

QSI Consulting Audit Report

The Efficiency and Effectiveness of the Kansas Universal Service Fund

Presented to:

Kansas Senate Utilities Committee

January 14, 2015

Kansas House Utilities and Telecommunications Committee

January 15, 2015

Report Presentation

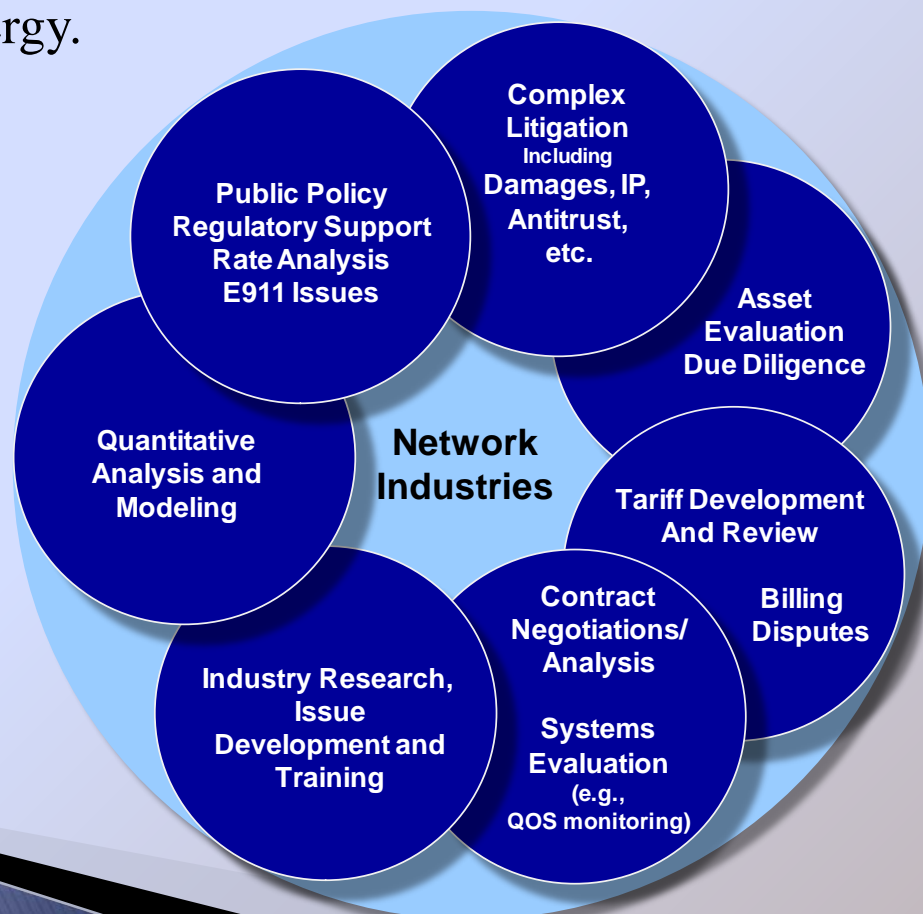
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Olesya Denney, Ph.D. • Scott Lundquist**



INTRODUCTION

Who is QSI Consulting?

- A privately-held consulting firm specializing in the economics of regulated network industries, including telecommunications and energy.



INTRODUCTION

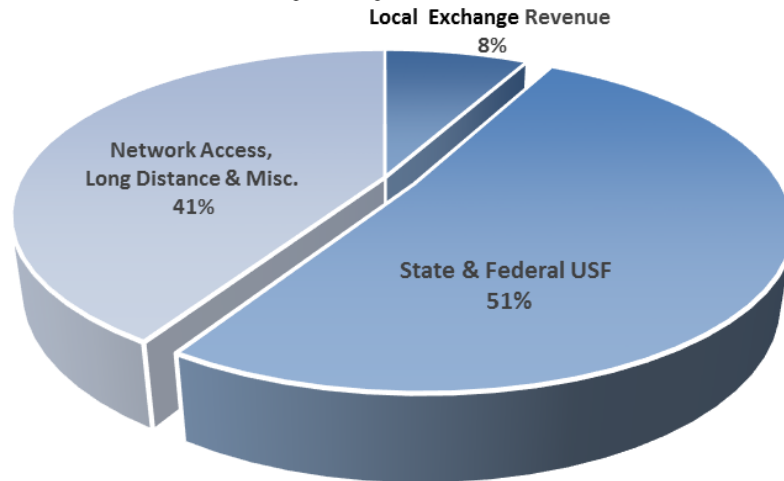
Historical Summary of the KUSF

- House Bill 2728 directed the KCC to establish the KUSF by January 1, 1997, for purposes of ensuring that Kansas Local Exchange Carriers (“LECs”) had the funding necessary to make infrastructure investments in support of newly defined “universal service” and “enhanced universal service” requirements.
- In general terms, “universal service” referred to ensuring statewide availability of single-party voice grade telephone service, including access to emergency E-911 capabilities, touch tone dialing, and competitive choice of long distance providers.
- “Enhanced universal service” referred to additional requirements for LECs to upgrade their networks to prevailing state-of-the-art technologies, and extending broadband-capable facilities to Kansas schools, hospitals, libraries, and state and local government facilities which requested broadband services.
- Key KUSF facts:
 - ❖ Support payments ranged from a high of \$96.4M in 1998 to \$41.9M in 2013.
 - ❖ Original intention of KUSF support in 1996 was to replace revenue lost from mandated access rate reductions.
 - ❖ KUSF transitioned to providing support based on costs of service in 1998.

INTRODUCTION

Universal Service Funding as a Percent of Income

Average KUSF Recipient Local Exchange Carrier Total Revenue Composition (2013)



Kansas Local Exchange Carrier Intrastate Revenue Components by Company Size (2013)



INTRODUCTION

House Bill 2201 Audit Requirements

- Telecommunications Study Committee tasked with commissioning audit.
- Audit administered by Kansas Department of Revenue.
- Auditor to produce a detailed report documenting:
 - ❖ Its evaluation of Kansas statutes and rules governing the operation of the KUSF;
 - ❖ The review of the Kansas Corporation Commission's ("KCC") audit process of the KUSF;
 - ❖ Analysis of factors that determine the level of KUSF support for recipients from 1996 - 2013; and
 - ❖ Identification of quantifiable benefits of the KUSF program.

INTRODUCTION

Audit Report

The Efficiency and Effectiveness of the
Kansas Universal Service Fund

October 2014



QSI CONSULTING, INC.

- Report narrative - 175 pages, 54 charts, 35 tables.
- Over 40 specific findings and conclusions.
- Public appendix - 17 tables.
- Confidential appendix – 13 (available to KCC Staff only).

Audit Report - KUSF



Executive Summary

The Kansas Legislature's Telecommunications Study Committee ("Committee") directed QSI Consulting, Inc. ("QSI") to undertake a broad process-oriented, operational and economic audit of the Kansas Universal Service Fund ("KUSF"). Target issues focused on regulatory policy aspects as well as detailed operational and economic issues impacting the mechanics of the KUSF's administration. Sections 2 through 11 of this Report systematically address each of the Committee's target questions in the order in which they were identified in the Scope of Work. This approach allows the reader to review, on a detailed point-by-point basis, topics and issues of interest to the Committee. However, immediately below we provide our high-level conclusions and describe some of the more critical operational and economic aspects of the KUSF's administration since its inception in 1997.

As a general matter, we conclude that the KUSF is well run, with audit and affiliate transaction-related procedures in place to ensure the fund is appropriately sized given current rules for calculating local exchange carrier ("LEC") costs, and that contributions are collected from the correct companies and distributions to recipient carriers are effectively managed. Further, the passing of House Bill 2201 has effectively eliminated or capped certain portions of the KUSF and set other portions on a glide path toward elimination by 2018. These steps ensure the KUSF does not grow out of control as it appears federal universal service fund ("FUSF") programs had done in years preceding the Federal Communications Commission's ("FCC") sweeping universal service reforms.

Section 1 – KUSF Overview

- The KUSF was created by the enactment of House Bill 2728 by the 1996 Kansas Legislature. House Bill 2728 directed the Kansas Corporation Commission ("KCC") to establish the KUSF by January 1, 1997, for purposes of ensuring that Kansas LECs had the funding necessary to make infrastructure investments in support of newly-defined "universal service" and "enhanced universal service" requirements.
- Under House Bill 2728, "universal service" referred to ensuring statewide availability of single-party voice grade telephone service, including access to emergency E-911 capabilities. "Enhanced universal service" referred to additional requirements for LECs to upgrade their networks to prevailing (at that time) state-of-the-art technologies, and extending broadband-capable facilities to Kansas schools, hospitals, libraries, and state and local government facilities that requested broadband services.
- Most recently, the enactment of House Bill 2201 (2013) made significant changes to the operation of the KUSF. House Bill 2201 strengthened the Legislature's and the KCC's control over the KUSF through the establishment of caps on, the reduction in, or even the elimination of, KUSF support for certain classes of telecommunications providers.

Executive Summary - i



Audit Report - KUSF

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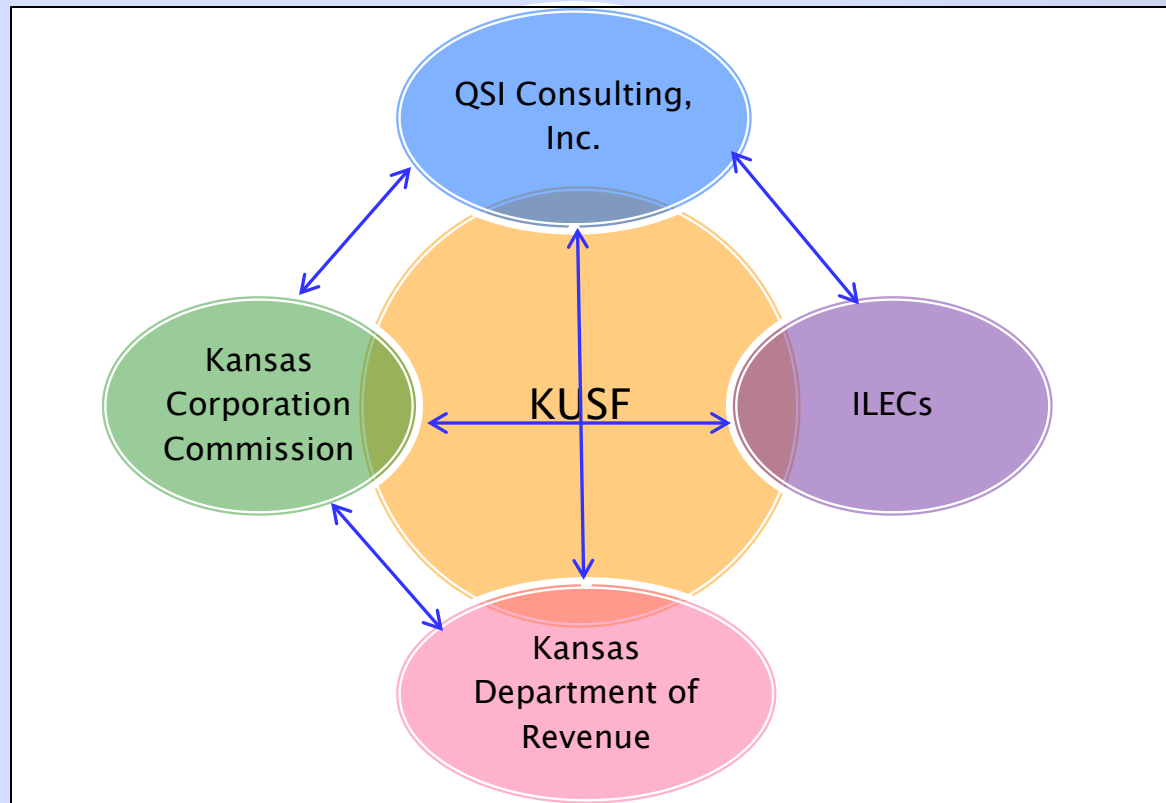
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CONTRACT SCOPE OF WORK / TASKS

- 10 tasks segmented by three Scope of Work sections
- Sections highlighted in this presentation

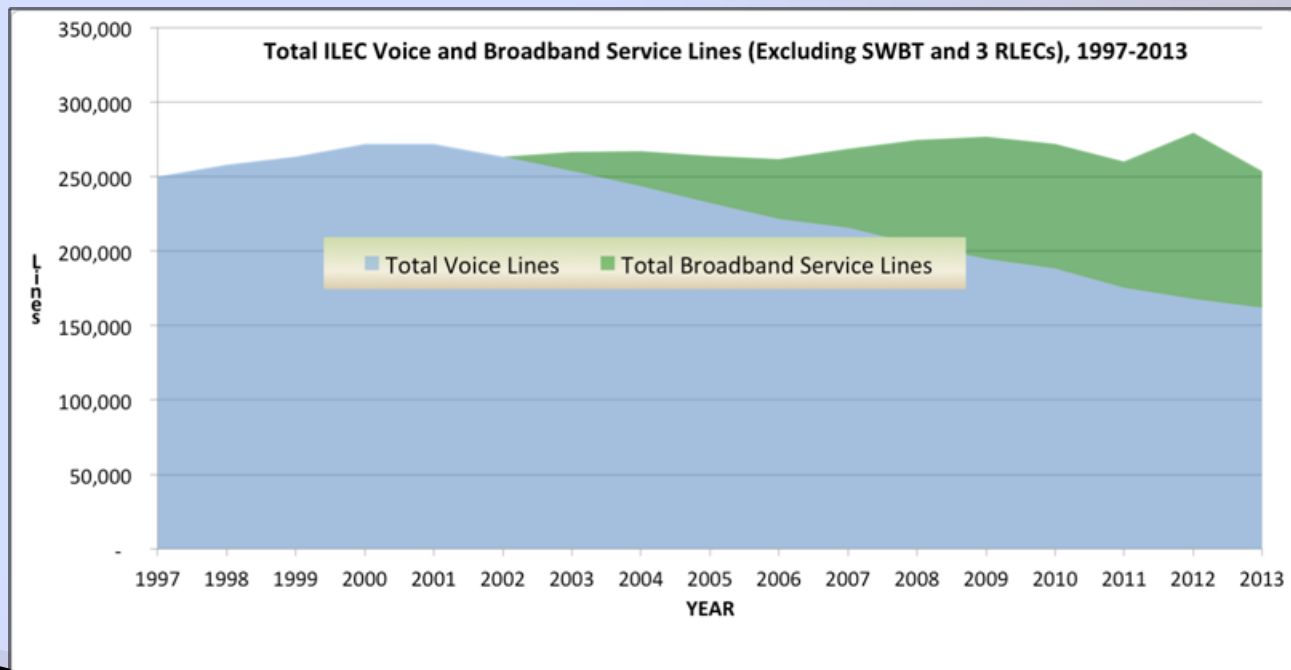
AUDIT CONTRACT SCOPE OF WORK	AUDIT REPORT SECTION / TOPIC	
A - Process-Oriented Review	2	Assessment of Kansas Statutes and Governmental Review Processes
	3	Factors that Determine How Much KUSF Support a Company Receives
B - Analysis of Operations	4	Historical Analysis of KUSF Support Received
	5	Rural Utility Service and Other Debt with Nexus to KUSF
	6	Capital Expenditures Analysis
	7	Telephone Competitors by Modality
	8	Affiliate Transactions and Transfers with a Nexus to KUSF
	9	Analysis of Companies with High KUSF Support Per Line
	10	Review of the KCC's Performance
C- Economic Assessments	11	Benefits Achieved by the KUSF and its Impact on Local Rates

INFORMATION FLOW



KEY ANALYSES, FINDINGS & RECOMMENDATIONS

- Key industry trends affecting ILEC operations and their need for KUSF support.
 - ❖ Incumbent local exchange carrier (“ILEC”) Voice lines have decreased approximately by – 6% per year, and by –64% in total from 1997 - 2013.
 - ❖ ILEC Broadband Service lines have grown roughly 22% per year since 2003 helping to compensate for the long-run erosion in the ILEC Voice line customer base.
 - ❖ The compensatory effects of Broadband Service may be under-represented by these figures, because residential Broadband Service is often purchased as a bundle that also includes a VoIP line, which is not captured by the Voice line counts reported to the KCC.



KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 2 – Assessment of Kansas Statutes and Governmental Review Processes

- Do the statutes provide incentives to control existing cost?
 - ❖ YES
- Do the statutes allow for investment in broadband, cable VoIP and other non-telecommunications services?
 - ❖ Statutes are silent regarding the relationship between KUSF support and investment in broadband, cable Voice over Internet Protocol (“VoIP”), or other services that may not be considered telecommunication services.

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 2 – Assessment of Kansas Statutes and Governmental Review

- Adequacy of KCC Audit Processes over KUSF Support Determination
 - ❖ Are standard processes being utilized (Scope of Work A.2.a)?
✓ YES
 - ❖ Is the time to complete KUSF support audits reasonable?
✓ YES
 - ❖ Were the audit processes consistent across companies?
✓ YES

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 3 – Factors Affecting Calculation of KUSF Support

➤ Key Finding

- ❖ HB 2100 eliminated support for SWBT (AT&T), capped support for CenturyLink, and capped and reduced support for the competitive eligible telecommunications carriers (“CETCs”).
- ❖ FCC separations and cost allocation rules used to determine KUSF support for rural local exchange carriers (“RLECs”) are outdated:
 - They allocate majority of loop costs to traditional voice services.
 - Investment in broadband-capable loop facilities supports not only traditional voice, but also data services.

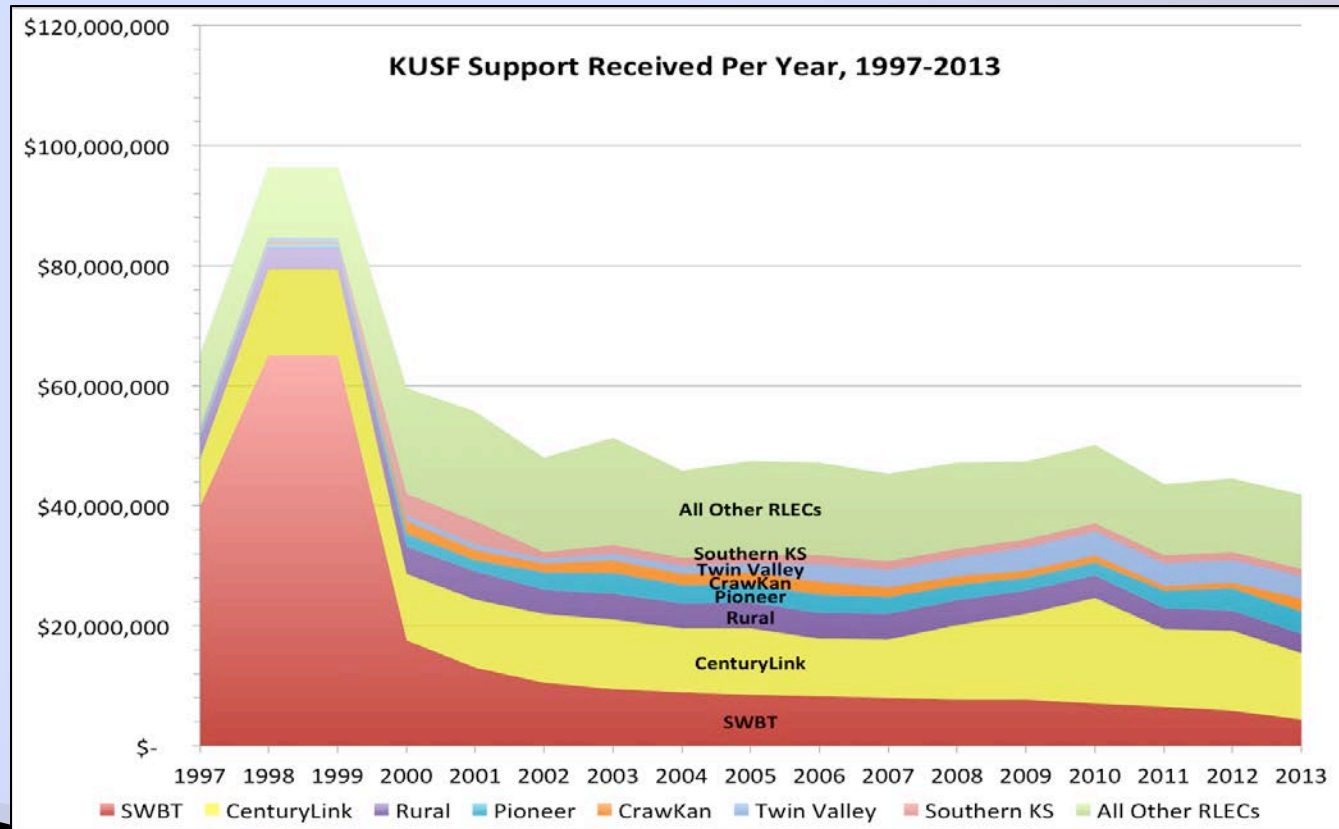
➤ Recommendation

- ❖ KCC should be directed to consider a cost allocation mechanism to trace costs to voice and data services. Some possible allocation mechanisms are:
 - Equal proportion allocation of jointly used network facilities (50% voice / 50% broadband).
 - Relative average revenue per line from each type of service.
 - Relative bandwidth usage.

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 4 – Historical Analysis of KUSF Support Received

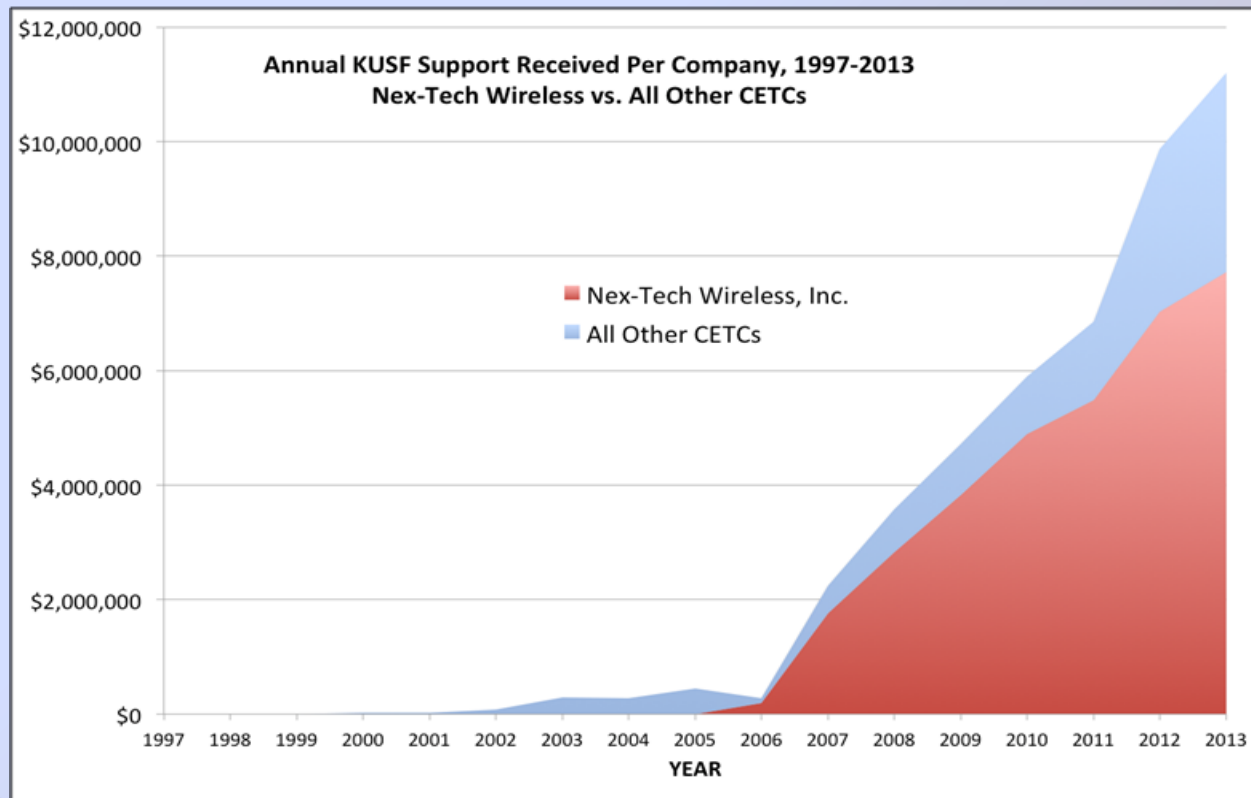
- Total annual KUSF payouts to ILECs have fallen substantially over time, from a high of \$96.4M in 1998, to \$41.9M in 2013. SWBT's (AT&T) support ended in January 2014 pursuant to HB 2201. No RLEC has received more than \$5.0M in a given year.



KEY ANALYSES, FINDINGS & RECOMMENDATIONS

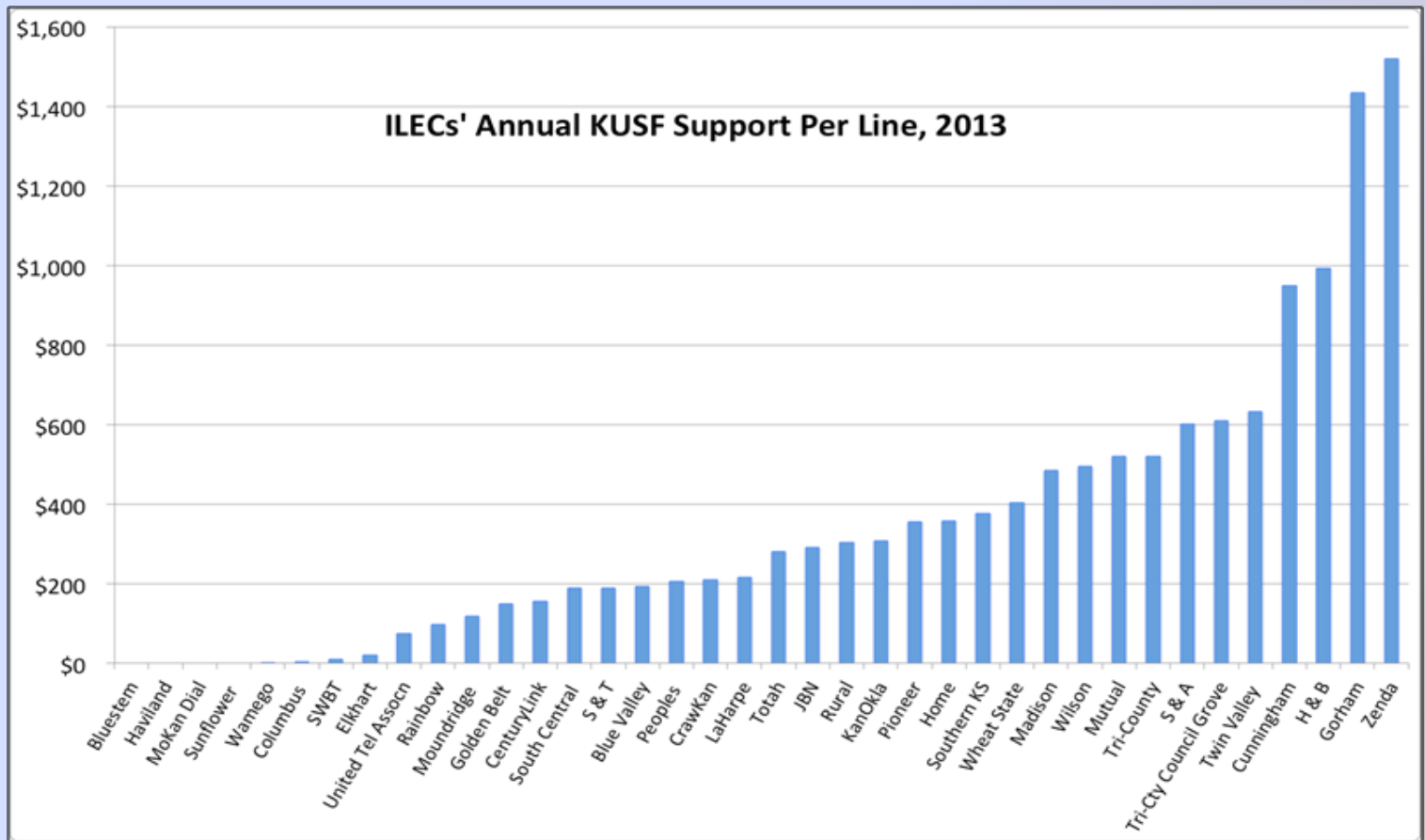
SECTION 4 – Historical Analysis of KUSF Support Received

- Total CETC support grew at an average rate of nearly 50% annually from 2005 - 2013, to some \$11.2M overall due primarily to support paid to Nex-Tech Wireless, which has received 75% of the total KUSF support paid to CETCs since 2005.



KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 4 – Historical Analysis of KUSF Support Received

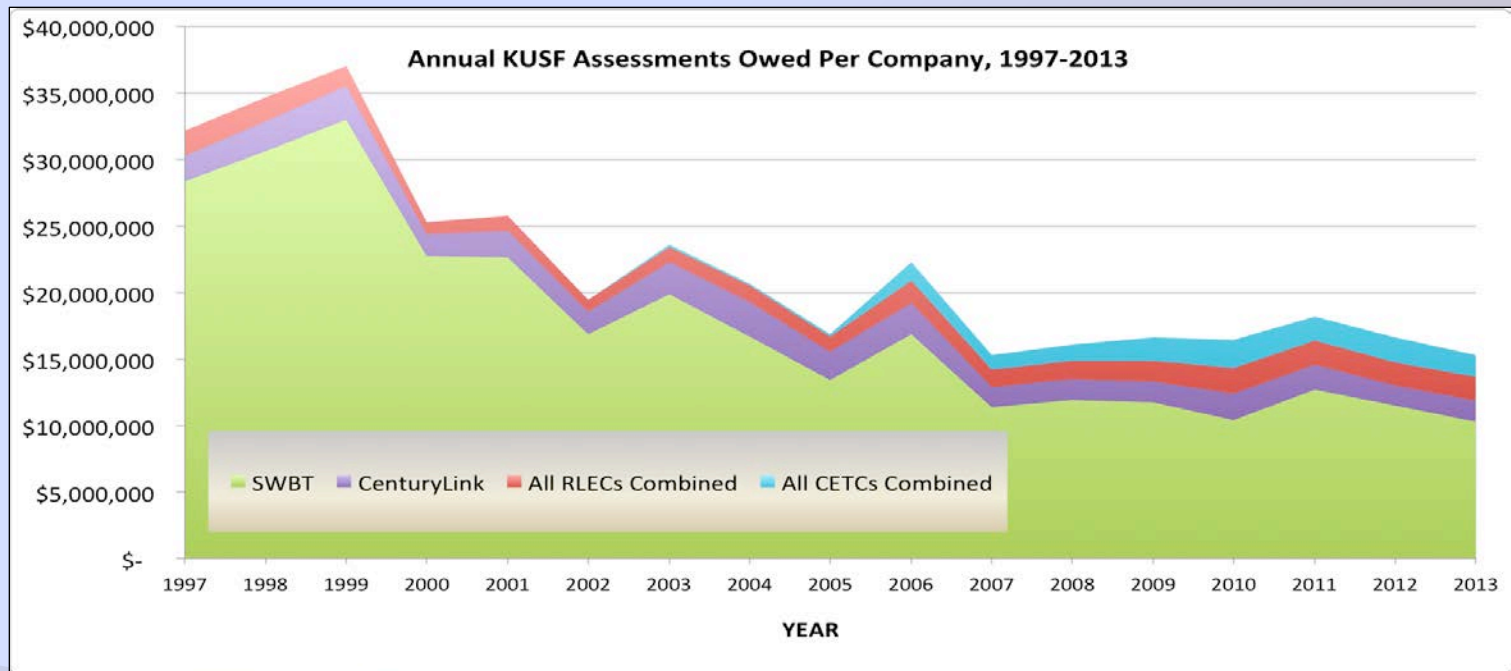


KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 4 – Historical Analysis of KUSF Support Received

➤ KUSF assessment trend:

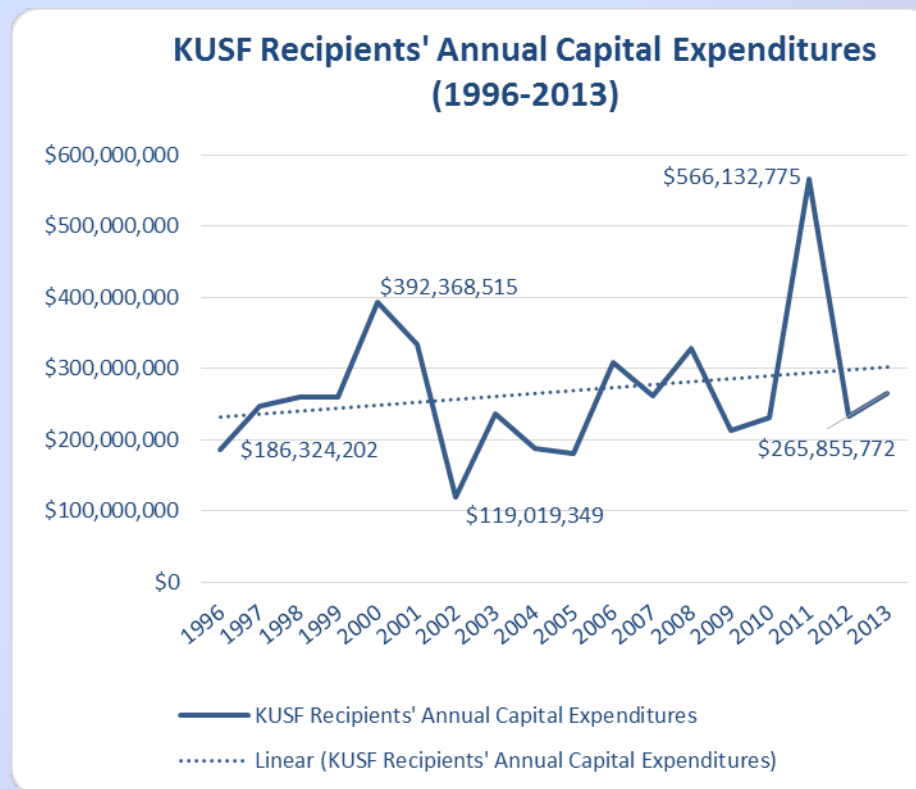
- ❖ (1) SWBT has incurred the largest annual assessments over the span of the fund, (2) the overall level of assessments on ILECs and CETCs combined has fallen over time, and (3) the CETCs were responsible for a growing share during 2005 through 2010 as these trends primarily reflect changes in the size of the customer base (i.e., access line counts) on which the KUSF surcharges are applied.



KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 6 – Capital Expenditures Analysis

- KUSF recipients' annual total capital expenditures:

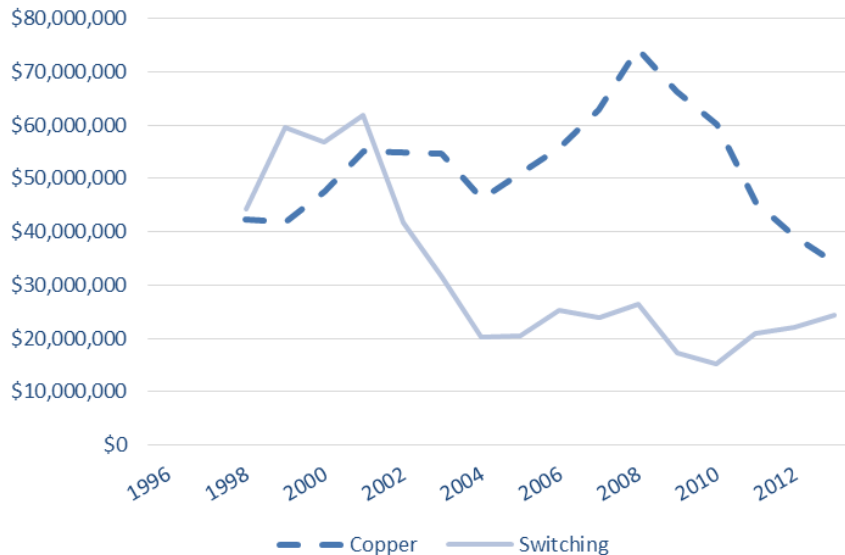


KEY ANALYSES, FINDINGS & RECOMMENDATIONS

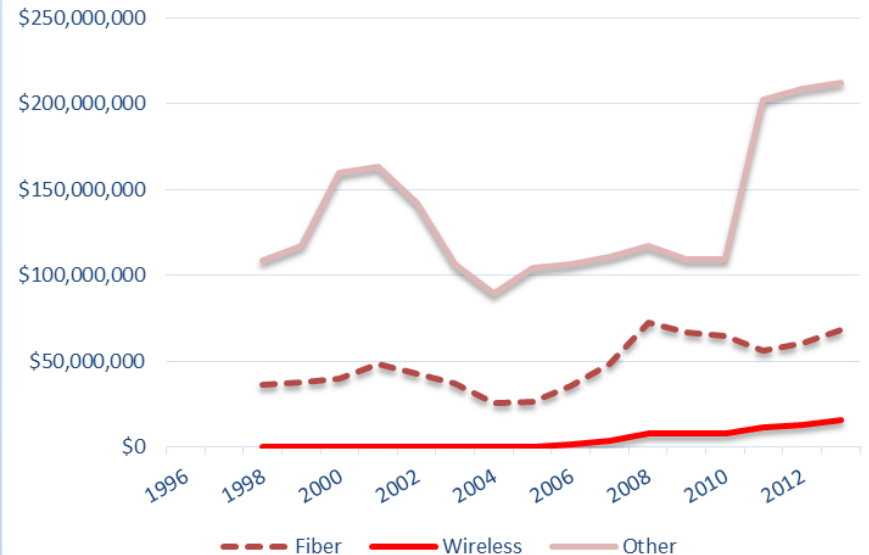
SECTION 6 – Capital Expenditures Analysis

➤ KUSF recipients' 3-year average capital expenditures:

KUSF Recipients' 3 Year Average Copper and Switching Expenditures (1996-2013)



KUSF Recipients' 3 Year Average Fiber, Wireless and Other Capital Expenditures (1996-2013)



KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 7 – Telephone Competitors by Modality (type of service)

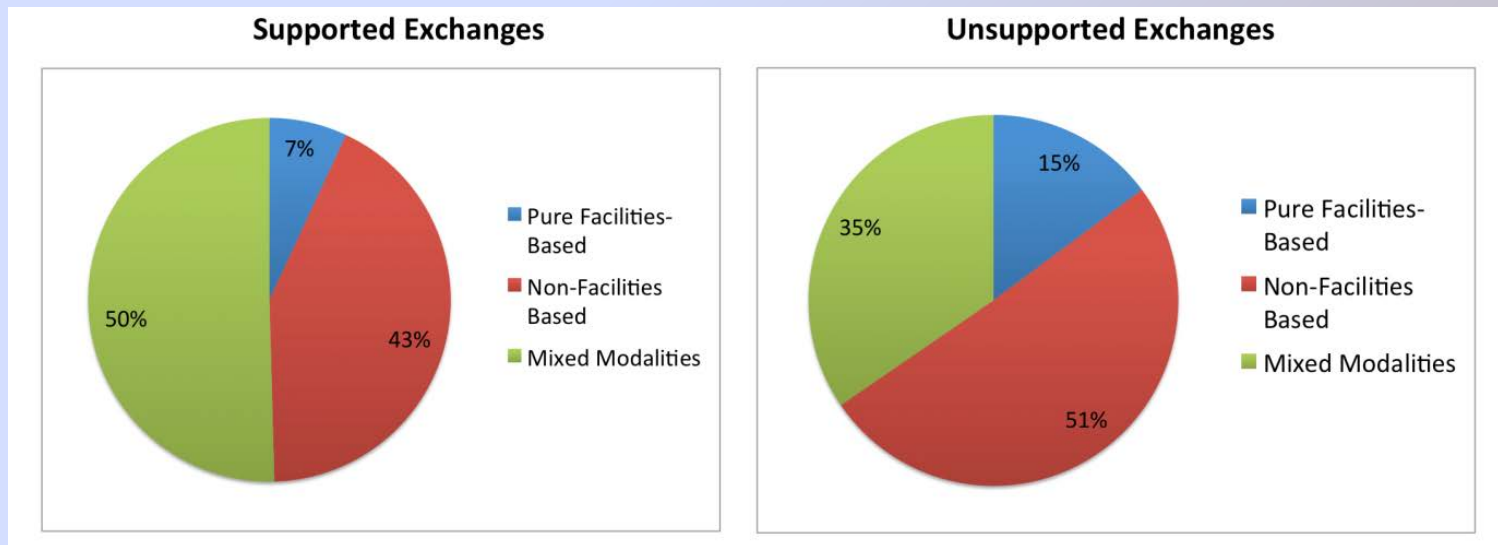
- 390 (71%) of 550 telephone exchanges in Kansas are supported by the KUSF.
- There are no wireline competitors in 44% of KUSF supported exchanges and in 11% of non-KUSF supported exchanges.
- In the exchanges with wireline competitive entry, supported exchanges average 2.8 competitors, while unsupported exchanges average 9.4 competitors.
- The great majority of exchanges have access to mobile wireless voice service and coverage of at least “3G” technology.

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 7 – Telephone Competitors by Modality

- The frequency of pure Facilities-Based competitors in supported exchanges is about half that seen in unsupported exchanges (7% vs. 15%, respectively).

Frequency Distributions of Competitors by Modality (Non-Facilities Based Category includes Resale and UNE Platform)



KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 9 – Analysis of Companies with High KUSF Support Per Line

- Median KUSF support across all Kansas ILECs averaged \$280/line/year over the last three years.
- Nine RLECs comprised the top quartile (25%) of KUSF recipients when measuring support on a per line basis over the last 3 years:
 - ❖ Lowest recipient in this group received \$370/line in KUSF support in 2011
 - ❖ Highest recipient in this group received \$1,521/line in KUSF support in 2013

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 9 – Analysis of Companies with High KUSF Support Per Line

- Factors contributing to high levels of KUSF support per line:
 - ❖ The top KUSF recipients tend to be smaller than other companies in the state.
 - ❖ Scale economies are significant with respect to the cost of General and Administrative services: the smallest company among top KUSF recipients had the highest per line General and Administrative Expense, and the largest company among top KUSF recipients had the smallest per line General and Administrative Expense.
 - ❖ The top KUSF recipients tend to have newer telecommunications plant (lower percentage of depreciated plant) than other similarly sized Rural LECs.

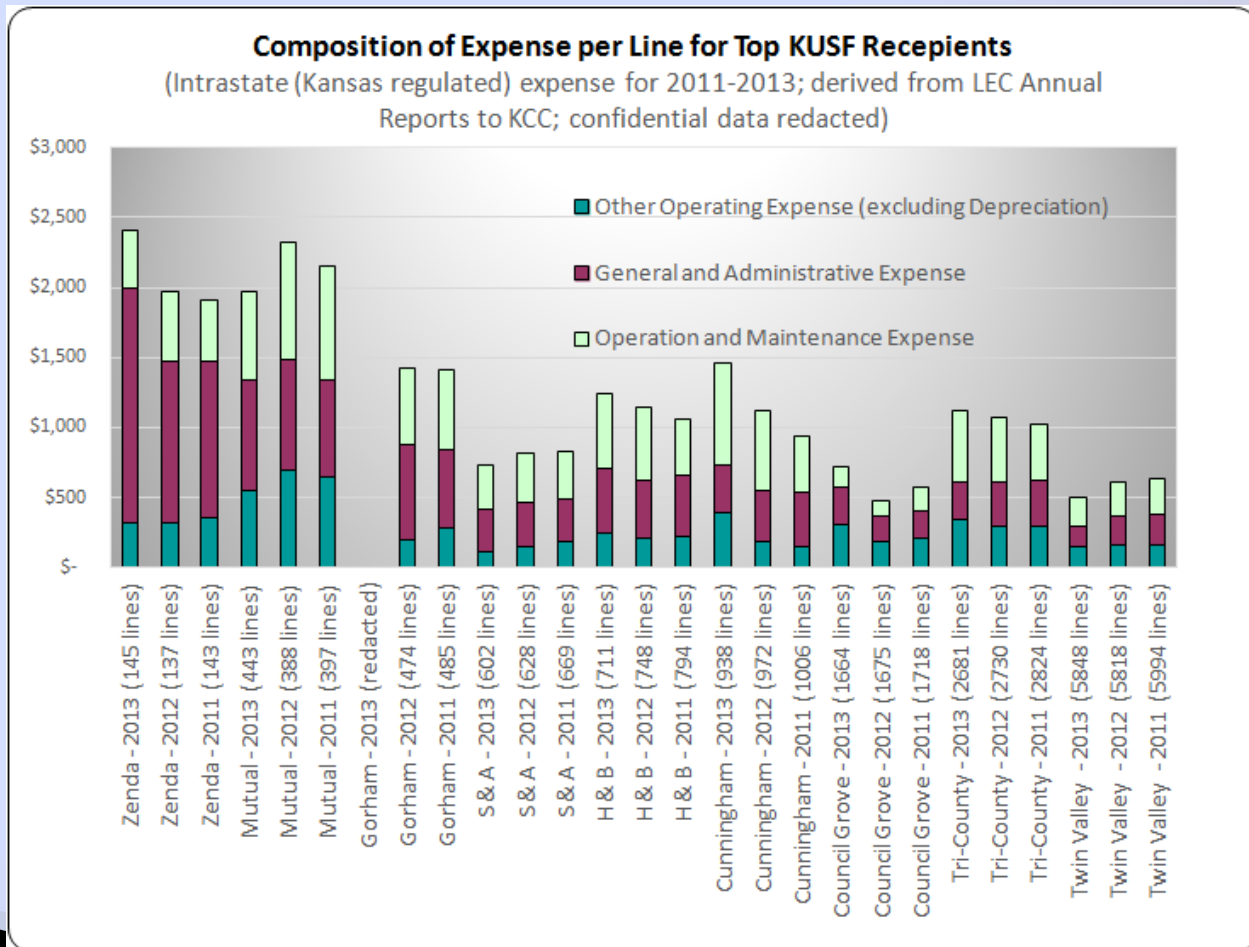
KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 9 – Analysis of Companies with High KUSF Support Per Line

- Top KUSF recipients on a per line basis do not stand out from other similarly sized RLECs with respect to the following metrics:
 - ❖ Population density.
 - ❖ Route miles per line.
 - ❖ Operation and Maintenance Expense.

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 9 – Analysis of Companies with High KUSF Support Per Line



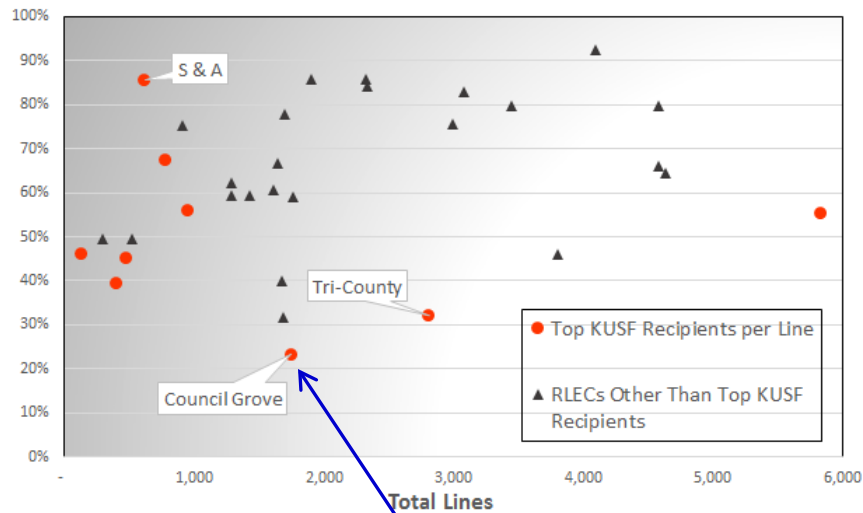
KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 9 – Analysis of Companies with High KUSF Support Per Line

Percent of Depreciated Plant in Service:

Comparison of Top KUSF Recipients with Other RLECs *

(Total Regulated (Interstate and Intrastate Jurisdictions); Derived from Public NECA 2012 Data)

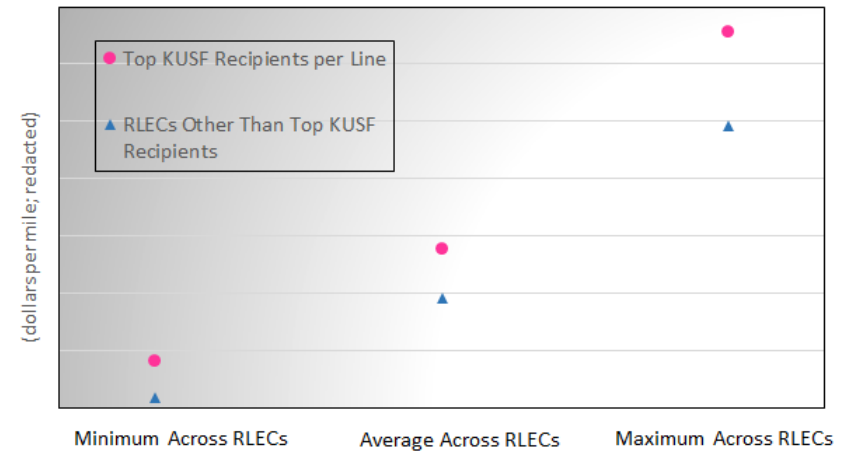


* -- Excludes RLECs with over 10,000 lines

Total Net Plant in Service Per Mile:

Comparison of Top KUSF Recipients with Other RLECs *

(Total Regulated (Interstate and Intrastate Jurisdictions); Derived from Public NECA 2012 Data)



* -- Excludes RLECs with over 10,000 lines

Council Grove – highest proportion of new plant (over 75%).

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 11 – Benefits Achieved by KUSF

- Benefits of the KUSF include the following:
 - ❖ KUSF support paid out from 1997-2013 - \$0.979B. Large ILECs (SWBT and CenturyLink) as a group received approximately 51% of this funding, followed by the RLECs (44% of cumulative KUSF funding).
 - ❖ On a net basis (when contributions are subtracted from distributions), RLECs benefited most from the KUSF (receiving as a group in excess of \$0.4B over 1997-2013).

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 11 – Benefits Achieved by KUSF

- Benefits of FUSF support between 1998¹ and 2013:
 - ❖ Kansas received significantly more FUSF moneys (\$2.6B) than it contributed to the FUSF (\$0.9B)
 - FUSF disbursements to Kansas LECs were over \$1.6B greater than KUSF support disbursements.
 - ❖ RLECs received approximately 70% of FUSF funding for Kansas (\$1.6B). On a net basis (when contributions are subtracted from distributions), the RLECs received an even larger share of total FUSF funding for Kansas – 94%.

¹ – 1998 was the first full year during which FUSF was operational

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

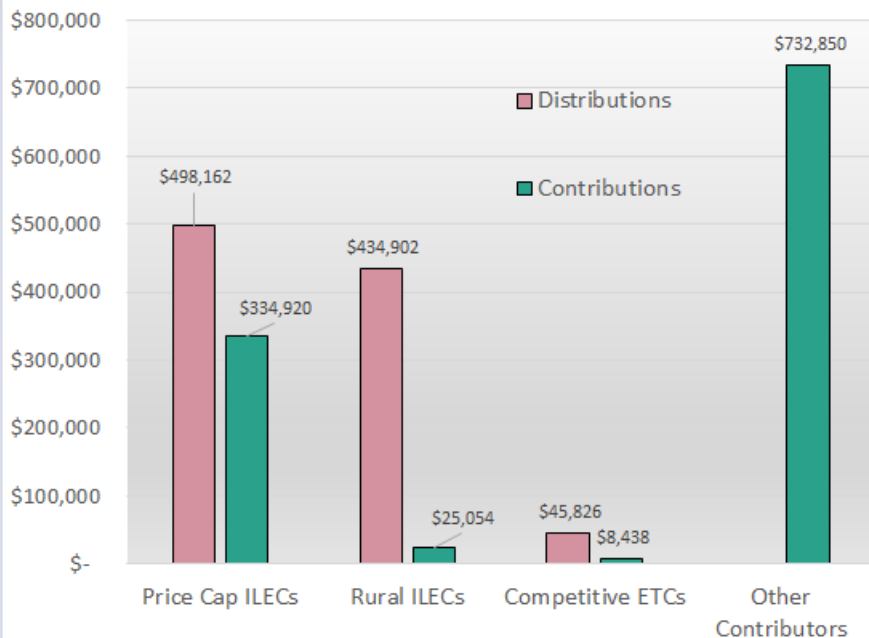
SECTION 11 – Benefits Achieved by KUSF

- Combined Benefits of KUSF and FUSF support:
 - ❖ RLECs accounted for approximately 60% of the combined federal and state USF distributions over the period 1997-2013.
 - ❖ Kansas is one of the leaders in broadband service penetration and availability in rural areas. Support from both federal and Kansas USFs should be credited for broadband availability in rural Kansas because both mechanisms compensate RLECs for actual investment in the network.

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 11 – Benefits Achieved by KUSF

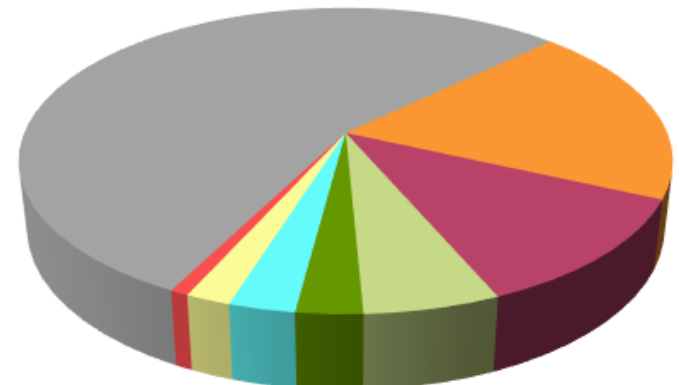
KUSF: Distributions and Contributions by Company Type
Cumulative over 1997-2013 (in \$000)*



* Derived from data provided by KCC. Total contributions are based on "amounts to be collected" from the KCC file "History of KUSF Assessment."

KUSF Contributions by Provider Type
Fiscal Year 17 (March 2013-February 2014)

Source: Estimated Assessments from Carrier Remittance Audits
(file FY17 Selections June 10 14 SR.xls)



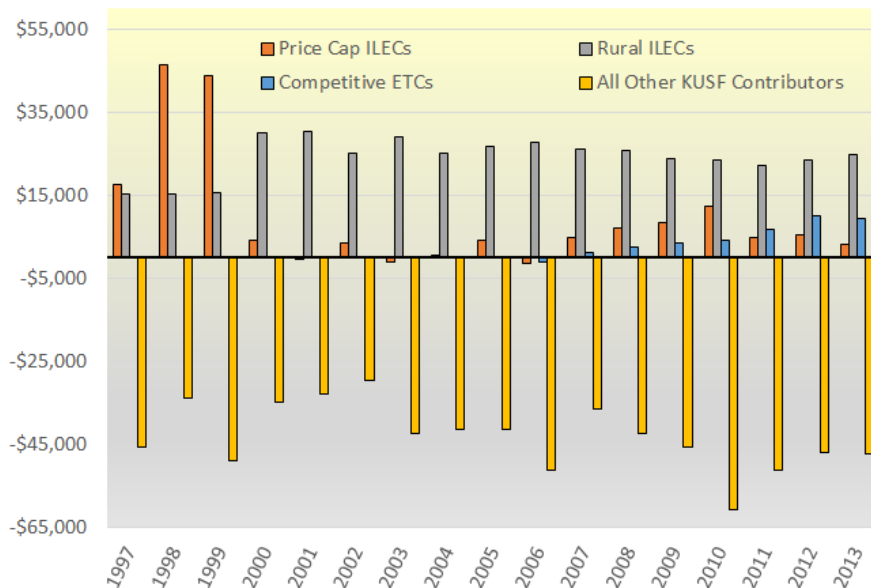
■ Wireless ■ Price cap ILECs ■ CLEC
■ Toll Providers ■ Rural ILECs ■ Competitive ETC
■ VoIP ■ Misc. Providers

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 11 – Benefits Achieved by KUSF

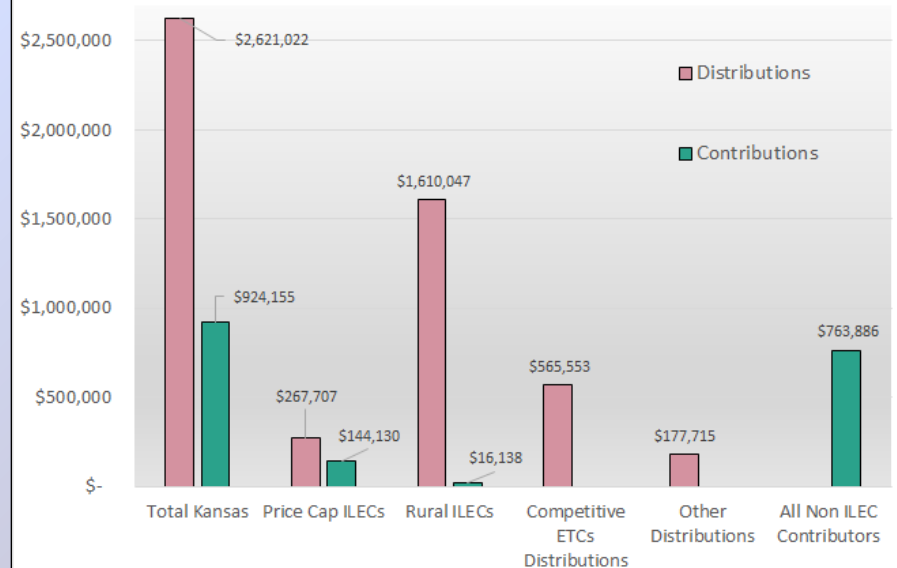
KUSF: Net Dollar Flows by Company Type (in \$000)

KUSF Distributions Minus KUSF Contributions*



* Derived from data provided by KCC. Total contributions are based on "amounts to be collected" from the KCC file "History of KUSF Assessment."

Federal USF: Distributions and Contributions in Kansas Cumulative over 1998-2013 (in \$000)*



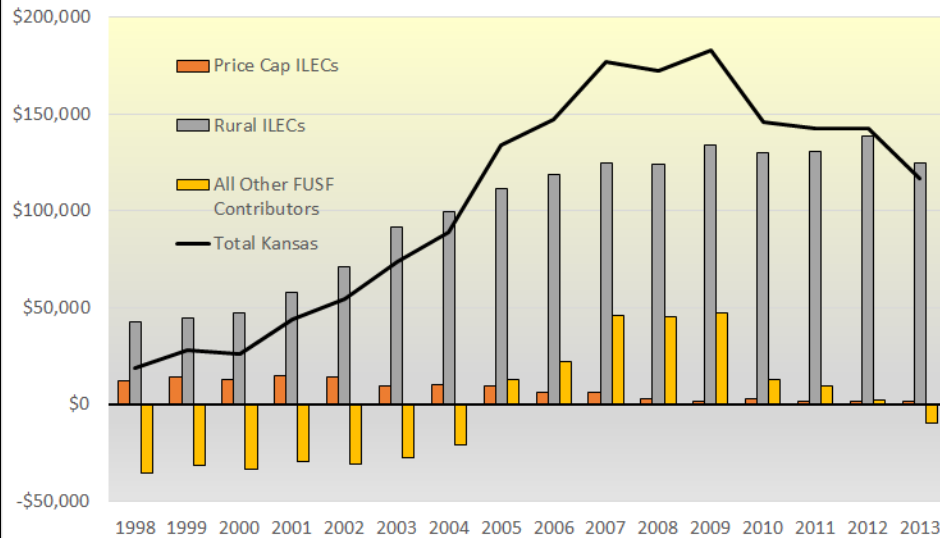
* Derived from USAC Annual Reports and disbursement data on high cost and low income funding, the FCC Monitoring and Telecommunications Industry Revenue Reports for various years. "Other Distributions" include Rural Healthcare and Schools and Libraries.

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 11 – Benefits Achieved by KUSF

Federal USF: Net Dollar Flows for Kansas (in \$000)

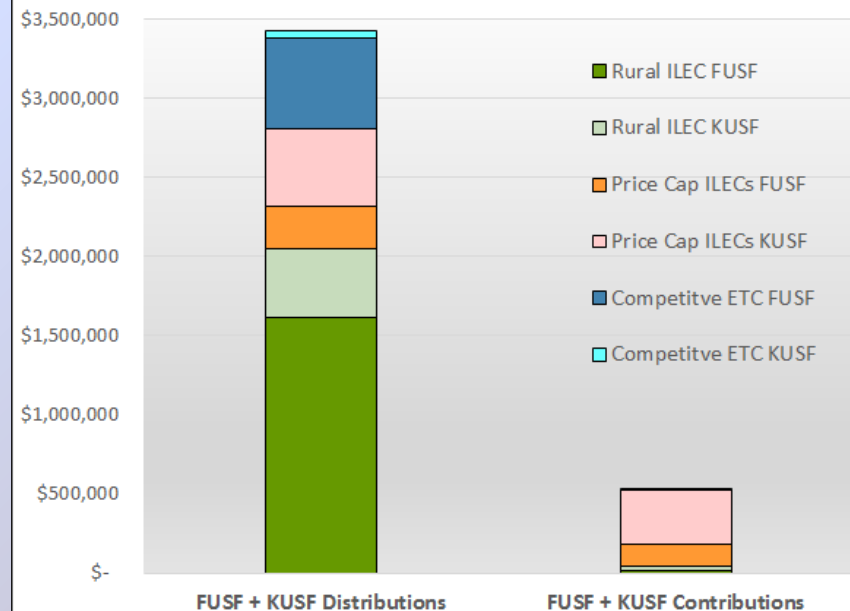
FUSF Distributions to Kansas Minus FUSF Contributions from Kansas*



* Derived from USAC Annual Reports and disbursement data, the FCC Monitoring and Telecommunications Industry Revenue Reports for various years. Rural Healthcare and Schools and Libraries funding for ILECs (if any) is contained in category "All Other."

Federal and Kansas USF: Distributions and Contributions by Company Type. Cumulative over 1997-2013 (in \$000)*

(FUSF contributions by CETCs are not estimated due to data limitations)



* Derived from USAC Annual Reports, disbursement data, the FCC Monitoring and Telecommunications Industry Revenue Reports for various years and data provided by KCC. FUSF Contributions of Competitive ETCs are not estimated.

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

SECTION 11 – Benefits Achieved by KUSF

- Effect of the KUSF on Local Rates:
 - ❖ Local rates of RLECs receiving KUSF support are, on average, \$16.58 per line per month for residential lines, and \$19.72 for business lines.
 - ❖ Rates of ILECs who do not receive KUSF support are slightly lower than the average rates of KUSF recipients, except for SWBT whose current rates are \$24 per residential line, and \$72.80 per business line per month.
 - ❖ Local rates would have likely been higher than actual rates if the KUSF subsidy was not available.

Comparison of Local Rates for Companies Receiving and not Receiving KUSF *

Company Type	Average Flat-Rate Local Exchange Rates			
	Residential		Business	
RLECs Receiving KUSF in 2013	\$	16.58	\$	19.72
RLECs Not Receiving KUSF in 2013	\$	15.09	\$	18.78
CenturyLink (Receives KUSF)	\$	17.73	\$	28.66
SWBT (Received KUSF up to 2013)	\$	24.00	\$	72.80

** -- Compiled from LEC tariffs. SWBT's rates, which are de-tariffed, are taken from its Guidebook (effective as of September 2014).*

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

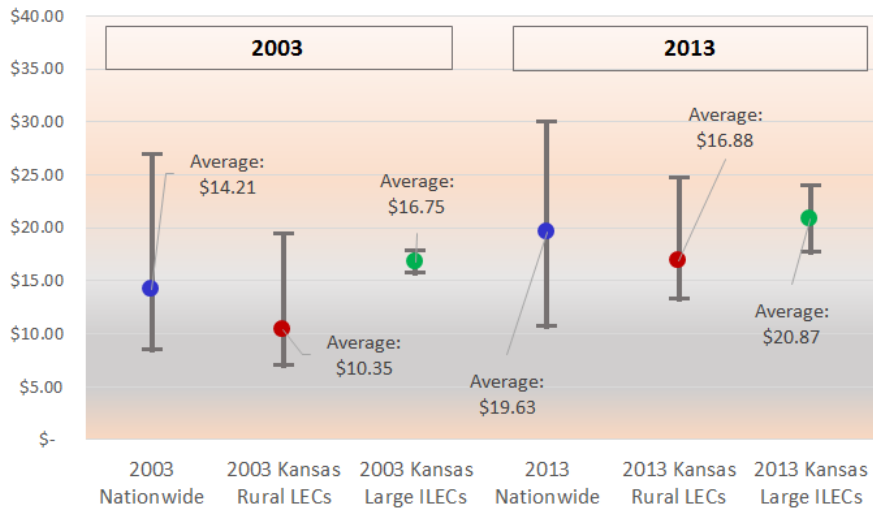
SECTION 11 – Benefits Achieved by KUSF

- Comparison of Kansas local rates to other states:
 - ❖ Local rates show significant variation across the country: A high of \$71.34 (CenturyLink (United Telephone) Wyoming) and a low of \$5 (several unnamed companies in a NECA filing to the FCC). The lowest residential RLEC rate in Kansas is \$13.27 (Sunflower), and the highest is \$ 24.70 (Southern Kansas' rate in the highest rated zone).
 - ❖ Approximately 20% of RLEC lines nationwide have residential rates below \$16 (the level just slightly lower than the average Kansas RLEC residential rates).
 - ❖ Nationwide urban rates have been on average higher than the Kansas RLEC rates. The gap is more pronounced for business rates compared to residential rates. Rates for Kansas large ILECs are on average higher than nationwide urban rates.

KEY ANALYSES, FINDINGS & RECOMMENDATIONS

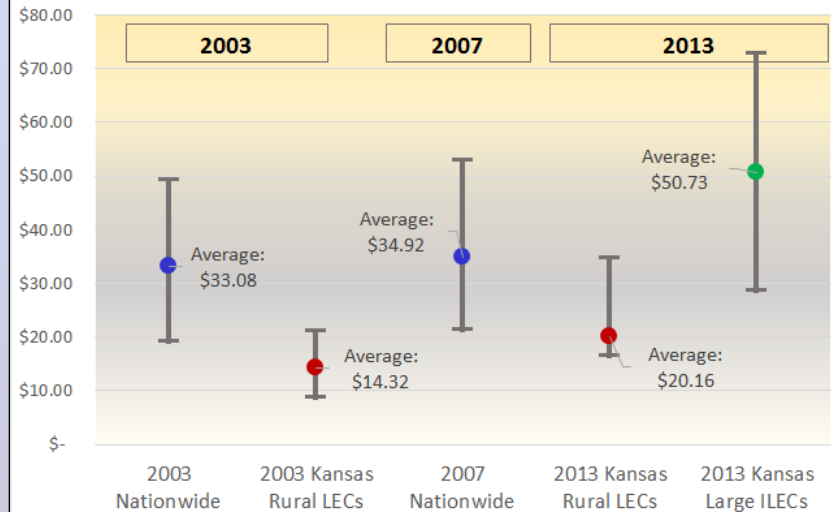
SECTION 11 – Benefits Achieved by KUSF

Range of Residential Rates: Comparison of Kansas LECs and Nationwide Urban Rates Data



Sources: Kansas LEC Tariffs, the FCC 2003 and 2014 Urban Rates Surveys. Data point "2013 Kansas Large ILECs" reflects SWBT 2014 rates.

Range of Business Rates: Comparison of Kansas Rural LECs and Nationwide Urban Rates Data



Sources: Kansas LEC Tariffs, the FCC 2003 and 2007 Urban Rates Surveys. Note: 2003 Data on Kansas large ILECs are not available. FCC has not collected business urban rates after 2007. Data point "2013 Kansas Large ILECs" reflects SWBT's 2014 rates.

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