



80 South Jefferson Road  
Whippany, NJ 07981

Regina McNeil  
Vice President of Legal,  
General Counsel &  
Corporate Secretary  
PH 973-884-8168  
FX 973-884-8372  
mrcneil@neca.org

December 2, 2015

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

**Accepted / Filed**

**DEC - 2 2015**

**Federal Communications Commission  
Office of the Secretary**

Rodger Woock  
Suzanne Yelen  
Industry Analysis and Technology Division  
Federal Communications Commission  
445 12<sup>th</sup> 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.<sup>1</sup> This information is being filed pursuant to the *Third Protective Order* issued in this proceeding.<sup>2</sup>

<sup>1</sup> 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. 19, 2015; Nov. 17, 2015; Nov. 13, 2015; Nov. 6, 2015; Sept. 11, 2015).

<sup>2</sup> *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.

No. of Copies rec'd 0 + 4  
List ABCDE

This filing reflects a number of refinements to modeling techniques including methods for projecting line growth, average schedule simulation, depreciation expense calculations and new mechanism common line support. Filing assumptions have been modified to reflect these changes.

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 5. Supporting data used in producing the summary information in Attachment 5 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.<sup>3</sup> 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:

---

<sup>3</sup> 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 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.

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.

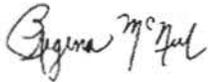
- Any other information that the party seeking confidential treatment believes may be useful in assessing whether its request for confidentiality should be granted:

*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, appearing to read "Eugene M. Neal".

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 reflects a number of refinements to modeling techniques including methods for projecting line growth, average schedule simulation, depreciation expense calculations and new mechanism common line support. The Technical Notes and Assumptions found in Attachment 2 have been modified to reflect these changes.

The following analysis presents three scenarios intended to simulate, on an aggregate basis, potential effects of the concept under different potential investment growth assumptions.<sup>1</sup> 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.

---

<sup>1</sup> 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.

- **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, expense growth has been applied using the aggregate two-year average growth rate (1.05%) of the 740 sample cost companies. This scenario produces aggregate cost growth close to recent trends.
- **Scenario 3** assumes each company's future investment equals the sum of its depreciation expense on old and new investment, plus 20 percent.

### 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 an increase of 7% over the 10 years; and Scenario 3 results in an aggregate increase in loop costs of 17% 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 <sup>th</sup> Percentile Rate Band <sup>1</sup>	Median Percentile Rate Band <sup>2</sup>	75 <sup>th</sup> Percentile Rate Band <sup>3</sup>	25 <sup>th</sup> Percentile Rate Band <sup>1</sup>	Median Percentile Rate Band <sup>2</sup>	75 <sup>th</sup> Percentile Rate Band <sup>3</sup>	
New Mechanism Benchmark Plus Budget Control = Total Effective Benchmark <sup>4</sup>	\$45.00 plus \$9.31 = \$54.31	\$45.00 plus \$11.72 = \$56.72	\$45.00 plus \$16.56 = \$61.56	NA	NA	NA	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)
Wholesale Transmission Tariff Rate <sup>5</sup>	\$18.14	\$28.14	\$38.13	\$101.49	\$134.90	\$188.98	
Total Benchmark for Supported/Regulated Network Elements	\$72.45	\$84.86	\$99.69	\$101.49	\$134.90	\$188.98	
Federal Universal Service Charge <sup>6</sup>	\$12.10	\$14.17	\$16.65	\$16.95	\$22.53	\$31.56	Rate of return carrier end user customers for Title II services incur this cost.
Middle Mile and Access Service Connection Point Costs <sup>7</sup>	\$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 <sup>8</sup>	\$91.06	\$105.84	\$123.46	\$124.95	\$164.24	\$227.66	Excludes unregulated non-network costs

**Notes**

- <sup>1</sup> Rates are displayed for the approximate 25<sup>th</sup>, 50<sup>th</sup> (median), and 75<sup>th</sup> percentile rate band assignments based on NECA's Tariff No. 5 filed June 16, 2015 Filing (Transmittal No. 1455). The 25<sup>th</sup> percentile uses rate band 9 for DSL Voice-Data rate elements, and rate band 11 for DSL Data-Only rate elements.
- <sup>2</sup> The median percentile uses rate band 13 for DSL Voice-Data rate elements and rate band 14 for DSL Data-Only rate elements.
- <sup>3</sup> The 75<sup>th</sup> percentile uses rate band 17 for DSL Voice-Data rate elements and rate band 19 for DSL Data-Only rate element.
- <sup>4</sup> The median percentile budget control of \$11.72 represents the Scenario 1, year 2025 price out 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.
- <sup>5</sup> 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.
- <sup>6</sup> The Federal Universal Service Charge is 16.7% per Section 17.1.3 (A) of NECA's Tariff No. 5.
- <sup>7</sup> 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
- <sup>8</sup> 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 (per Individual Consumer for 10/1 Mbps Service)						Relevant Costs Covered
	Provide Support Per FCC Proposal			Not Providing Support			
	25 <sup>th</sup> Percentile Rate Band <sup>1</sup>	Median Percentile Rate Band <sup>2</sup>	75 <sup>th</sup> Percentile Rate Band <sup>3</sup>	25 <sup>th</sup> Percentile Rate Band <sup>1</sup>	Median Percentile Rate Band <sup>2</sup>	75 <sup>th</sup> Percentile Rate Band <sup>3</sup>	
New Mechanism Benchmark Plus Budget Control = Total Effective Benchmark <sup>4</sup>	\$45.00 plus \$12.11 = \$57.11	\$45.00 plus \$16.76 = \$61.76	\$45.00 plus \$24.92 = \$69.92	NA	NA	NA	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)
Wholesale Transmission Tariff Rate <sup>5</sup>	\$18.14	\$28.14	\$38.13	\$101.49	\$134.90	\$188.98	
Total Benchmark for Supported/Regulated Network Elements	\$75.25	\$89.90	\$108.05	\$101.49	\$134.90	\$188.98	
Federal Universal Service Charge <sup>6</sup>	\$12.57	\$15.01	\$18.04	\$16.95	\$22.53	\$31.56	Rate of return carrier end user customers for Title II services incur this cost.
Middle Mile and Access Service Connection Point Costs <sup>7</sup>	\$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 <sup>8</sup>	\$94.33	\$111.72	\$133.21	\$124.95	\$164.24	\$227.66	Excludes unregulated non-network costs

**Notes**

- <sup>1</sup> Rates are displayed for the approximate 25<sup>th</sup>, 50<sup>th</sup> (median), and 75<sup>th</sup> percentile rate band assignments based on NECA's Tariff No. 5 filed June 16, 2015 Filing (Transmittal No. 1455). The 25<sup>th</sup> percentile uses rate band 9 for DSL Voice-Data rate elements, and rate band 11 for DSL Data-Only rate elements.
- <sup>2</sup> The median percentile uses rate band 13 for DSL Voice-Data rate elements and rate band 14 for DSL Data-Only rate elements.
- <sup>3</sup> The 75<sup>th</sup> percentile uses rate band 17 for DSL Voice-Data rate elements and rate band 19 for DSL Data-Only rate element.
- <sup>4</sup> The median percentile budget control of \$16.76 represents the Scenario 2, year 2025 price out 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.
- <sup>5</sup> 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.
- <sup>6</sup> The Federal Universal Service Charge is 16.7% per Section 17.1.3 (A) of NECA's Tariff No. 5.
- <sup>7</sup> 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
- <sup>8</sup> 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 <sup>th</sup> Percentile Rate Band <sup>1</sup>	Median Percentile Rate Band <sup>2</sup>	75 <sup>th</sup> Percentile Rate Band <sup>3</sup>	25 <sup>th</sup> Percentile Rate Band <sup>1</sup>	Median Percentile Rate Band <sup>2</sup>	75 <sup>th</sup> Percentile Rate Band <sup>3</sup>	
New Mechanism Benchmark Plus Budget Control = Total Effective Benchmark <sup>4</sup>	\$45.00 plus \$17.28 = \$62.28	\$45.00 plus \$24.14 = \$69.14	\$45.00 plus \$35.88 = \$80.88	NA	NA	NA	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)
Wholesale Transmission Tariff Rate <sup>5</sup>	\$18.14	\$28.14	\$38.13	\$101.49	\$134.90	\$188.98	
Total Benchmark for Supported/Regulated Network Elements	\$80.42	\$97.28	\$119.01	\$101.49	\$134.90	\$188.98	
Federal Universal Service Charge <sup>6</sup>	\$13.43	\$16.25	\$19.87	\$16.95	\$22.53	\$31.56	Rate of return carrier end user customers for Title II services incur this cost
Middle Mile and Access Service Connection Point Costs <sup>7</sup>	\$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 <sup>8</sup>	\$100.36	\$120.34	\$146.00	\$124.95	\$164.24	\$227.66	Excludes unregulated non-network costs

**Notes**

<sup>1</sup> Rates are displayed for the approximate 25<sup>th</sup>, 50<sup>th</sup> (median), and 75<sup>th</sup> percentile rate band assignments based on NECA's Tariff No. 5 filed June 16, 2015 Filing (Transmittal No. 1455). The 25<sup>th</sup> percentile uses rate band 9 for DSL Voice-Data rate elements, and rate band 11 for DSL Data-Only rate elements.

<sup>2</sup> The median percentile uses rate band 13 for DSL Voice-Data rate elements and rate band 14 for DSL Data-Only rate elements.

<sup>3</sup> The 75<sup>th</sup> percentile uses rate band 17 for DSL Voice-Data rate elements and rate band 19 for DSL Data-Only rate element.

<sup>4</sup> The median percentile budget control of \$24.14 represents the Scenario 3, year 2025 price out 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.

<sup>5</sup> 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.

<sup>6</sup> The Federal Universal Service Charge is 16.7% per Section 17.1.3 (A) of NECA's Tariff No. 5.

<sup>7</sup> 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

<sup>8</sup> 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 and new investment for all scenarios is based on the ratio by study area between 2015 depreciation expense and 2015 TPIS applied annually to the corresponding 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, the depreciation rate used for new investment is assumed to be the actual study area specific depreciation rate 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. Common line SLC and line port revenues were allocated between old and new annually by percent of Common Line revenue requirement in old and new mechanisms 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.

- d. Additional new support mechanism funding is added to the extent a study area has insufficient new mechanism support to cover its residual new investment common line revenue requirement after deduction of allocated SLC revenues. These added new support mechanism amounts are shown on Attachment 6.
- 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 recent trends adjusted to maintain the relative relationship to Category 1.3 loops. 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 \$3000 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.** Safety Valve and Safety Net Support are not included in the modeling of support amounts.
- 23.** 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	12,081,225,708	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	157,477,893	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	85.14%	85.98%	86.57%							86.28%
	Avg. Plant Removal										-278,363,468
	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%	2,901,059,389
	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	309,243,078	(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	5,478,068,156	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%	78.69%							76.04%
	Avg. Plant Removal										-61,022,058
	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	5,188,963,251	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	401,689,847	404,435,508	416,804,797	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	61.85%	62.92%	63.25%							63.09%
	Avg. Plant Removal										-62,675,920
	Removal Factor										-1.21%

0 - 26% (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	2,611,935,678	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										-124,348,022
	Removal Factor										-2.72%

Notes:  
 (1) Based on HCL Algorithm  
 (2) Operating Expenses incl. C&W & 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 and include the costs of acquired exchanges.
  - 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 =**

$$EXP \{6.095088 - 0.213262 \times \ln Locations - 0.276079 \times \ln Density + 0.025323 \times [\ln Density]^2\} + 95.6362$$

- **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 \$87.1 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 \$214.1 million. Collectively, the three programs require \$1,720.0 million while the available loop support budget is \$1,632.9 million, resulting in a budget variance of \$87.1 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 41.3 percent of the total support requirement (\$710.8m/\$1,720.0m), ICLS 46.2 percent with the remaining 12.4 percent being attributable to the new mechanism. Thus, the budget overrun of \$87.1 million would be prorated among the three programs using the derived percentages:

HCLS - \$36.0 million (from \$710.8 to \$674.0 million)  
ICLS - \$40.2 million (from \$795.0 to \$754.8 million)

New - \$10.8 million (from \$199.5 to \$188.7 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 \$36.0 million would be divided by 2 to determine the amount for which the per line reduction is to apply. The resulting \$18.0 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 \$692.8 million. The budget control amount of \$674.0 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 .973 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 \$692.8 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	\$87.1 M	\$113.9 M	\$134.1 M
HCLS	<b>-\$36.0M</b>	<b>-\$46.3 M</b>	<b>-\$53.8 M</b>
Per Line per Month	-\$0.70	-\$0.90	-\$1.04
Percent	97.38 %	96.59%	96.00%
ICLS	<b>-\$40.2 M</b>	<b>-\$50.8 M</b>	<b>-\$57.8 M</b>
Per Line per Month	-\$0.47	-\$0.60	-\$0.68
Percent	97.40%	96.63%	96.06%
New	<b>-\$10.8 M</b>	<b>-\$16.7 M</b>	<b>-\$22.5 M</b>
Per Line per Month	-\$0.12	-\$0.19	-\$0.25
Percent	97.40%	96.63%	96.05%

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	\$520.9 M	\$690.4 M	\$966.0 M
<b>HCLS</b>	<b>-\$70.3 M</b>	<b>-\$85.6 M</b>	<b>-\$106.3 M</b>
Per Line per Month	-\$2.08	-\$2.37	-\$2.87
Percent	85.31%	81.36%	75.62%
<b>ICLS</b>	<b>-\$37.5 M</b>	<b>-\$29.7 M</b>	<b>-\$32.8 M</b>
Per Line per Month	-\$1.33	-\$1.01	-\$1.12
Percent	86.80%	83.33%	78.05%
<b>New</b>	<b>-\$413.1 M</b>	<b>-\$575.1 M</b>	<b>-\$826.9 M</b>
Per Line per Month	-\$5.95	-\$8.29	-\$11.92
Percent	86.91%	83.26%	77.97%

## 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
<b>Legacy Support Mechanisms -Existing Investment</b>											
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 NACPL after Adjustment Factor and \$3,000 Limit Adjustment Factor	\$ 732,584,114	\$ 710,846,037	\$ 692,579,603	\$ 674,090,275	\$ 655,416,432	\$ 636,798,010	\$ 593,826,803	\$ 530,510,897	\$ 458,107,209	\$ 384,083,073	\$ 306,148,666
ICLS after \$3,000 Limit	940,244,722	795,014,839	707,800,767	626,100,708	547,849,834	473,803,574	402,818,375	335,731,515	268,559,510	214,985,244	163,262,191
<b>New Mechanism Support</b>											
Percent of Revenue Requirement Assigned to New Mechanism		16.68%	27.30%	36.97%	45.89%	54.14%	62.00%	69.22%	76.05%	81.38%	86.34%
Loop Cost Assigned to New Mechanism	\$ 627,879,347	\$ 1,038,618,904	\$ 1,414,820,181	\$ 1,753,044,392	\$ 2,059,856,189	\$ 2,340,460,260	\$ 2,599,128,875	\$ 2,815,582,871	\$ 3,019,866,373	\$ 3,202,860,055	\$ 3,202,860,055
Benchmark Revenue	\$ 430,739,158	\$ 647,866,404	\$ 824,395,834	\$ 972,093,997	\$ 1,092,073,403	\$ 1,191,462,546	\$ 1,266,921,129	\$ 1,332,254,429	\$ 1,363,456,235	\$ 1,387,261,452	\$ 1,387,261,452
New Mechanism Support after \$3,000 Limit	\$ 214,096,549	\$ 404,968,605	\$ 600,037,460	\$ 787,519,132	\$ 967,998,479	\$ 1,144,284,081	\$ 1,322,986,539	\$ 1,471,333,811	\$ 1,639,134,730	\$ 1,795,888,043	\$ 1,795,888,043
<b>Total Loop "Old" Investment High Cost Support</b>	\$ 1,672,828,836	\$ 1,505,860,876	\$ 1,400,380,370	\$ 1,300,190,983	\$ 1,203,266,266	\$ 1,110,601,584	\$ 996,645,178	\$ 866,242,412	\$ 726,666,719	\$ 599,068,317	\$ 469,410,857
<b>Total Loop High Cost Support Old plus New</b>	\$ 1,672,828,836	\$ 1,719,957,425	\$ 1,805,348,975	\$ 1,900,228,443	\$ 1,990,785,398	\$ 2,078,600,063	\$ 2,140,929,259	\$ 2,189,228,951	\$ 2,198,000,530	\$ 2,238,203,047	\$ 2,265,298,900
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
<b>Total RLEC High Cost Support Budget</b>	\$ 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	\$ 1,744,438,447
<b>Budget Variance</b>	\$87,087,555	\$150,957,084	\$237,785,349	\$320,080,822	\$396,585,374	\$445,284,339	\$480,548,908	\$476,869,541	\$505,155,625	\$520,860,453	\$520,860,453
<b>Budget Variance per Line per Month</b>	\$1.94	\$3.47	\$5.63	\$7.80	\$9.95	\$11.49	\$12.76	\$13.02	\$14.17	\$15.02	\$15.02
<b>HCLS adjusted for Budget Variance</b>	\$ 674,853,377	\$ 634,668,474	\$ 589,737,895	\$ 550,037,806	\$ 515,300,478	\$ 470,318,857	\$ 414,060,568	\$ 358,718,073	\$ 297,396,691	\$ 235,755,866	\$ 235,755,866
<b>\$ per line per month</b>	\$0.70	\$1.12	\$1.59	\$1.97	\$2.21	\$2.33	\$2.33	\$2.10	\$2.11	\$2.08	\$2.08
<b>%</b>	97.38%	95.56%	93.15%	90.98%	88.78%	87.64%	86.65%	86.47%	85.98%	85.31%	85.31%
<b>ICLS adjusted for Budget Variance</b>	\$ 754,760,413	\$ 648,616,897	\$ 547,753,510	\$ 459,765,892	\$ 383,404,477	\$ 319,037,599	\$ 262,036,430	\$ 210,293,896	\$ 166,463,728	\$ 125,723,295	\$ 125,723,295
<b>\$ per line per month</b>	\$0.47	\$0.72	\$1.00	\$1.21	\$1.40	\$1.45	\$1.49	\$1.51	\$1.49	\$1.33	\$1.33
<b>%</b>	97.40%	95.62%	93.26%	91.15%	89.21%	88.05%	87.30%	87.58%	87.04%	86.80%	86.80%
<b>New Mechanism adjusted for Budget Variance</b>	\$ 203,256,080	\$ 371,106,520	\$ 524,951,689	\$ 660,900,878	\$ 783,309,733	\$ 906,288,464	\$ 1,032,583,045	\$ 1,152,119,020	\$ 1,269,187,004	\$ 1,382,959,286	\$ 1,382,959,286
<b>\$ per line per month</b>	\$0.12	\$0.39	\$0.89	\$1.54	\$2.32	\$3.07	\$3.85	\$4.36	\$5.19	\$5.95	\$5.95
<b>%</b>	97.40%	95.64%	93.33%	91.25%	89.43%	88.35%	87.61%	87.76%	87.15%	86.91%	86.91%
<b>Total RLEC High Cost Support Budget Adjusted for Budget Overage</b>	\$ 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	\$ 1,744,438,447

**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	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
<b>All Study Areas</b>	1095	3,639,449	\$1,529.9 M	\$1,744.4 M	\$214.6 M	14.0%	455	1,300,120	-25.9%	64	\$7	\$188	640	2,339,329	28.9%	173	\$11	\$67
<b>Groups By Loop Count</b>																		
0 - 500	183	53,502	\$40.1 M	\$40.9 M	\$ 7 M	1.8%	114	29,634	-16.3%	9	\$10	\$188	69	23,868	22.5%	15	\$15	\$63
501 - 1000	209	153,015	\$107.4 M	\$119.6 M	\$12.1 M	11.3%	95	68,870	-16.6%	7	\$8	\$46	114	84,145	26.5%	30	\$18	\$62
1001 - 2500	295	472,346	\$270.9 M	\$316.6 M	\$45.7 M	16.9%	109	167,461	-19.1%	11	\$7	\$47	186	304,885	29.1%	55	\$16	\$61
2501 - 5000	212	754,117	\$386.4 M	\$445.8 M	\$59.4 M	15.4%	67	242,907	-22.0%	16	\$7	\$33	145	511,210	27.8%	36	\$13	\$45
5001 - 10000	124	872,396	\$340.0 M	\$404.6 M	\$64.6 M	19.0%	42	302,322	-31.0%	14	\$7	\$32	82	570,074	34.3%	32	\$13	\$67
10001 - 20000	52	705,646	\$249.2 M	\$270.5 M	\$21.3 M	8.5%	21	284,331	-28.7%	4	\$7	\$18	31	421,315	26.2%	4	\$9	\$32
> 20000	20	628,427	\$135.8 M	\$146.5 M	\$10.6 M	7.8%	7	204,595	-50.2%	3	\$6	\$11	13	423,832	25.3%	1	\$5	\$19
<b>Groups By CPI Percentile</b>																		
10%: \$0 - \$542	110	611,244	\$78.3 M	\$85.9 M	\$7.6 M	9.7%	37	227,016	-62.2%	24	\$7	\$13	73	384,228	53.7%	54	\$6	\$25
23%: \$542 - \$656	164	772,391	\$147.2 M	\$151.1 M	\$3.9 M	2.6%	98	437,717	-40.3%	15	\$6	\$15	66	334,674	51.1%	32	\$9	\$29
50%: \$656 - \$886	274	816,450	\$269.3 M	\$305.3 M	\$36.0 M	13.3%	142	285,826	-28.9%	19	\$7	\$188	132	530,624	32.5%	42	\$9	\$43
75%: \$886 - \$1,351	274	904,412	\$480.5 M	\$566.1 M	\$85.7 M	17.8%	118	276,800	-15.7%	5	\$6	\$101	156	627,612	30.4%	30	\$14	\$59
90%: \$1,351 - \$2,115	163	407,844	\$344.1 M	\$407.5 M	\$63.5 M	18.4%	22	45,136	-14.3%	1	\$10	\$59	141	362,708	22.3%	14	\$16	\$67
95%: \$2,115 - \$2,898	55	67,196	\$94.8 M	\$108.0 M	\$13.1 M	13.9%	9	6,730	-16.4%	0	\$21	\$39	46	60,466	17.7%	1	\$21	\$60
>95% > \$2,898	55	59,912	\$115.7 M	\$120.5 M	\$4.9 M	4.2%	29	20,895	-12.7%	0	\$23	\$47	26	39,017	15.3%	0	\$23	\$62
<b>Groups By Settlement Type</b>																		
A/S	310	678,307	\$144.9 M	\$101.7 M	-\$43.2 M	-29.8%	258	605,006	-37.2%	36	\$6	\$101	52	73,301	4.7%	0	\$1	\$6
Cost	785	2,961,142	\$1,384.9 M	\$1,642.7 M	\$257.8 M	18.6%	197	695,114	-21.3%	28	\$8	\$188	588	2,266,028	29.5%	173	\$12	\$67
<b>Groups By Density</b>																		
Less than 1	70	139,329	\$147.7 M	\$173.5 M	\$25.8 M	17.5%	17	9,845	-12.2%	1	\$14	\$101	53	129,484	20.4%	8	\$18	\$59
1 - 3	146	424,870	\$306.2 M	\$353.0 M	\$46.8 M	15.3%	37	107,470	-15.0%	1	\$7	\$36	109	317,400	22.6%	14	\$15	\$63
3 - 10	321	623,795	\$332.0 M	\$391.8 M	\$59.7 M	18.0%	137	178,796	-15.4%	5	\$7	\$188	184	444,999	31.2%	45	\$14	\$61
10 - 20	242	674,064	\$263.5 M	\$311.0 M	\$47.5 M	18.0%	100	225,453	-20.8%	14	\$6	\$25	142	448,611	32.9%	45	\$12	\$67
20 - 50	227	1,194,370	\$343.9 M	\$378.9 M	\$35.0 M	10.2%	105	472,206	-33.4%	21	\$7	\$33	122	722,164	33.1%	52	\$9	\$47
More than 50	89	583,021	\$136.5 M	\$136.2 M	-\$4 M	-0.3%	59	306,350	-48.3%	22	\$8	\$32	30	276,671	35.0%	9	\$8	\$41
<b>Groups by ACAM 10/1 Deployment</b>																		
0% Deployed	70	67,766	\$49.63 M	\$59.88 M	\$10.3 M	21%	29	15,150	-18%	2	\$7	\$59	41	52,616	27%	12	\$18	\$59
1% to 25%	242	604,736	\$260.31 M	\$318.67 M	\$58.4 M	22%	93	199,715	-26%	14	\$6	\$47	149	405,021	36%	57	\$15	\$62
25% to 50%	104	373,102	\$155.0 M	\$175.2 M	\$20.1 M	13.0%	38	126,346	-28.5%	7	\$8	\$35	66	246,756	29.2%	28	\$11	\$57
50% to 75%	135	517,783	\$200.8 M	\$230.0 M	\$29.2 M	14.5%	47	174,789	-27.0%	8	\$7	\$101	88	342,994	31.2%	28	\$11	\$63
75% to 99%	386	1,503,314	\$624.7 M	\$720.0 M	\$95.4 M	15.3%	170	440,690	-24.3%	19	\$7	\$46	216	1,062,624	27.4%	39	\$10	\$67
100% Deployed	158	572,748	\$239.4 M	\$240.7 M	\$1.2 M	0.5%	78	343,430	-26.9%	14	\$7	\$188	80	229,318	21.4%	9	\$11	\$62
<b>Groups By Census Region</b>																		
Northeast	81	238,543	\$48.1 M	\$54.5 M	\$6.4 M	13.3%	36	104,097	-32.9%	10	\$5	\$101	45	134,446	45.2%	22	\$8	\$39
Midwest	572	1,269,985	\$568.2 M	\$609.0 M	\$40.8 M	7.2%	290	534,548	-22.2%	33	\$7	\$188	282	735,437	22.1%	55	\$9	\$61
South	263	1,590,225	\$566.4 M	\$674.4 M	\$107.9 M	19.1%	80	559,027	-33.6%	18	\$7	\$39	183	1,031,198	37.0%	73	\$13	\$67
West	179	540,696	\$347.2 M	\$406.6 M	\$59.5 M	17.1%	49	102,448	-17.1%	3	\$8	\$59	130	438,248	24.4%	23	\$13	\$59

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

	Base Year 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Legacy Support Mechanisms -Existing Investment</b>											
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 NACPL after Adjustment Factor and \$3,000 Limit	\$ 732,584,114	\$ 709,671,788	\$ 689,379,159	\$ 669,645,766	\$ 648,984,562	\$ 627,386,518	\$ 583,602,728	\$ 519,449,231	\$ 447,637,993	\$ 378,293,762	\$ 301,628,797
Adjustment Factor		0.90	0.88	0.91	0.93	0.97	1.00	1.00	1.00	1.00	1.00
ICLS after \$3,000 Limit	940,244,722	779,980,746	669,565,048	565,475,682	468,437,839	381,513,062	304,963,959	240,194,524	180,867,479	138,591,411	104,338,118
<b>New Mechanism Support</b>											
Percent of Revenue Requirement Assigned to New Mechanism		17.74%	30.12%	41.31%	51.32%	60.04%	67.79%	74.39%	80.41%	84.78%	88.43%
Loop Cost Assigned to New Mechanism	\$ 674,701,885	\$ 1,171,682,601	\$ 1,635,512,971	\$ 2,051,900,144	\$ 2,416,853,191	\$ 2,733,635,844	\$ 3,004,713,216	\$ 3,220,621,241	\$ 3,400,262,107	\$ 3,551,227,071	\$ 3,551,227,071
Benchmark Revenue	\$ 432,997,081	\$ 679,609,352	\$ 884,938,858	\$ 1,054,643,844	\$ 1,187,520,103	\$ 1,289,393,857	\$ 1,359,680,113	\$ 1,413,948,561	\$ 1,432,113,832	\$ 1,435,627,571	\$ 1,435,627,571
New Mechanism Support after \$3,000 Limit	\$ 257,080,157	\$ 503,205,290	\$ 754,986,142	\$ 994,429,914	\$ 1,215,705,776	\$ 1,416,086,631	\$ 1,602,919,739	\$ 1,748,768,307	\$ 1,895,690,967	\$ 2,028,879,062	\$ 2,028,879,062
<b>Total Loop "Old" Investment High Cost Support</b>	<b>\$ 1,672,828,836</b>	<b>\$ 1,489,652,534</b>	<b>\$ 1,358,944,207</b>	<b>\$ 1,235,121,448</b>	<b>\$ 1,117,422,401</b>	<b>\$ 1,008,899,580</b>	<b>\$ 888,566,687</b>	<b>\$ 759,643,755</b>	<b>\$ 628,505,472</b>	<b>\$ 516,885,173</b>	<b>\$ 405,966,915</b>
<b>Total Loop High Cost Support Old plus New</b>	<b>\$ 1,672,828,836</b>	<b>\$ 1,746,732,691</b>	<b>\$ 1,862,149,497</b>	<b>\$ 1,990,107,590</b>	<b>\$ 2,111,852,315</b>	<b>\$ 2,224,605,356</b>	<b>\$ 2,304,653,318</b>	<b>\$ 2,362,563,494</b>	<b>\$ 2,377,273,779</b>	<b>\$ 2,412,576,140</b>	<b>\$ 2,434,845,977</b>
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
<b>Total RLEC High Cost Support Budget</b>	<b>\$1,632,869,870</b>	<b>\$1,654,391,891</b>	<b>\$1,662,443,094</b>	<b>\$1,670,704,576</b>	<b>\$1,682,014,689</b>	<b>\$1,695,644,920</b>	<b>\$1,708,680,043</b>	<b>\$1,721,130,989</b>	<b>\$1,733,047,422</b>	<b>\$1,744,438,447</b>	<b>\$1,744,438,447</b>
<b>Budget Variance</b>		\$113,862,821	\$207,757,606	\$327,664,496	\$441,147,739	\$542,590,667	\$609,008,398	\$653,883,451	\$656,142,790	\$679,528,718	\$690,407,530
<b>Budget Variance per Line per Month</b>		\$2.54	\$4.77	\$7.75	\$10.75	\$13.61	\$15.72	\$17.36	\$17.91	\$19.07	\$19.90
<b>HCLS adjusted for Budget Variance</b>	\$ 663,410,999	\$ 612,466,020	\$ 559,390,851	\$ 513,417,283	\$ 474,364,290	\$ 429,384,755	\$ 375,681,982	\$ 324,087,040	\$ 271,743,146	\$ 216,101,090	\$ 216,101,090
\$ per line per month	\$0.90	\$1.49	\$2.08	\$2.55	\$2.85	\$2.90	\$2.77	\$2.54	\$2.43	\$2.37	\$2.37
%	96.59%	93.95%	90.75%	87.91%	85.26%	83.52%	82.27%	82.09%	81.70%	81.36%	81.36%
<b>ICLS adjusted for Budget Variance</b>	\$ 729,136,786	\$ 594,862,543	\$ 472,372,020	\$ 370,585,214	\$ 288,460,410	\$ 224,376,736	\$ 173,716,216	\$ 130,946,896	\$ 99,555,609	\$ 74,752,747	\$ 74,752,747
\$ per line per month	\$0.60	\$0.90	\$1.19	\$1.35	\$1.46	\$1.40	\$1.34	\$1.26	\$1.19	\$1.01	\$1.01
%	96.63%	94.08%	90.95%	88.21%	85.97%	84.41%	83.65%	83.59%	83.34%	83.33%	83.33%
<b>New Mechanism adjusted for Budget Variance</b>	\$ 240,322,085	\$ 447,063,328	\$ 630,680,223	\$ 786,702,080	\$ 919,189,989	\$ 1,041,883,429	\$ 1,159,281,846	\$ 1,266,097,053	\$ 1,361,748,667	\$ 1,453,584,610	\$ 1,453,584,610
\$ per line per month	\$0.19	\$0.65	\$1.47	\$2.53	\$3.72	\$4.84	\$5.90	\$6.60	\$7.49	\$8.29	\$8.29
%	96.63%	94.09%	91.01%	88.27%	86.00%	84.63%	83.72%	83.76%	83.34%	83.26%	83.26%
<b>Total RLEC High Cost Support Budget Adjusted for Budget Overage</b>	<b>\$ 1,632,869,870</b>	<b>\$ 1,654,391,891</b>	<b>\$ 1,662,443,094</b>	<b>\$ 1,670,704,576</b>	<b>\$ 1,682,014,689</b>	<b>\$ 1,695,644,920</b>	<b>\$ 1,708,680,043</b>	<b>\$ 1,721,130,989</b>	<b>\$ 1,733,047,422</b>	<b>\$ 1,744,438,447</b>	<b>\$ 1,744,438,447</b>

**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	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
<b>All Study Areas</b>	1095	3,639,449	\$1,697.8 M	\$1,744.4 M	\$46.7 M	2.7%	657	2,323,477	-27.8%	142	\$8	\$237	438	1,315,972	27.2%	31	\$16	\$74
<b>Groups By Loop Count</b>																		
0 - 500	183	53,502	\$42.8 M	\$42.4 M	-\$4 M	-1.0%	130	35,613	-20.4%	11	\$11	\$237	53	17,889	22.9%	3	\$20	\$74
501 - 1000	209	153,015	\$116.4 M	\$122.8 M	\$6.4 M	5.5%	126	93,316	-17.8%	12	\$9	\$43	83	59,699	28.8%	8	\$23	\$62
1001 - 2500	295	472,346	\$293.4 M	\$311.4 M	\$18.0 M	6.1%	167	264,053	-23.4%	36	\$8	\$43	128	208,293	23.2%	6	\$17	\$57
2501 - 5000	212	754,117	\$426.1 M	\$452.2 M	\$26.1 M	6.1%	114	413,677	-23.6%	39	\$8	\$49	98	340,440	26.2%	6	\$16	\$64
5001 - 10000	124	872,396	\$384.5 M	\$413.2 M	\$28.7 M	7.5%	71	504,848	-33.6%	32	\$8	\$17	53	367,548	30.4%	7	\$17	\$48
10001 - 20000	52	705,646	\$285.1 M	\$301.9 M	\$16.8 M	5.9%	30	410,876	-28.3%	5	\$7	\$14	22	294,770	28.7%	1	\$14	\$33
> 20000	20	628,427	\$149.5 M	\$100.6 M	-\$48.9 M	-32.7%	19	601,094	-35.4%	7	\$7	\$12	1	27,333	17.5%	0	\$4	\$4
<b>Groups By CPL Percentile</b>																		
10%: \$0 - \$542	110	611,244	\$89.3 M	\$19.4 M	-\$69.9 M	-78.3%	109	608,370	-78.6%	93	\$10	\$21	1	2,874	13.7%	0	\$1	\$1
25%: \$542 - \$656	164	772,391	\$167.2 M	\$100.1 M	-\$67.2 M	-40.2%	157	736,776	-42.6%	35	\$8	\$22	7	35,615	24.5%	2	\$3	\$9
50%: \$656 - \$886	274	816,450	\$290.2 M	\$259.2 M	-\$31.1 M	-10.7%	225	639,007	-18.1%	13	\$5	\$237	49	177,443	16.1%	2	\$5	\$22
75%: \$886 - \$1,351	274	904,412	\$524.8 M	\$606.1 M	\$81.3 M	15.5%	109	268,376	-10.4%	1	\$5	\$119	165	636,036	25.6%	7	\$13	\$31
90%: \$1,351 - \$2,115	163	407,844	\$391.2 M	\$512.6 M	\$121.4 M	31.0%	9	21,038	-7.2%	0	\$6	\$64	154	386,806	33.1%	16	\$26	\$64
95%: \$2,115 - \$2,898	55	67,196	\$105.7 M	\$128.9 M	\$23.2 M	21.9%	3	1,234	-12.0%	0	\$21	\$28	52	65,962	22.8%	4	\$30	\$74
>95%: > \$2,898	55	59,912	\$129.3 M	\$118.2 M	-\$11.1 M	-8.6%	45	48,676	-12.0%	0	\$22	\$49	10	11,236	9.3%	0	\$14	\$27
<b>Groups By Settlement Type</b>																		
A/S	310	678,307	\$174.5 M	\$114.4 M	-\$60.1 M	-34.4%	293	655,614	-36.6%	38	\$8	\$119	17	22,693	2.4%	0	\$1	\$4
Cost	785	2,961,142	\$1,523.2 M	\$1,630.0 M	\$106.8 M	7.0%	364	1,667,863	-25.3%	104	\$7	\$237	421	1,293,279	27.5%	31	\$17	\$74
<b>Groups By Density</b>																		
Less than 1	70	139,329	\$156.4 M	\$179.4 M	\$22.9 M	14.7%	30	37,267	-10.2%	2	\$11	\$119	40	102,062	25.3%	3	\$23	\$45
1 - 3	146	424,870	\$339.6 M	\$392.8 M	\$53.3 M	15.7%	56	128,294	-13.6%	2	\$8	\$49	90	296,576	27.0%	5	\$19	\$64
3 - 10	321	623,795	\$365.9 M	\$410.7 M	\$44.8 M	12.2%	173	267,594	-17.6%	16	\$7	\$237	148	356,201	26.7%	14	\$15	\$74
10 - 20	242	674,064	\$295.8 M	\$316.9 M	\$21.1 M	7.1%	154	380,014	-28.5%	38	\$7	\$44	88	294,050	28.1%	3	\$15	\$57
20 - 50	227	1,194,370	\$386.4 M	\$326.5 M	-\$59.9 M	-15.5%	171	994,114	-34.6%	56	\$8	\$41	56	200,256	26.2%	4	\$13	\$48
More than 50	89	583,021	\$153.7 M	\$118.2 M	-\$35.5 M	-23.1%	73	516,194	-40.4%	28	\$8	\$23	16	66,827	37.1%	2	\$16	\$60
<b>Groups by ACAM 10/1 Deployment</b>																		
0% Deployed	70	67,766	\$51.03 M	\$53.5 M	\$2.5 M	5%	45	34,195	-18%	6	\$11	\$64	25	33,571	26%	2	\$17	\$48
1% to 25%	242	604,736	\$269.61 M	\$275.8 M	\$6.2 M	2%	160	388,493	-27%	35	\$7	\$57	82	216,243	26%	3	\$15	\$49
25% to 50%	104	373,102	\$173.6 M	\$170.6 M	-\$3.0 M	-1.8%	79	274,041	-31.4%	29	\$8	\$44	25	99,061	28.1%	1	\$20	\$55
50% to 75%	135	517,783	\$218.6 M	\$207.5 M	-\$11.1 M	-5.1%	79	357,342	-40.6%	29	\$10	\$119	56	160,441	27.5%	3	\$16	\$74
75% to 99%	386	1,503,314	\$696.2 M	\$717.3 M	\$21.1 M	3.0%	215	957,646	-23.6%	29	\$7	\$49	171	545,668	25.6%	12	\$15	\$64
100% Deployed	158	572,748	\$288.7 M	\$319.8 M	\$31.1 M	10.8%	79	311,760	-27.4%	14	\$7	\$237	79	260,988	31.2%	10	\$19	\$60
<b>Groups By Census Region</b>																		
Northeast	81	238,543	\$53.1 M	\$31.6 M	-\$21.5 M	-40.5%	73	227,093	-45.8%	35	\$8	\$119	8	11,450	16.2%	0	\$5	\$25
Midwest	572	1,269,985	\$654.6 M	\$715.9 M	\$61.3 M	9.4%	349	691,512	-25.8%	59	\$7	\$237	223	578,473	29.4%	19	\$18	\$74
South	263	1,590,225	\$612.7 M	\$599.2 M	-\$13.5 M	-2.2%	144	1,095,987	-30.8%	36	\$7	\$43	119	494,238	25.6%	8	\$13	\$55
West	179	540,696	\$377.4 M	\$397.8 M	\$20.3 M	5.4%	91	308,885	-20.0%	12	\$9	\$64	88	231,811	25.5%	4	\$19	\$48

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

REDACTED – FOR PUBLIC INSPECTION

FCC Bifurcated Mechanism - Preliminary Modeling  
 Scenario 3: Growth equals depreciation expense in new and old, grown by 20%; Benchmark = \$4E  
 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
<b>Legacy Support Mechanisms -Existing Investment</b>											
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 NACPL after Adjustment Factor and \$3,000 Limit	\$ 732,584,114	\$ 709,156,673	\$ 688,231,262	\$ 668,026,190	\$ 646,536,547	\$ 624,431,495	\$ 580,934,700	\$ 516,708,441	\$ 444,698,851	\$ 375,818,466	\$ 298,468,784
Adjustment Factor		0.90	0.88	0.91	0.93	0.97	1.00	1.00	1.00	1.00	1.00
ICLS after \$3,000 Limit	940,244,722	761,373,089	641,191,937	533,185,258	435,666,157	350,735,153	277,632,054	216,915,762	161,637,508	122,994,256	91,981,067
<b>New Mechanism Support</b>											
Percent of Revenue Requirement Assigned to New Mechanism		19.69%	33.00%	44.53%	54.54%	63.06%	70.48%	76.68%	82.32%	86.35%	89.67%
Loop Cost Assigned to New Mechanism		\$ 755,732,988	\$ 1,306,806,282	\$ 1,808,529,665	\$ 2,253,867,164	\$ 2,643,024,894	\$ 2,981,313,591	\$ 3,272,629,270	\$ 3,511,281,340	\$ 3,713,203,374	\$ 3,887,391,127
Benchmark Revenue		\$ 473,874,046	\$ 735,796,864	\$ 943,233,151	\$ 1,109,255,690	\$ 1,235,742,215	\$ 1,327,808,351	\$ 1,389,920,598	\$ 1,437,309,258	\$ 1,449,981,895	\$ 1,449,236,702
New Mechanism Support after \$3,000 Limit		\$ 296,454,383	\$ 579,542,058	\$ 865,141,165	\$ 1,134,322,843	\$ 1,383,157,081	\$ 1,609,970,823	\$ 1,821,556,337	\$ 1,993,457,221	\$ 2,164,522,206	\$ 2,319,944,725
<b>Total Loop "Old" Investment High Cost Support</b>	\$ 1,672,828,836	\$ 1,470,529,762	\$ 1,329,423,199	\$ 1,201,211,448	\$ 1,082,202,704	\$ 975,166,648	\$ 858,566,754	\$ 733,624,203	\$ 606,336,359	\$ 498,812,722	\$ 390,449,851
<b>Total Loop High Cost Support Old plus New</b>	\$ 1,672,828,836	\$ 1,766,984,145	\$ 1,908,965,257	\$ 2,066,352,613	\$ 2,216,525,547	\$ 2,358,323,729	\$ 2,468,537,577	\$ 2,555,180,540	\$ 2,599,793,580	\$ 2,663,334,928	\$ 2,710,394,576
<b>CAF ICC</b>		\$ 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
<b>Total RLEC High Cost Support Budget</b>		\$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
<b>Budget Variance</b>		\$134,114,275	\$254,573,366	\$403,909,519	\$545,820,971	\$676,309,040	\$772,892,657	\$846,500,497	\$878,662,591	\$930,287,506	\$965,956,129
<b>Budget Variance per Line per Month</b>		\$2.99	\$5.85	\$9.56	\$13.30	\$16.96	\$19.95	\$22.47	\$23.99	\$26.10	\$27.85
<b>HCLS adjusted for Budget Variance</b>		\$ 655,331,610	\$ 596,450,991	\$ 537,447,248	\$ 487,326,469	\$ 445,359,954	\$ 399,045,565	\$ 345,529,166	\$ 294,402,209	\$ 244,547,247	\$ 192,097,648
per line per month		\$1.04	\$1.78	\$2.46	\$2.96	\$3.27	\$3.17	\$3.18	\$2.90	\$2.96	\$2.87
%		96.00%	92.65%	88.81%	85.38%	82.15%	79.34%	78.03%	76.97%	76.61%	75.62%
<b>ICLS adjusted for Budget Variance</b>		\$ 703,584,795	\$ 555,684,677	\$ 428,963,646	\$ 328,383,060	\$ 250,152,968	\$ 190,706,184	\$ 145,054,186	\$ 107,008,236	\$ 80,033,073	\$ 59,199,982
per line per month		\$0.68	\$1.04	\$1.33	\$1.48	\$1.58	\$1.51	\$1.45	\$1.38	\$1.30	\$1.12
%		96.06%	92.83%	89.07%	85.78%	83.06%	80.95%	79.71%	79.10%	78.47%	78.05%
<b>New Mechanism adjusted for Budget Variance</b>		\$ 273,953,466	\$ 502,256,224	\$ 696,032,200	\$ 854,995,047	\$ 986,501,768	\$ 1,105,893,171	\$ 1,218,096,691	\$ 1,319,720,544	\$ 1,408,467,102	\$ 1,493,140,817
per line per month		\$0.25	\$0.89	\$2.00	\$3.41	\$4.98	\$6.51	\$8.02	\$9.21	\$10.61	\$11.92
%		96.05%	92.85%	89.11%	85.83%	83.04%	81.12%	79.75%	79.26%	78.45%	77.97%
<b>Total RLEC High Cost Support Budget Adjusted for Budget Overage</b>		\$ 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 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
<b>All Study Areas</b>	1095	3,639,449	\$1,744.4 M	\$1,744.4 M	\$ 0.0 M	0.0%	706	2,417,078	-28.9%	168	\$9	\$292	389	1,222,371	27.7%	29	\$17	\$70
<b>Groups By Loop Count</b>																		
0 - 500	183	53,502	\$43.1 M	\$41.0 M	-\$2.2 M	-5.1%	136	37,698	-22.4%	11	\$13	\$292	47	15,804	22.0%	4	\$20	\$70
501 - 1000	209	153,015	\$117.7 M	\$118.9 M	\$1.2 M	1.0%	135	98,796	-21.3%	14	\$11	\$52	74	54,219	27.0%	6	\$23	\$54
1001 - 2500	295	472,346	\$298.7 M	\$303.4 M	\$4.6 M	1.6%	189	299,292	-23.9%	49	\$9	\$52	106	173,054	23.3%	5	\$18	\$48
2501 - 5000	212	754,117	\$434.6 M	\$447.3 M	\$12.8 M	2.9%	122	436,773	-26.4%	43	\$10	\$64	90	317,344	26.7%	6	\$17	\$63
5001 - 10000	124	872,396	\$395.4 M	\$415.6 M	\$20.2 M	5.1%	74	520,848	-34.8%	34	\$9	\$19	50	351,548	31.0%	6	\$18	\$42
10001 - 20000	52	705,646	\$295.6 M	\$310.7 M	\$15.2 M	5.1%	31	422,577	-28.9%	9	\$7	\$15	21	283,069	30.2%	2	\$15	\$33
> 20000	20	628,427	\$159.4 M	\$107.6 M	-\$51.8 M	-32.5%	19	601,094	-34.8%	8	\$7	\$13	1	27,333	12.1%	0	\$3	\$3
<b>Groups By CPL Percentile</b>																		
10%: \$0 - \$542	110	611,244	\$94.9 M	\$18.1 M	-\$76.8 M	-80.9%	110	611,244	-80.9%	101	\$10	\$27	0	-	0.0%	0	\$0	\$0
25%: \$542 - \$656	164	772,391	\$180.2 M	\$99.8 M	-\$80.3 M	-44.6%	161	750,464	-46.1%	53	\$9	\$25	3	21,927	22.9%	0	\$4	\$6
50%: \$656 - \$886	274	816,450	\$303.9 M	\$263.9 M	-\$40.0 M	-13.2%	248	691,096	-18.7%	13	\$6	\$292	26	125,354	17.5%	2	\$5	\$18
75%: \$886 - \$1,351	274	904,412	\$536.9 M	\$616.1 M	\$79.2 M	14.7%	115	267,024	-10.8%	1	\$5	\$123	159	637,388	24.7%	8	\$12	\$34
90%: \$1,351 - \$2,115	163	407,844	\$394.7 M	\$516.3 M	\$121.6 M	30.8%	15	28,664	-9.8%	0	\$8	\$72	148	379,180	34.1%	17	\$27	\$63
95%: \$2,115 - \$2,898	55	67,196	\$105.5 M	\$121.3 M	\$15.8 M	15.0%	9	14,297	-5.2%	0	\$8	\$42	46	52,899	21.9%	2	\$27	\$70
>95%: \$2,898	55	59,912	\$128.3 M	\$108.9 M	-\$19.4 M	-15.1%	48	54,289	-16.8%	0	\$30	\$59	7	5,623	3.9%	0	\$6	\$13
<b>Groups By Settlement Type</b>																		
A/S	310	678,307	\$185.0 M	\$116.3 M	-\$68.7 M	-37.1%	305	672,334	-37.7%	45	\$9	\$123	5	5,973	3.2%	0	\$1	\$2
Cost	785	2,961,142	\$1,559.4 M	\$1,628.1 M	\$68.7 M	4.4%	401	1,744,744	-26.5%	123	\$8	\$292	384	1,216,398	27.8%	29	\$17	\$70
<b>Groups By Density</b>																		
Less than 1	70	139,329	\$156.5 M	\$173.8 M	\$17.3 M	11.0%	34	49,587	-11.6%	3	\$13	\$123	36	89,742	28.9%	3	\$23	\$41
1 - 3	146	424,870	\$344.6 M	\$390.4 M	\$45.8 M	13.3%	61	147,460	-17.0%	3	\$10	\$64	85	277,410	27.0%	7	\$19	\$55
3 - 10	321	623,795	\$372.6 M	\$407.1 M	\$34.5 M	9.3%	192	280,217	-20.6%	21	\$8	\$292	129	343,578	26.3%	11	\$15	\$70
10 - 20	242	674,064	\$304.8 M	\$317.2 M	\$12.4 M	4.1%	166	403,249	-30.3%	43	\$8	\$54	76	270,815	28.5%	3	\$16	\$53
20 - 50	227	1,194,370	\$404.5 M	\$334.1 M	-\$70.4 M	-17.4%	179	1,018,165	-35.5%	68	\$8	\$50	48	176,205	27.8%	3	\$15	\$47
More than 50	89	583,021	\$161.4 M	\$121.9 M	-\$39.5 M	-24.5%	74	518,400	-40.5%	30	\$8	\$25	15	64,621	35.6%	2	\$16	\$63
<b>Groups by ACAM 10/1 Deployment</b>																		
0% Deployed	70	67,766	\$51.24 M	\$51.36 M	\$1.1 M	0%	46	34,452	-25%	9	\$15	\$72	24	33,314	23%	2	\$15	\$48
1% to 25%	242	604,736	\$276.62 M	\$272.77 M	-\$3.8 M	-1%	175	412,277	-28%	41	\$8	\$63	67	192,459	25%	2	\$15	\$57
25% to 50%	104	373,102	\$177.8 M	\$168.4 M	-\$9.4 M	-5.3%	84	279,962	-33.1%	31	\$10	\$53	20	93,140	31.2%	1	\$21	\$55
50% to 75%	135	517,783	\$225.5 M	\$204.1 M	-\$21.4 M	-9.5%	83	363,801	-43.3%	35	\$11	\$123	52	153,982	24.6%	3	\$15	\$70
75% to 99%	386	1,503,314	\$716.6 M	\$724.7 M	\$8.1 M	1.1%	233	999,930	-24.0%	34	\$7	\$59	153	503,384	26.2%	11	\$16	\$55
100% Deployed	158	572,748	\$296.6 M	\$323.1 M	\$26.5 M	8.9%	85	326,656	-27.6%	18	\$8	\$292	73	246,092	33.8%	10	\$20	\$63
<b>Groups By Census Region</b>																		
Northeast	81	238,543	\$56.2 M	\$30.4 M	-\$25.8 M	-45.9%	76	231,254	-50.1%	39	\$9	\$123	5	7,289	15.0%	0	\$6	\$23
Midwest	572	1,269,985	\$671.6 M	\$719.5 M	\$47.9 M	7.1%	377	739,405	-26.3%	66	\$8	\$292	195	530,580	30.8%	18	\$19	\$70
South	263	1,590,225	\$633.2 M	\$603.0 M	-\$30.2 M	-4.8%	156	1,122,982	-31.5%	46	\$8	\$53	107	467,243	25.3%	7	\$13	\$55
West	179	540,696	\$383.4 M	\$391.4 M	\$8.1 M	2.1%	97	323,437	-22.1%	17	\$11	\$72	82	217,259	25.5%	4	\$19	\$48

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

**Additional New Mechanism Funding Needed to Recover New Common Line Revenue Requirement\***

YEAR	Scenario 1		Scenario 2		Scenario 3	
	Num of Sars	\$ Impact	Num of Sars	\$ Impact	Num of Sars	\$ Impact
2016	329	\$ 17,787,617	310	\$ 17,267,446	292	\$ 16,904,669
2017	211	\$ 15,883,891	209	\$ 15,799,841	183	\$ 14,443,952
2018	150	\$ 12,611,585	140	\$ 13,299,755	126	\$ 11,261,865
2019	100	\$ 11,924,170	119	\$ 13,028,407	96	\$ 10,736,141
2020	76	\$ 9,298,297	98	\$ 13,233,661	87	\$ 10,877,787
2021	62	\$ 7,919,755	89	\$ 11,469,102	68	\$ 7,567,707
2022	42	\$ 4,711,866	70	\$ 9,148,897	54	\$ 5,457,944
2023	33	\$ 3,872,519	57	\$ 6,799,938	38	\$ 4,110,455
2024	26	\$ 2,756,404	45	\$ 4,805,500	31	\$ 3,143,259
2025	21	\$ 2,189,094	32	\$ 3,475,352	23	\$ 2,223,349

Notes: New mechanism funding needed to recover new interstate common line revenue requirement is calculated each year as the residual of new common line revenue requirement minus common line subscriber line charge revenues allocated to recover cost in the new mechanism.

DOCKET NO.

10-90

Attachment A

DOCUMENT OFF-LINE

This page has been substituted for one of the following:

- o This filing contains confidential information (Not For Public Inspection)
- o An oversize page or document (such as a map) which was too large to be scanned into the ECFS system.
- o Microfilm, microform, certain photographs or videotape.
- o Other materials which, for one reason or another, could not be scanned into the ECFS system.

The actual document, page(s) or materials may be reviewed by contacting an Information Technician at the FCC Reference Information Center, at 445 12<sup>th</sup> Street, SW, Washington, DC, Room CY-A257. Please note the applicable docket or rulemaking number, document type and any other relevant information about the document in order to ensure speedy retrieval by the Information Technician.

1 CD-ROM