY, TN, MS, AL, OK, TX, AR, LA; West: ID, MT, WY, NV, UT, CO, AZ, NM, AK, WA, OR, CA, HI, GU, AS

FCC Bifurcated Mechanism - Preliminary Modeling
Scenario 3: Growth equals depreciation expense in new and old, grown by 20%; Benchmark = \$45
 Work in Progress Draft for Discussion Only
 Subject to Change Based on Further Analysis

Base Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Legacy Support Mechanisms - Existing Investment											
High Cost Loop Support Cap	\$ 735,165,218	\$ 718,696,728	\$ 700,566,166	\$ 682,892,983	\$ 665,665,642	\$ 648,872,895	\$ 632,503,778	\$ 616,547,605	\$ 600,993,959	\$ 585,832,684	\$ 571,053,883
High Cost Loop Support with Frozen NACPI after Adjustment Factor	\$ 732,584,114	\$ 709,137,921	\$ 686,567,142	\$ 652,233,192	\$ 623,259,674	\$ 580,627,032	\$ 527,515,803	\$ 471,436,366	\$ 408,021,196	\$ 346,831,145	\$ 277,010,817
Adjustment Factor	0.90	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ICLS	940,244,722	761,646,608	638,733,932	528,514,775	429,766,784	344,253,971	271,120,628	210,504,975	155,893,571	117,704,806	87,199,025
New Mechanism Support											
Percent of Revenue Requirement Assigned to New Mechanism	19.71%	19.71%	33.04%	44.58%	54.58%	63.09%	70.50%	76.68%	82.31%	86.32%	89.63%
Loop Cost Assigned to New Mechanism	\$ 757,063,667	\$ 1,310,298,186	\$ 1,814,424,130	\$ 2,262,361,670	\$ 2,654,376,129	\$ 2,995,608,714	\$ 3,290,104,602	\$ 3,532,368,574	\$ 3,738,054,212	\$ 3,916,698,768	\$ 4,081,101,817
Benchmark Revenue	\$ 473,572,411	\$ 736,307,774	\$ 949,336,877	\$ 1,127,539,805	\$ 1,273,597,110	\$ 1,395,226,909	\$ 1,493,219,076	\$ 1,583,261,228	\$ 1,643,045,875	\$ 1,693,486,707	\$ 1,738,101,817
New Mechanism Support	\$ 281,170,209	\$ 567,333,344	\$ 852,016,072	\$ 1,112,166,403	\$ 1,344,930,787	\$ 1,549,549,519	\$ 1,730,636,718	\$ 1,865,544,539	\$ 1,994,770,211	\$ 2,105,386,749	\$ 2,201,101,817
Total Loop "Old" Investment High Cost Support	\$ 1,672,828,836	\$ 1,470,784,529	\$ 1,325,301,074	\$ 1,180,747,967	\$ 1,053,026,458	\$ 924,881,003	\$ 798,636,431	\$ 681,941,341	\$ 563,914,767	\$ 464,535,951	\$ 364,209,842
Total Loop High Cost Support Old plus New	\$ 1,672,828,836	\$ 1,751,954,738	\$ 1,892,634,418	\$ 2,032,764,039	\$ 2,165,192,861	\$ 2,269,811,790	\$ 2,348,185,950	\$ 2,412,578,059	\$ 2,429,459,306	\$ 2,459,306,162	\$ 2,469,596,591
CAF ICC	\$ 367,130,130	\$ 345,608,109	\$ 337,556,906	\$ 329,295,424	\$ 317,985,311	\$ 304,355,080	\$ 291,319,957	\$ 278,869,011	\$ 266,952,578	\$ 255,561,553	\$ 244,438,447
Total RLEC High Cost Support Budget	\$ 1,632,869,870	\$ 1,654,391,891	\$ 1,662,443,094	\$ 1,670,704,576	\$ 1,682,014,689	\$ 1,695,644,920	\$ 1,708,680,043	\$ 1,721,130,989	\$ 1,733,047,422	\$ 1,744,438,447	\$ 1,755,953,883
Budget Variance	\$ 119,084,868	\$ 238,242,527	\$ 370,320,945	\$ 494,488,285	\$ 587,797,101	\$ 652,541,030	\$ 703,898,016	\$ 708,328,317	\$ 726,258,740	\$ 744,438,447	\$ 762,541,030
Budget Variance per Line per Month	\$2.66	\$5.47	\$8.71	\$11.84	\$14.26	\$15.99	\$17.35	\$17.50	\$17.93	\$18.31	\$18.69
HCLS adjusted for Budget Variance	\$ 660,935,993	\$ 600,142,902	\$ 533,411,918	\$ 480,919,186	\$ 430,266,157	\$ 380,923,620	\$ 333,889,263	\$ 289,059,349	\$ 244,408,293	\$ 195,670,953	\$ 146,944,817
\$ per line per month	\$0.94	\$1.74	\$2.38	\$2.78	\$2.89	\$2.82	\$2.69	\$2.41	\$2.41	\$2.41	\$2.28
ICLS adjusted for Budget Variance	\$ 709,875,530	\$ 558,330,878	\$ 432,232,035	\$ 331,616,340	\$ 255,104,956	\$ 195,778,497	\$ 149,087,673	\$ 110,441,552	\$ 82,945,350	\$ 61,594,405	\$ 40,405,817
\$ per line per month	\$0.61	\$0.97	\$1.22	\$1.33	\$1.35	\$1.23	\$1.14	\$1.03	\$0.92	\$0.73	\$0.57
New Mechanism adjusted for Budget Variance	\$ 262,058,347	\$ 495,918,111	\$ 696,799,141	\$ 858,169,049	\$ 996,643,576	\$ 1,118,942,803	\$ 1,225,703,107	\$ 1,321,630,089	\$ 1,405,693,778	\$ 1,487,173,089	\$ 1,562,541,030
\$ per line per month	\$0.26	\$0.90	\$1.92	\$3.19	\$4.44	\$5.48	\$6.43	\$6.93	\$7.48	\$7.93	\$8.31
Total RLEC High Cost Support Budget Adjusted for Budget Overage	\$ 1,632,869,870	\$ 1,654,391,891	\$ 1,662,443,094	\$ 1,670,704,576	\$ 1,682,014,689	\$ 1,695,644,920	\$ 1,708,680,043	\$ 1,721,130,989	\$ 1,733,047,422	\$ 1,744,438,447	\$ 1,755,953,883

FCC Bifurcated Mechanism - Preliminary Modeling
Scenario 3: Growth equals depreciation expense in new and old, grown by 20%;
 Work in Progress Draft for Discussion Only
Subject to Change Based on Further Analysis
 Impacts Compared to Legacy Support

	All Study Areas				Study Areas Losing Support				Study Areas Gaining Support										
	Count	Loops	2025 Legacy Support	2025 Bifurcated Support	\$ Change	% Change	Count	Loops	% Loss of Support	SARs Losing More Than 50% Support	Average Loss per Loop per Month	Max Loss per Loop per Month	Count	Loops	% Gain of Support	SARs Gaining More Than 50% Support	Average Gain per Loop per Month	Max Gain per Loop per Month	
All Study Areas	1095	3,761,691	\$1,565.8 M	\$1,744.4 M	\$178.7 M	11.4%	529	2,124,670	-30.9%	170	\$7	\$107	566	1,637,021	36.3%	118	\$18	\$90	
Groups By Loop Count																			
0 - 500	172	49,716	\$36.5 M	\$39.0 M	\$2.5 M	6.8%	84	21,656	-20.0%	8	\$11	\$107	88	28,060	25.2%	7	\$16	\$90	
501 - 1000	203	146,443	\$101.6 M	\$112.6 M	\$11.1 M	10.9%	101	73,827	-17.0%	18	\$9	\$38	102	72,616	33.6%	19	\$22	\$59	
1001 - 2500	303	482,607	\$268.2 M	\$307.1 M	\$38.9 M	14.5%	135	212,329	-27.9%	48	\$8	\$30	168	270,278	30.3%	29	\$18	\$57	
2501 - 5000	210	746,477	\$376.4 M	\$436.1 M	\$59.7 M	15.9%	98	351,684	-27.7%	40	\$8	\$67	112	394,793	37.8%	35	\$20	\$64	
5001 - 10000	130	906,786	\$361.8 M	\$424.0 M	\$62.2 M	17.2%	64	457,904	-40.3%	38	\$8	\$17	66	448,882	39.9%	20	\$19	\$64	
10001 - 20000	56	759,754	\$271.1 M	\$306.5 M	\$35.3 M	13.0%	28	385,985	-33.6%	11	\$7	\$14	28	373,769	36.5%	7	\$15	\$39	
> 20000	21	669,908	\$150.1 M	\$119.1 M	-\$31.0 M	-20.6%	19	621,285	-32.5%	7	\$6	\$11	2	48,623	49.4%	1	\$18	\$34	
Groups By CPL Percentile																			
10%: \$0 - \$542	110	631,777	\$74.4 M	\$12.4 M	-\$62.0 M	-83.3%	107	619,953	-86.3%	97	\$8	\$17	3	11,824	17.1%	0	\$3	\$7	
25%: \$542 - \$656	164	798,336	\$147.4 M	\$89.8 M	-\$57.6 M	-39.1%	146	726,494	-46.0%	59	\$7	\$22	18	71,842	35.6%	3	\$5	\$21	
50%: \$656 - \$886	274	843,870	\$265.9 M	\$258.2 M	-\$7.7 M	-2.9%	150	533,412	-18.8%	12	\$5	\$97	124	310,458	23.3%	10	\$6	\$42	
75%: \$886 - \$1,351	274	934,783	\$489.4 M	\$616.2 M	\$126.8 M	25.9%	73	180,301	-12.8%	2	\$5	\$107	201	754,482	34.9%	39	\$15	\$42	
90%: \$1,351 - \$2,115	163	421,545	\$367.3 M	\$528.6 M	\$161.3 M	43.9%	8	14,410	-8.4%	0	\$6	\$42	155	407,135	45.8%	57	\$33	\$64	
95%: \$2,115 - \$2,898	55	69,456	\$99.3 M	\$125.8 M	\$26.5 M	26.6%	1	859	-13.4%	0	\$24	\$24	54	68,597	27.4%	9	\$32	\$90	
>95%: > \$2,898	55	61,924	\$122.0 M	\$113.4 M	-\$8.6 M	-7.0%	44	49,241	-10.7%	0	\$18	\$39	11	12,683	10.1%	0	\$14	\$29	
Groups By Settlement Type																			
A/S	310	701,082	\$150.9 M	\$107.1 M	-\$43.8 M	-29.0%	213	589,873	-43.0%	43	\$7	\$107	97	111,209	12.4%	4	\$4	\$21	
Cost	785	3,060,609	\$1,414.9 M	\$1,637.4 M	\$222.5 M	15.7%	316	1,534,797	-27.9%	127	\$7	\$97	469	1,525,812	37.3%	114	\$19	\$90	
Groups By Density																			
Less than 1	70	144,009	\$147.5 M	\$186.6 M	\$39.1 M	26.5%	22	16,547	-11.1%	2	\$17	\$107	48	127,462	36.1%	13	\$28	\$58	
1 - 3	146	439,143	\$317.1 M	\$401.9 M	\$84.8 M	26.7%	38	79,687	-15.4%	4	\$10	\$67	108	359,456	36.9%	23	\$22	\$64	
3 - 10	321	644,747	\$338.6 M	\$412.2 M	\$73.5 M	21.7%	119	207,584	-21.1%	20	\$7	\$97	202	437,163	35.6%	39	\$17	\$90	
10 - 20	242	696,700	\$271.8 M	\$315.8 M	\$44.0 M	16.2%	128	331,354	-33.3%	44	\$7	\$38	114	365,346	37.0%	20	\$16	\$60	
20 - 50	227	1,234,490	\$353.3 M	\$316.8 M	-\$36.5 M	-10.3%	156	968,040	-34.6%	69	\$7	\$39	71	266,450	31.6%	13	\$13	\$52	
More than 50	89	602,602	\$137.5 M	\$111.2 M	-\$26.3 M	-19.1%	66	521,458	-43.8%	31	\$7	\$25	23	81,144	52.9%	10	\$19	\$64	
Groups by ACAM 10/1 Deployment																			
0% Deployed	70	70,040	\$47.93 M	\$56.62 M	\$8.7 M	18%	32	28,059	-18%	7	\$9	\$42	38	41,981	38%	10	\$23	\$53	
1% to 25%	242	625,048	\$248.75 M	\$284.68 M	\$35.9 M	14%	128	325,405	-34%	44	\$7	\$41	114	299,643	38%	14	\$18	\$58	
25% to 50%	104	385,633	\$159.4 M	\$168.2 M	\$8.8 M	5.5%	66	251,226	-38.5%	34	\$8	\$31	38	134,407	36.2%	11	\$21	\$62	
50% to 75%	135	535,178	\$200.9 M	\$210.9 M	\$10.1 M	5.0%	61	318,985	-43.7%	31	\$9	\$107	74	216,193	37.7%	15	\$17	\$90	
75% to 99%	386	1,553,804	\$642.2 M	\$708.8 M	\$66.6 M	10.4%	179	925,633	-25.2%	38	\$6	\$30	207	628,171	34.9%	45	\$18	\$64	
100% Deployed	158	591,988	\$266.5 M	\$315.2 M	\$48.6 M	18.2%	63	275,362	-29.5%	16	\$7	\$97	95	316,626	37.0%	23	\$19	\$64	
Groups By Census Region																			
Northeast	81	246,559	\$47.2 M	\$28.2 M	-\$19.0 M	-40.2%	69	227,993	-50.4%	40	\$8	\$107	12	18,566	27.5%	1	\$8	\$24	
Midwest	572	1,312,634	\$603.5 M	\$717.8 M	\$114.4 M	19.0%	262	545,091	-31.3%	66	\$7	\$97	310	767,543	36.5%	54	\$18	\$90	
South	263	1,643,641	\$561.9 M	\$591.9 M	\$30.0 M	5.3%	122	1,078,405	-33.5%	49	\$7	\$37	141	565,236	36.8%	38	\$17	\$62	
West	179	558,857	\$353.2 M	\$406.5 M	\$53.3 M	15.1%	76	273,181	-19.4%	15	\$8	\$67	103	285,676	35.8%	25	\$23	\$58	

Note: Northeast: ME, NH, VT, MA, RI, CT, NY, PA, NJ; Midwest: WI, MI, IL, IN, OH, MO, ND, SD, NE, KS, MN, IA; South: DE, MD, DC, VA, WV, NC, SC, GA, FL, KY, TN, MS, AL, OK, TX, AR, LA; West: ID, MT, WY, NV, UT, CO, AZ, NM, AK, WA, OR, CA, HI, GU, AS