Approved: <u>April 1, 2011</u>
Date

MINUTES OF THE HOUSE ENERGY AND UTILITIES COMMITTEE

The meeting was called to order by Chairman Carl Holmes at 9:00 A.M. on March 16, 2011, in Room 785 of the Docking State Office Building.

All members were present.

Committee staff present:

Matt Sterling, Office of the Revisor of Statutes Cindy Lash, Kansas Legislative Research Department Corey Carnahan, Kansas Legislative Research Department Renae Hansen, Committee Assistant

Conferees appearing before the Committee:

Kimberly Svaty-Gencur/ITC
Scott Schneider, Cox
Ward Lloyd, Commissioner, KCC
Ben Foster, Kansas Rural Independent Telephone Companies
Ron Gaches, SPRINT
Dave Springe, CURB
Christine Aarnes, KCC
David Wilson, AARP

Others attending:

Forty eight including the attached list.

Announcement by:

Kimberly Svaty-Gencur, ITC, (<u>Attachment 1</u>) offered information to the committee announcing the siting permit filing they made to the KCC for the V-Plan transmission line project. She spoke about the process of the filing and the proposed time-line.

Questions were asked and comments made by Representative Joe Seiwert.

Continued Hearing on:

SubSB72-Telecommunications

Neutral:

Scott Schneider, Cox, (<u>Attachment 2</u>), offered testimony from a neutral position to <u>SubSB72</u> due to the amendments that were added to the bill in the Senate Utilities committee. He explained the two amendments that were added that made the bill more amicable to them. Without the amendments, they would be opposed to the bill.

Opponents:

Christine Aarnes, KCC, (Attachment 3) spoke to the committee in regards to <u>SubSB72</u> from an opposing position. The testimony broke out the different areas of the issue explaining each: price deregulation for "electing carriers", rural/urban rate comparability for residential service, requirement to offer single residential access line, resale obligation, lifeline, uniform price requirement, price floor restriction, quality of service obligation, and carrier of last resort (COLR). They noted that in the absence of solid evidence of effective, sustainable competition and in an effort to preserve and promote the public policy goals embedded in the Telecommunication Act of 1996, the commission staff recommended <u>SubSB72</u> be rejected.

Ben Foster, Kansas Rural Independent Telephone Companies, (<u>Attachment 4</u>), offered testimony to the committee in opposition to <u>SubSB72</u>. They noted that bill would substantially degrade the valuable principle of universally available and affordable communications service.

CONTINUATION SHEET

The minutes of the House Energy and Utilities Committee at 9:00 A.M. on March 16, 2011, in Room 785 of the Docking State Office Building.

Ron Gaches, SPRINT, (<u>Attachment 5</u>) spoke in opposition to <u>SubSB72</u>. He believes that this bill is much more complex than it has been made out to be by both sides. He noted that this is too important an issue to just pass it through without understanding all the implications of what this bill intends to do.

Dave Springe, CURB, (<u>Attachment 6</u>), offered testimony in opposition to <u>SubSB72</u>. He noted that we have modernized pricing in Kansas in a broad spectrum of technological areas. Contained in the testimony is a brief entitled, "Why 'Competition' is Failing to Protect Consumers."

Ward Lloyd, Commissioner, KCC, (Attachment 7), spoke on behalf of himself, in opposition to SubSB72. He noted that the bill is designed to allow AT&T to mix Broadband with traditional telephone service. This bill would allow them freedom from their obligation to support their traditional, wire-line system. He noted that Kansas has a long-term commitment to the universal availability of a quality telephone system, and the affordability of the provided services. Adding broadband to the rural mix is important to get right and notes that we need to preserve and build on the present wire-line system to facilitate broadband deployment and availability. Attached to his testimony is a summary of the issues from FCC's USF/ICC NPRM to promote broadband. Included in Mr. Lloyd's testimony is a white paper entitled, "Carriers of Last Resort, Eligible Telecommunications Carriers, and State Administrative Roles." He includes a breakdown of AT&T exchanges by size and grays the areas that are deregulated. Additionally, he included an article from the Association of Communications Engineers entitled, "Good Engineering Practices Relative to Broadband Deployment in Rural Areas." He believes that a proper assessment needs to be determined before any law is enacted changing the current law, either through a special legislative committee or through a KCC docket.

Ernie Cusling, spoke on behalf of David Wilson, AARP, (<u>Attachment 8</u>) offered testimony in opposition to <u>SubSB72</u> and urges the committee to not pass out this legislation. He notes the deregulation permitted in this bill is not justified by current market conditions and will have a detrimental effect on consumers, especially those who live on lower and fixed incomes.

Written Opponents:

Mitzi McFatrich, Kansans for Better Care, (<u>Attachment 9</u>) offered written testimony in opposition to <u>SubSB72</u>. She noted that this bill would remove the protections from price increases currently in place and assurance of service will be gone for elders living in non-urban counties of Kansas.

Questions were asked and comments made by Representatives: Nile Dillmore, Mike Burgess, and Joe Seiwert.

The hearing on **SubSB72** was suspended.

The next meeting is scheduled for March 17, 2011.

The meeting was adjourned at 10:51 A.M.

HOUSE ENERGY AND UTILITIES COMMITTEE GUEST LIST

DATE: <u>March 16, 2011</u>

NAME	REPRESENTING
Colin Custis	Soudstone Caroup
TOMDAY	Kcc /
Jan Spring	CURB
Diane Browning	Sprint
Mike Realt	Sprint
Ceorge Stafford	atst
John Iday	Certifink
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For Carles	Sprint
Bruce No	ATAT
ann Dugles	AT+T
Myla Scott	N TT
Steve Aum	NT+
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Scott ScHNeIDER Mike Hattle;	Cox Comm.
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HOUSE ENERGY AND UTILITIES COMMITTEE GUEST LIST

DATE: <u>March 16, 2011</u>

NAME	REPRESENTING
Terry Dielolt	ATAT
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ITC Great Plains Applies for Siting Permit for the Kansas V-Plan Transmission Line Project

TOPEKA, Kan., March 14, 2011 – ITC Great Plains, LLC today applied to the Kansas Corporation Commission (KCC) for a siting permit to construct the Kansas V-Plan high-voltage electric transmission line, a project designed to connect eastern and western Kansas. Subject to KCC analysis and approval, the 345,000 volt (345kV) line would run approximately 120 miles through southwestern Kansas from the existing Spearville substation to two new substations: the Clark County substation in northern Clark County and the Thistle substation east of Medicine Lodge.

"The Kansas V-Plan is a critical infrastructure project for the state of Kansas and the region," said Brian Slocum, ITC Holdings Corp. vice president of engineering. "It will improve electric reliability and enable energy developers to tap into the transmission grid, further establishing a competitive energy market in the state. This will contribute to a more robust transmission grid that will benefit Kansas and the entire region."

In 2010, ITC Great Plains developed several potential routes through Ford, Clark, Kiowa, Pratt and Barber counties. The company invited landowners with properties on or near the proposed routes to open house events in Dodge City, Medicine Lodge and Greensburg on January 17, 18 and 19, 2011. More than 300 landowners, residents and other interested parties attended the events and provided input regarding the routes. Their comments were taken into consideration during development of the proposed final route, which attempts to minimize impacts to residents, their land and the natural environment while providing a technically viable and cost-effective transmission line.

"We enjoyed the opportunity to meet personally with many of the landowners who attended the open houses," Slocum added. "Their feedback is very helpful in guiding our routing and design efforts. We always make it a point to work closely with landowners as well as state and local officials, community and business leaders, environmental organizations and other interested parties to review proposed routes and fully discuss a project."

The proposed route traverses Ford, Clark, Kiowa and Barber counties. ITC anticipates the KCC will conduct a public hearing on the siting application in approximately 45 to 60 days, followed by an order approving a specific route within 120 days of the application date. ITC then would begin negotiations with landowners to purchase right-of-way easements. Construction is projected to begin in the spring of 2013. The project is expected to enter service late in 2014.

Kansas V-Plan Fast Facts

Line route: Ford, Clark, Kiowa and Barber counties

Line length: Approximately 120 miles, Spearville to Clark County to Thistle substation

near Medicine Lodge

New substations: Clark County and Thistle

Voltage: 345,000 (345 kV)

Structure type: Steel monopole, double circuit

Structure height: 100-150 feet Structures per mile: Typically six

More information: http://www.itcgreatplains.com/1 whykansas.html

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HOUSE ENERGY AND UTILITIES

DATE: 3/10/2011

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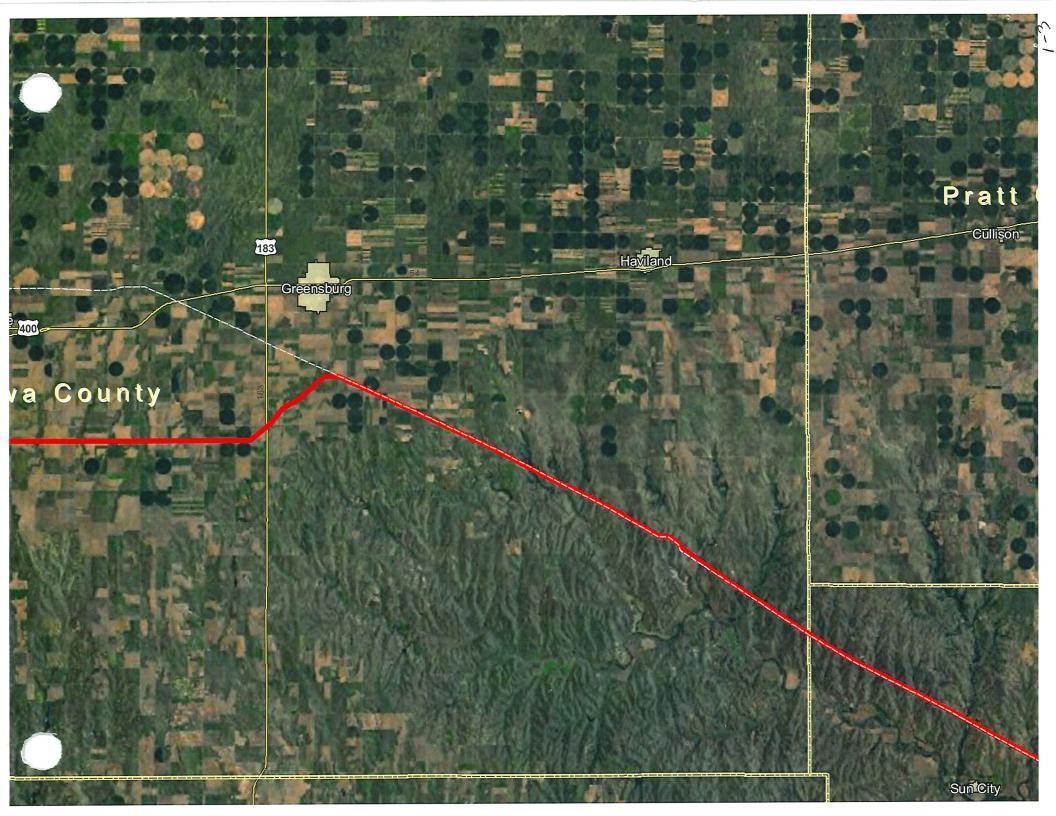
About ITC Great Plains

ITC Great Plains, LLC was formed in July 2006 as a subsidiary of ITC Grid Development, LLC, a wholly-owned subsidiary of ITC Holdings Corp., the nation's only fully independent electric transmission company. Headquartered in Topeka, Kansas, ITC Great Plains is a transmission-only utility which seeks to build a more robust electric transmission system providing access to reliable, non-discriminatory, competitive and low-cost energy throughout the Southwest Power Pool (SPP) region. ITC Great Plains holds transmission-only utility status in Kansas and Oklahoma with the authority to construct, own, operate, and maintain a regulated, high-voltage transmission system. For more information, please visit http://www.itctransco.com.

About ITC Holdings Corp.

ITC Holdings Corp. (NYSE: ITC) invests in the electricity transmission grid to improve electric reliability, expand access to markets, lower the overall cost of delivered energy and allow new generating resources to interconnect to its transmission systems. The largest independent electricity transmission company in the country, ITC currently operates high-voltage transmission systems and assets in Michigan's Lower Peninsula and portions of lowa, Minnesota, Illinois, Missouri and Kansas, serving a combined peak load in excess of 25,000 megawatts through its regulated operating subsidiaries, ITCTransmission, Michigan Electric Transmission Company (METC), ITC Midwest and ITC Great Plains. ITC also focuses on further expansion in areas where significant transmission system improvements are needed through ITC Grid Development and its subsidiaries. For more information, please visit http://www.itc-holdings.com.

Media Contact: Joe Kirik (248.946.3478, jkirik@itctransco.com)





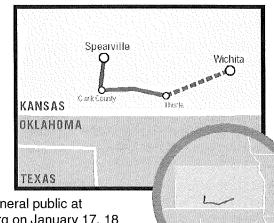
Capital Project Profile:

Kansas V-Plan

The Kansas V-Plan is a high-voltage transmission line designed to connect eastern and western Kansas to improve electric reliability and enable energy developers to tap into the transmission grid, further establishing a competitive energy market in the state. This will contribute to a stronger transmission grid that will benefit the entire region. Kansans will enjoy a robust grid that will increase reliability.

THE PROJECT

In collaboration with Sunflower Electric Power Corporation and Mid-Kansas Electric Company, ITC Great Plains will design and construct two segments of the V-Plan project, from Spearville south to the new Clark County substation, then east to the Thistle substation that ITC will construct east of Medicine Lodge. Prairie Wind Transmission will construct the third section of the line, from Medicine Lodge to a termination point outside Wichita.

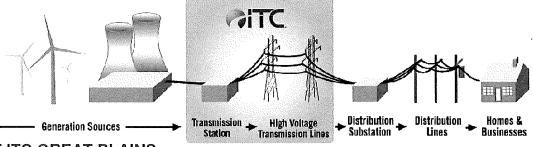


PROJECT STATUS

Several proposed routes were presented to landowners and the general public at Open House events in Dodge City, Medicine Lodge and Greensburg on January 17, 18 and 19, 2011. Comments were taken into consideration and a proposed final route was developed which attempts to minimize impacts to residents, their land and the natural environment while providing a technically viable and cost-effective transmission line.

The proposed route was submitted to the Kansas Corporation Commission on March 14, 20

The proposed route was submitted to the Kansas Corporation Commission on March 14, 2011. The KCC is expected to hold a public hearing within 60 days of the filing date and issue a final order within 120 days.



ABOUT ITC GREAT PLAINS

ITC Great Plains, LLC was formed in July 2006 as a subsidiary of ITC Grid Development, LLC, a wholly-owned subsidiary of ITC Holdings Corp., the nation's only fully independent electric transmission company. Headquartered in Topeka, Kansas, ITC Great Plains is a transmission-only utility which seeks to build a more robust electric transmission system providing access to reliable, non-discriminatory, competitive and low-cost energy throughout the Southwest Power Pool (SPP) region. ITC Great Plains holds transmission-only utility status in Kansas and Oklahoma with the authority to construct, own, operate, and maintain a regulated, high-voltage transmission system.



1100 SW Wanamaker Rd., Suite 103 Topeka, KS 66604 877.ITC.ITC9 www.itcgreatplains.com



Answers to Your Questions

Q. What will the line look like?

A. Subject to final detailed engineering design, the V-Plan project is expected to be built primarily with single tubular steel poles in a double-circuit arrangement (see photo at right). Single tubular steel pole structures will minimize the impact on land use. The height of the structures will vary based on terrain, clearances to the ground, objects under the line and structure spacing, but will typically range between 100 and 150 feet. The span lengths between structures will be approximately 800 to 1,100 feet, with an average span of 900 feet.

Q. Do landowners get input on where the line is located?

A. ITC works with landowners throughout the siting, design and construction process to attempt to minimize impacts to their property. We held community open house events to introduce the project to potentially affected landowners along the proposed routes. Their comments were taken into consideration during development of the proposed final route.

Q. How will ITC work with landowners to secure the necessary right of way?

A. After the final line route is approved by the Kansas Corporation Commission, ITC will contact landowners who have property on the proposed line route corridor and begin discussions with them about obtaining the necessary easements.

Q. What kind of payment structure do you use?

A. We provide one-time payments, typically negotiated up-front, based on determination of market value and individual negotiations. This approach is consistent with the law governing the payment of utility easements.

Q. Will construction on my property cause damage to my land?

A. ITC Great Plains will seek to minimize damage to your land. We will work with you to establish favorable points of ingress and egress to the right of way. However, because of the weight of the equipment and materials used in construction, there could be impacts on your property including soil disturbance and compaction. After construction, ITC Great Plains will return your property as near as possible to its pre-existing condition.

Q. What use of my land will be available to me after this project is built?

A. After construction is completed, vehicles, equipment and livestock will be free to pass under the line. In most cases, ITC Great Plains expects that after construction you will be able to use most of the land for the same purposes that you used it prior to the construction of the transmission line.

Q. What options do I have if I don't want your line on my property?

A. The final route for this line will be determined by the Kansas Corporation Commission. It is always ITC's goal to reach a negotiated agreement with affected landowners. However, ITC Great Plains is a certificated Kansas utility with the authority to file condemnation actions under procedures established by the Kansas Eminent Domain Procedure Act, KSA 26-501.

Q. How can I get more information about the V-Plan?

A. You can email us at VPlan@itctransco.com or call 877.ITC.ITC9.

Key Dates & Timeline

June 2010 - FERC approves cost allocation

June 2010 – Southwest Power Pool issues Notice to Construct

August 2010 – Local government outreach meetings

November 2010 - Preliminary routing established

December 2010 – Local leadership Summits

January 17-19 2011 – Public Open Houses in Dodge City, Medicine Lodge and Greensburg March 14, 2011 – Route application filed with the

Kansas Corporation Commission

Mid-2011 – Route approval anticipated, right-of-way acquisition begins

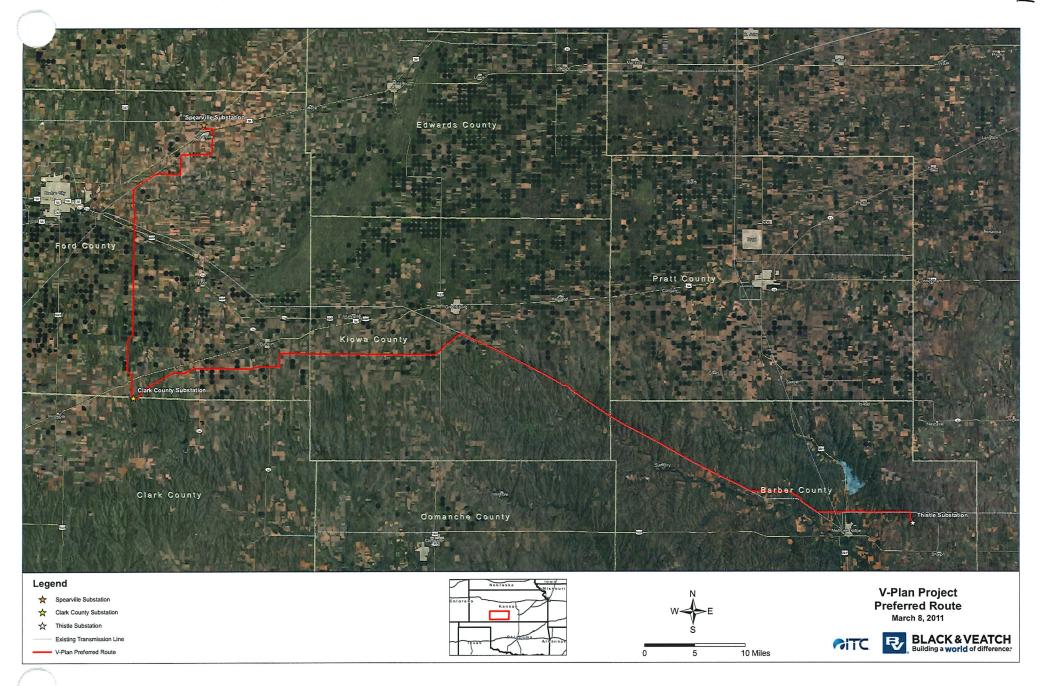
Spring 2013 – Construction begins Late 2014 – V-Plan enters service



1100 SW Wanamaker Rd., Suite 103 Topeka, KS 66604

877.ITC.ITC9 www.itcgreatplains.com

acpianis.com





901 S. George Washington Blvd. Wichita, Kansas 67211 316.260.7000 tel www.cox.com

Cox Communications Testimony House Utilities Committee Substitute for Senate Bill 72 Scott J. Schneider J.D.

Mr. Chairman and Members of the Committee, I am Scott Schneider, Director of Government Affairs for Cox Communications. Today, we are neutral to Senate Bill 72.

Cox Communications was one of the first facilities-based competitive local exchange carriers to enter the telecommunications marketplace following passage of the 1996 Federal Telecommunications Act. The pillars of both the Federal and State reform Acts gave us confidence that a sustainable business model could be created that would allow us to compete in the marketplace. Since 1996, Cox has invested over \$16 billion of private capital nationally to provide our customers with the quality video, data and voice products and services they have come to expect. Cox Kansas serves 85 communities in Kansas, all with state-of-the-art technology.

The Senate Utilities Committee improved SB 72 by including several key amendments. Absent these amendments, we would oppose SB 72 because it substantially changes the operating rules regarding interconnection and the obligation of incumbent carriers like AT&T. Connecting to each others' networks and exchanging calls from one provider to another is the foundation of a competitive telecommunications marketplace. SB 72 creates an alternative definition for an Incumbent Local Exchange Carrier (ILEC). Without the language and assurances which tie an "electing carrier" to long established interconnection rules and definitions, Cox cannot support this approach.

Cox supports a vibrant and competitive marketplace. Our focus remains on providing our customers and future customers with the products they want and a business relationship which can last over time. We have identified an additional, procedural statute which we believe is anticompetitive, hampers customer choice and is difficult to administer. KSA 50-6,103 (f) allows a customer to place a freeze on their account to avoid being unintentionally or fraudulently transferred to a different long distance or local exchange carrier. The law does not create a path to easily remove the freeze, thus allowing customers to easily realize the benefits of competition by transferring their service to the carrier that meets their needs.

Our competitors have used this procedure as a tool to both slow down a transfer and retain a customer after they signed up with Cox, but before the back office handoff has occurred. Several State Commissions have voided all customer freezes because the company could not produce an actual customer request and called them anti-competitive. The telecommunications marketplace has evolved beyond the earlier years when fraud and unauthorized changes were rampant. This provision has outlived its usefulness and now works to hinder, rather than facilitate a competitive



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marketplace. Even with the removal of this provision, adequate protections against the *unauthorized* change of carriers will still exist at both the state and federal level. If this Committee pursues additional deregulation we are asking for our amendment to remain in the legislation. By changing the statute, the telecommunications marketplace will be more functional and not give the predominant provider a regulatory advantage.

Again, Cox is more than willing to compete in a deregulated marketplace as long as it is fair and the rules remain clear.

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1500 SW Arrowhead Road Topeka, KS 66604-4027



phone: 785-271-3100 fax: 785-271-3354 http://kcc.ks.gov/

Thomas E. Wright, Chairman Ward Loyd, Commissioner

Corporation Commission

Sam Brownback, Governor

Testimony of Christine Aarnes, Chief of Telecommunications Kansas Corporation Commission

Before the House Energy and Utilities Committee Regarding Sub for SB 72 March 16, 2011

Chairman Holmes and Committee Members:

My name is Christine Aarnes and I am the Kansas Corporation Commission's Chief of Telecommunications. Thank you for allowing me to appear before you this morning on behalf of the staff of the Commission.

The Commission has the responsibility of ensuring that all telecommunications carriers and local exchange carriers preserve and enhance universal service and provide quality services at reasonable rates. The Commission staff does not believe the substitute for SB 72 would further those goals, which is why we are opposing SB 72.

The Commission filed its 2011 Report on Price Deregulation on February 3, 2011. This report indicates the Commission is wary of the effectiveness of competition. Rather than move forward with SB 72, Commission staff suggests the Committee consider the recommendations contained in the 2011 Report on Price Deregulation.

Background

In 1996, both Congress and the Kansas Legislature determined that it was appropriate to encourage the development of competitive markets for telecommunications services. The Federal Telecommunications Act of 1996 and the Kansas Telecommunications Act of 1996 contain provisions to facilitate the transition to a telecommunications industry disciplined by competition rather than agency regulation. Deciding whether this goal has been met; and thus, deciding that it is appropriate to grant price deregulation is a matter of public policy. The Kansas Telecommunications Act originally delegated that authority to the Commission, and specified that the existence of competition was a question of fact to be determined by the Commission in an evidentiary type proceeding with notice and an opportunity to participate provided to interested parties.

The statute, however, was modified in 2006 and 2008 by AT&T initiated legislation, SB 350 and HB 2637, respectively. Since July 1, 2006, a local exchange carrier electing price cap regulation has been able to request price deregulation of services pursuant to K.S.A. 66-2005(q). Pursuant to this statute, rates for all bundles of services were deregulated, statewide, on July 1, 2006. At

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ATTACHMENT 3-1

this same time, rates for residential and business services in exchanges with 75,000 or more access lines were also deregulated. For smaller exchanges, a price cap carrier must demonstrate to the Commission that there are two carriers unaffiliated with the price cap carriers that are providing service to customers. One of the carriers identified in support of such application is required to be a facilities-based carrier, such as a cable provider, and only one identified carrier can be a provider of wireless service. Only AT&T has petitioned for price deregulation under these statutory provisions. To date, 59 exchanges have been deemed price deregulated pursuant to the statute.

The current statute also contains certain protective provisions, including maintaining price cap regulation for Lifeline (low-income) lines, uniform pricing throughout an exchange, and a cap on the allowable annual price increase for basic service which is tied to the consumer price index. All of these protections would be eliminated by SB 72.

Proposed Legislation – Sub SB 72

SB 72 amends K.S.A. 66-2005 and allows any local exchange carrier with a majority of its local exchange access lines in the state price deregulated pursuant to subsection (q) to elect to no longer be regulated as a local exchange carrier and, not withstanding other provisions, instead be regulated as a telecommunications carrier. A local exchange carrier making such election would be referred to as an "electing carrier".

Under the proposed legislation, an electing carrier will not be subject to price regulation and any other regulation by the Commission would be no more stringent than the regulation imposed on telecommunications carriers. However, an electing carrier would remain subject to its resale of retail telecommunications services, unbundling and interconnection obligations; intrastate access charge requirements in subsection (c); Kansas lifeline service program (KLSP) requirements; and, remain eligible to receive Kansas Universal Service Fund (KUSF) support.

SB 72 requires an electing carrier's rates for single residential lines in rural exchanges to be no higher than the rates for single residential lines in urban exchanges. SB 72 defines a "rural exchange" as any exchange with fewer than 6,000 access lines and an "urban exchange" as any exchange with 75,000 or more access lines.

SB 72 (as amended) also relieves the electing carrier of its obligation to serve as the carrier of last resort in its exchanges with 75,000 or more access lines by providing written notice to the Commission.

Under SB 72 (as amended), an electing carrier would be required to offer single residential local exchange access lines in its exchanges.

¹ The exchanges in Kansas with 75,000 or more access lines are the Kansas City, Topeka and Wichita exchanges, all served by AT&T.

Price Deregulation for "Electing Carriers"

The current statutory provisions for price deregulation set fairly low hurdles for a company to jump in order to obtain price deregulation. As indicated above, the carrier must demonstrate that at least one facilities-based wireline carrier and one other carrier, which may be a wireless carrier, provide service to more than one customer in the requested exchange. There is no other evaluation of the competitive landscape.

Under SB 72, an electing carrier's remaining exchanges would be price deregulated merely upon a carrier selecting the electing carrier status. Thus, the already low hurdles are completely removed. It is possible that AT&T is unable to meet the requirement to show a facilities-based wireline carrier provides service in its remaining exchanges and proposes this legislation as a means of achieving price deregulation without such a showing. In fact, this is quite possible given that 51 of the 75 (68%) exchanges that have not been price deregulated have less than 1,000 access lines.

The Commission's 2011 Report on Price Deregulation contains data that the Commission believes casts doubt on the effectiveness of competition in those exchange that have already been price deregulated. Thus, it may be premature to move forward with additional pricing freedoms for price-cap regulated carriers. While all the price deregulated exchanges continue to meet the statutory criteria established for price deregulation, the quality of the competition in those exchanges is questionable. On page 20 of the report, you will find market share information showing that AT&T serves more than 50% of the residential customers in 46 of the 58 price deregulated exchanges (or 79.3% of the exchanges). The market share information for business services is on page 21 of the report and shows that AT&T serves more than 50% of the business customers in 31 of the 48 price deregulated exchanges (or 64.6% of the exchanges).

Additionally, the report shows that the Herfindahl-Hirschman Index (HHI) which is a measure of the size of firms in relation to the industry and an indicator of the amount of concentration in the market, is well above that level considered by the U.S. Department of Justice to be indicative of a highly concentrated marketplace in all price deregulated exchanges for both residential and business services. An HHI analysis was one of the pieces of evidence/factors considered by the Commission prior to the 2006 amendment when considering an application for price deregulation for an exchange. While measuring the level of competition is difficult and the result is likely to be imperfect, it is important to try to gauge the effectiveness of competition in those exchanges that have already been price deregulated before moving on to price deregulation in exchanges for which AT&T has apparently been unable to meet the current statutory requirement for such designation and for which it is less likely that effective competition will exist.

Commission staff further notes that price deregulation has not brought lower prices in those states where deregulation legislation has passed. In fact, rates have increased dramatically in some states.

According to a recent report released by the Missouri Public Service Commission, AT&T Missouri's statewide weighted average rate increased by 71.13% since 2007. AT&T Mo. has

increased its residential rates by 62.27% and its business rates by 22.22% since 2007. CenturyTel of Missouri's statewide weighted average rate has increased by 28.96% since 2007 and Embarq Mo.'s statewide weighted average rate has increased by 14.10% since 2007.

In Ohio, where deregulation legislation went into effect in September 2010, AT&T recently implemented a 9% residential rate increase. Although the Ohio legislation still provides some pricing constraints, the 9% rate increase implemented is the maximum allowed under the law.

In Arkansas, where deregulation went into effect in 1997, AT&T recently increased its residential rate in its smallest exchanges by 19%, which is 46% higher than the rate in 2009. AT&T recently increased its business rate for its three largest rate groups to \$48, which is a 7% increase over 2010 rates.

In K.S.A. 66-2001(b), the Kansas Legislature declared it to be the public policy of the state to "ensure that consumers throughout the state realize the benefits of competition through increased services and improved telecommunications facilities and infrastructure **at reduced rates**". Staff does not believe SB 72 would advance this policy.

The data for Kansas and other states suggest that caution should be used in moving forward with additional price deregulation. If the Committee moves forward with SB 72, Commission staff makes the following suggestions.

Rural/Urban Rate Comparability for Residential Service

SB 72 proposes that an electing carrier's rates for single residential and business local exchange access lines in rural areas shall be no higher than the average of its rates in urban areas. For purposes of this subsection "rural exchange" means any exchange in which there are fewer than 6,000 local exchange access lines served by all providers and "urban exchange" means any exchange in which there are 75,000 or more local exchange access lines served by all providers.

First, Commission staff is unsure what this provision means for exchanges with more than 6,000 access lines but less than 75,000 access lines. It is not clear whether there would be a pricing constraint on the electing carrier for these exchanges or if an electing carrier would be allowed to immediately increase its rates for these exchanges.

Second, the pricing "protection" provision in SB 72 does not, in reality, offer much protection. AT&T's urban rates are currently higher than its rural rates. Even under the CPI pricing constraint imposed by the current statute, AT&T has increased its rates in its largest exchanges (Kansas City, Topeka, and Wichita), where one would presumably think AT&T would face the most competition and the most competitive pressure to keep its rates low.

Requirement to Offer Single Residential Access Line

Under SB 72, an electing carrier would be required to offer single residential local exchange access lines in its exchanges; however, there is no associated pricing constraint. Commission staff believes the requirement to offer such service is important and necessary. However, staff

urges the Legislature to go one step further and not only require the basic service to be offered, but to also protect these customers from outlandish rates.

We urge the retention in the bill of the obligation to make available a basic subscriber line. As discussed in the 2011 Price Deregulation Report, many consumers do not wish to subscribe to bundles of services and value their ability to subscribe to the basic access line. Competition is and will continue to be less effective for stand-alone service, especially residential, given that most competition is for bundled services. However, without basic local service, the consumer cannot have or use other telecommunications services. Economies of scope enable telecommunications providers to provide multiple services over the facilities used to establish the local network. Without basic local service in the first instance, a customer cannot make long distance calls, benefit from call management services such as Call Waiting, Call Forwarding, or Three-Way Calling, or utilize any of the remaining myriad of network-based telecommunications services, especially access to broadband/Internet.

Resale Obligation

Under SB 72, an electing carrier would remain subject to its resale obligation, which staff believes is appropriate. It is required by the Federal Telecommunications Act.

However, you are urged to be mindful that all resellers' costs are directly influenced by the retail rate offered by AT&T and CenturyLink, since resellers receive a discount off of the retail rate. Thus, without any control over the rates of electing carriers, any electing carrier rate increases would impact customers served by resellers as well.

Lifeline

In 1996, Congress articulated a national goal that consumers in all regions of the country, including low-income consumers, have access to telecommunications and information services at rates that are reasonably comparable to rates charged for similar services in urban areas. The Federal Lifeline program was designed to further this goal.

Likewise, the Kansas Legislature assigned the Commission with a similar charge in creating the Kansas Lifeline Service Program (KLSP). The purpose of the KLSP is to "promote the provision of universal service by local exchange carriers to persons with low income. The KLSP shall be targeted to maintain affordable rates for residential local exchange service." K.S.A. 66-2006

The current statutory language contains a provision intended to protect low-income Kansans served by price deregulated price cap carriers from large local rate increases by keeping rates for lifeline services under price cap regulation. K.S.A. 66-2005(q)(1)(E)

An electing carrier would not be subject to this provision under SB 72. Absent this requirement, low-income consumers without competitive options could be forced to pay whatever rate the electing carrier deems appropriate (less the KLSP discount) or forgo telecommunications service.

Given that AT&T provides service to 69% and CenturyLink provides service to 4% (for a grand total of 73%) of the total Lifeline customers in Kansas, Staff does not believe it to be in the public interest to remove pricing protections for these customers.² Commission staff suggests the current statutory requirement be retained or other pricing protections should be imposed to protect low-income Kansans from large rate increases.

Uniform Price Requirement

K.S.A. 66-2005(q)(1)(G) currently requires local exchange carriers to offer a uniform price throughout the exchange for services subject to price deregulation, including packages or bundles of services. Under SB 72, the electing carrier will no longer be required to price uniformly throughout an exchange.

As you may recall, this provision was included in the statute because the primary source of facilities-based competition, a cable service provider, does not always serve the entire exchange. Therefore, the statute requires uniform pricing throughout an exchange to ensure that consumers without access to the competitive facilities-based service providers will receive the benefits of competition that others in the exchange are able to enjoy. The same is true for competition from wireless carriers. Until the Committee is convinced that ample facilities-based competition is available throughout the entirety of every exchange, it would be reasonable to maintain this provision.

Price Floor Restriction

Under SB 72, an electing carrier would no longer be required to maintain prices above a price floor (the long-run incremental cost of a service). All price-cap regulated carriers have been required to maintain prices above the price floor for a particular service. This requirement was based on the theory that if a carrier holds a dominant position in a market, it is possible that such carrier will price services below cost in order to discourage competitors from entering or remaining in the market. Then, once competitors are gone, the dominant carrier is free to raise prices and recoup lost margins. Given the data provided in the 2011 Report on Price Deregulation that indicates AT&T is the dominant carrier in 79.3% of the residential markets and 64.6% of the business markets in the price deregulated exchanges, it may be reasonable to maintain this provision.

Quality of Service Obligation

Although an electing carrier would be required to continue to abide by the Commission's quality of service standards, the proposed language is silent with regard to the Commission's authority

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² According to Commission records, AT&T received the KLSP discount for 70% of the KLSP lines between March 2007 and February 2008; 68% of the KLSP lines between March 2008 and February 2009; 67% of the KLSP lines between March 2009 and February 2010; and, 69% of the KLSP lines between March 2010 and December 2010. CenturyLink received the KLSP discount for 5% of the KLSP lines between March 2007 and February 2008; 5% of the KLSP lines between March 2008 and February 2009; 4% of the KLSP lines between March 2009 and February 2010; and, 4% of the KLSP lines between March 2010 and December 2010. AT&T and CenturyLink are eligible to receive KLSP support for retail lines they serve and also lines served by competitive carriers that resell their services.

to re-regulate for failure to meet such standards. The current statute allows for the Commission to resume price cap regulation of a local exchange carrier if it violates minimum quality of service standards and has been given reasonable notice and an opportunity to correct the violation and failed to do so. K.S.A. 66-2005(q)(2)(C)(5)

All facilities-based local wireline carriers are subject to the Commission's quality of service standards. Thus, AT&T and CenturyLink are currently treated in the same manner as traditional wireline competitive local exchange carriers.

The Commission collects quality of service information from all facilities-based carriers for the following measures:

Customer Trouble Reports per 100 lines. The benchmark is 6 or fewer. % Repeat Trouble Reports. The benchmark is less than 20%. Average Customer Repair Intervals. The benchmark is 30 hours or less. % of Appointments Met. The benchmark is 90% or greater.

Failing to meet the benchmark for two (2) consecutive months constitutes a *jeopardy condition*, and requires immediate reporting and a corrective action plan to be filed with the report. Failing to meet the benchmark for three (3) consecutive months constitutes a *noncompliance condition* and requires immediate reporting with an updated corrective action plan. Commission rules require its staff to evaluate the provided action plan and current results, and make a recommendation to the Commission regarding the assessment of fines.

In 2008, the Commission's rules were revised regarding the assessment of fines if the condition is deemed *exempt*, in which case no staff analysis or recommendation will be made. An *exempt condition* is defined as an extraordinary condition or event that is clearly outside of the Company's control, such as an "Act of God" or force majeure. In claiming such condition the reporting company is required to comprehensively describe the scope and magnitude of the event(s) including references to governmental declarations (e.g. FEMA, Emergency Management, etc.) as appropriate. A corrective action plan discussing measures being taken to manage the situation is required to be filed.

In 2004, AT&T failed to meet the benchmark of Average Customer Repair Interval for four straight months. After the first two months of sub-standard performance, the company filed its corrective action plan but still did not meet the benchmark. Because the company missed the benchmark in 4 of 6 rolling months, it triggered a non-compliance condition and the company was assessed a penalty of \$12,000. During the four months, the average customer repair interval ranged from 33 hours to 41 hours.

In 2005, AT&T failed to meet the benchmark for Average Customer Repair Interval for three months but these were not consecutive months. Therefore, no jeopardy or non-compliance condition was triggered.

In 2006, AT&T met all of the benchmarks for all measures.

In 2007, AT&T again failed to meet the benchmark for Average Customer Repair Interval for four consecutive months and an additional month. After the first two months of sub-standard performance, the company filed its corrective action plan but still did not meet the benchmark. Because the company missed the benchmark in 4 of 6 rolling months, it triggered a non-compliance condition. During sub-standard performance months, the average customer repair interval ranged from 36 hours to 47 hours. The Commission determined that it would not assess a penalty and required Commission staff to submit revised standards for consideration of "Acts of God" when determining whether to penalize a company. As discussed above, this change was adopted in 2008.

In 2008, AT&T missed the benchmark for Average Customer Repair Interval in three months, two of which were consecutive months and triggered a jeopardy condition. AT&T cited to weather conditions and a corrective action plan was filed.

In 2009, AT&T missed the benchmark for Average Customer Repair Interval in two consecutive months two times, which triggered two jeopardy conditions. AT&T, again, cited to weather conditions and filed additional corrective action plans.

In 2010, AT&T missed the benchmark for Average Customer Repair Interval in two consecutive months, which triggered another jeopardy condition. AT&T, again, cited to weather conditions and filed a corrective action plan.

As discussed above, all facilities-based carriers providing local service are subject to the Commission's Quality of Service requirements. No other carrier subject to the Commission's Quality of Service standards has triggered a jeopardy condition. Given the past performance of AT&T, it is not unreasonable to expect that there may be service quality issues in the future.

If an electing carrier fails to meet the minimum quality of service standards, the Commission would be left with minimal enforcement ability. Pursuant to K.S.A. 66-138, the Commission is allowed to fine the carrier for non-compliance of not less than \$100 and not more than \$5,000 per occurrence.

It is not unreasonable to expect that a carrier might reduce its workforce in an effort to cut costs. In cutting workforce and costs, a carrier's quality of service could suffer. Given the level of penalties that may be imposed, it is possible that it could be more cost beneficial for a carrier to pay a penalty for not meeting the Commission's minimum quality of service standards than to maintain enough staff to meet the standards.

Commission staff believes it would be reasonable to impose the threat of re-regulation to provide an incentive for an electing carrier to maintain service quality.

Carrier of Last Resort (COLR)

SB 72 proposes that an electing carrier may elect to be relieved of its COLR obligation in exchanges with 75,000 or more access lines. In exchanges with less than 75,000 lines, an electing carrier would be obligated to continue to serve as the COLR.

Commission staff believes the provisions in SB72 that state an electing carrier remains eligible for KUSF support and the proposed COLR provisions may conflict with federal and state eligible telecommunications (ETC) requirements.

AT&T and CenturyLink were granted ETC designation by virtue of being the incumbent local exchange carrier, and both carriers receive federal and state universal service fund support as an ETC. All ETCs are required to provide service to all reasonable requests for service. Thus, there is a COLR-like obligation. The Commission adopted AT&T's proposed definition for "reasonable request" for service in an order issued in Docket No. 06-GIMT-446-GIT, which is: "any request for service at a permanent residence or business location within the service areas, by a verifiable party and subject to the normal customer screening processes for a type and quantity of service normally requested by similar customers."

Under the Federal Telecommunications Act, an ETC can be required by a state Commission to provide local service in unserved areas and can relinquish its ETC status and discontinue providing universal service in an area where there is another ETC only by giving advance notice to a state Commission and by giving the state Commission adequate time (not to exceed one year) to find another carrier to provide services. Again, these obligations may be in conflict with the COLR provisions in SB 72.

Thus, if SB 72 passes, it would need to be understood that while an electing carrier may be relieved of its state statutory COLR obligations, it would still be obligated to provide service to all requesting customers pursuant to its ETC obligations. That is, unless the electing carrier relinquishes its ETC designation and the associated monies it receives.

Conclusion

In the absence of solid evidence of effective, sustainable competition and in an effort to preserve and promote the public policy goals embedded in the Telecommunication Act of 1996 -- a ubiquitous first-class telecommunications system, improved infrastructure, excellent service quality, affordable prices, and consumer protection for all Kansans, the Commission staff recommends the substitute for SB 72 be rejected.

The current provisions for price deregulation are not difficult to meet and at least there are some protections in place should the level of competition be insufficient to discipline price.

Thank you for your consideration of these comments. I am available for questions at the appropriate time.

³ Although Sub for SB72 will prohibit an electing carrier from receiving explicit KUSF support for fulfilling its COLR obligation, the carrier will continue to receive KUSF and FUSF support as an ETC. AT&T and CenturyLink, as ETCs, are currently eligible to receive Kansas Universal Service Fund (KUSF) and Federal Universal Service Fund (FUSF) support. AT&T currently receives approximately \$6.5M per annum in KUSF support and \$700,000 in FUSF support. CenturyLink currently receives approximately \$13M in KUSF support and \$7.9M per annum in FUSF support.

Blue Valley Telephone Company
Home

Bluestem Telephone Company Dodge City

Columbus Telephone Company

Craw-Kan Telephone Coop., Inc. Girard

Cunningham Telephone Company, Inc. Glen Elder

Elkhart Telephone

Golden Belt Telephone Assn., Inc. Rush Center

Gorham Telephone Company

H&B Communications, Inc. Holyrood

Haviland Telephone Company, Inc.

Home Telephone Company, Inc.

JBN Telephone Company, Inc. Wetmore

KanOkla Telephone Assn., Inc.

LaHarpe Telephone Company, Inc.

Madison Telephone Company, Inc.

MoKan Dial, Inc. Louisburg

Mutual Telephone Company
Little River

Peoples Mutual Telephone Company LaCygne

Pioneer Telephone Assn., Inc. Ulysses

Rainbow Telephone Coop, Assn., Inc. Everest

Rural Telephone Service Company, Inc.

S & A Telephone Company, Inc. Allen

S & T Telephone Coop. Assn. Brewster

South Central Telephone Assn., Inc. Medicine Lodge

Southern Kansas Telephone Co., Inc. Clearwater

Sunflower Telephone Company, Inc. Dodge City

Totah Telephone Company, Inc. Ochelata, OK

Tri-County Telephone Assn., Inc. Council Grove

Twin Valley Telephone., Inc. Miltonvale

United Telephone Association, Inc. Dodge City

Warnego Telephone Company. Inc.

The Wheat State Telephone Co., Inc. Udall

Wilson Telephone Company, Inc.



Investment that works for all Kansans

TESTIMONY OF BEN FOSTER, PRESIDENT

TWIN VALLEY TELEPHONE, INC.

Miltonvale, Kansas

on behalf of

THE KANSAS RURAL INDEPENDENT TELEPHONE COMPANIES

in opposition to

Substitute for Senate Bill 72

March 16, 2011

Mr. Chairman and Representatives:

I appear today on behalf of all of the three dozen independent telephone companies committed to providing reliable, affordable service to the individuals, families and businesses in half the state. Although Substitute for Senate Bill 72 would primarily affect customers of other companies, we have concluded that we should oppose its passage. We believe the bill proposes bad public policy for Kansas consumers, and its passage would adversely affect rural Kansas economies — including the communities we serve. Equally important is that this is a terrible time to consider significant changes in state policy; federal telecommunications policy is as unsettled as at any time in the past fifteen years, and no one can say how well or how badly new state and federal policies would work with each other.

Substitute for Senate Bill 72 would substantially degrade the valuable principle of universally available and affordable communications service. By authorizing unlimited rate increases, the state would abandon the principle that every Kansan should be able to rely on the availability of unlimited local calling at an affordable price. Rates could be raised to such an extent that some Kansans would be compelled by pricing to accept time-limited and less reliable cellular service – and to buy even that service only at a significantly higher price than is now charged for wireline service. Compare that dubious opportunity to the present right of all rural Kansans to enjoy unlimited local calling for a little over \$15 per month.

Statewide rate deregulation would impact rural customers. There is less, if any competitive local service available in many rural exchanges, so there is less, if any, competitive restraint on rates. The only semblance of rate restraint is an ineffective provision that would cap rates in over seventy exchanges at the higher levels chosen by the carrier for its customers in larger exchanges; even then the carrier could

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override the protection simply by moving urban rates further upward. If a key assumption of Substitute for Senate Bill 72 is that competition will adequately protect consumers, there is persuasive evidence to the contrary: the KCC's new report on competition and deregulation shows Kansans continue to need rate restraint, and again shows that competition alone has failed to meet that need.

We recognize these significant changes would directly impact another carrier's customers, but there would be negative impact on our customers as well. The loss of assured affordable service from other carriers would degrade the value of our networks and services, since there would be fewer people with phone service that our customers could reach. Rural economies readily ignore telephone service area boundaries, and increased phone rates in neighboring exchanges hurt not only those communities but also those we serve. A Senate amendment to the original SB 72 eliminates the threat that AT&T rate increases under existing law would force us to raise our rates as well. That amendment, however, only makes the substitute bill a little less bad for Kansas consumers.

We've heard many claims about the potential effects of this bill, including reference to broadband deployment. Make no mistake – this bill does nothing to assure that a single additional Kansan will gain access to broadband service. Persuasive testimony before the Senate committee from financial and economic development professionals established that this bill would hurt, not help, rural investment and employment. The only assured consequence of its passage would be higher rates with absolutely no requirement for increased levels or quality of service. AT&T alone would decide whether to use its increased revenues from Kansas consumers to improve service, fight competition wherever it chooses, or just increase stock value or pay higher dividends worldwide. There is no incentive, and certainly no requirement, to use the new Kansas revenue in Kansas.

Substitute for Senate Bill 72 paradoxically would have an anti-competitive effect. Deregulation would undermine market-friendly protections against cross-subsidization and manipulation. The bill's provision for continued KUSF payments to an unregulated carrier would mean all Kansans would pay to support an electing carrier's ability to move its cost recovery from one market to another, dictated by the competitive strategy of the single, consumer-supported competitor. Increased local rates would also allow AT&T to charge potential competitive carriers more for resale, impeding the development of competition.

All of these concerns would play out in the context of an unstable federal regulatory environment. Proposals for wide-ranging revision of existing policy are under active consideration at the FCC, each with strong proponents and opponents. The proposed National Broadband Plan, if implemented, would be a drastic departure affecting provision of basic and advanced services throughout rural Kansas. Significant change in Kansas communications policy, like that proposed in Substitute for Senate Bill 72, would be unwise until we know how that change would interact with national initiatives.

Governor Brownback's welcome focus on the economies of rural Kansas will be less effective if rural basic services become more expensive. Substitute for Senate Bill 72 unnecessarily risks the present assurance of service availability and affordability just as communications services become more important to the availability of basic educational, medical and commercial applications. We ask that you not add to the burdens of rural communities, and that you not recommend Substitute for Senate Bill 72 for passage.



Sprint Nextel 6450 Sprint Parkway Overland Park, KS 66251 Mailstop: KSOPHN0314-3B221 patrick.r.fuclk@sprint.com Patrick R. Fuclk Director, West Region State Government Affairs 913-315-9155 desk 913-687-5548 wireless

Testimony of Sprint Presented by Ron Gaches, Gaches, Braden & Associates In opposition to SB 72: AT&T's Deregulation Bill House Utilities Committee Wednesday, March 16, 2011

- 1. Competitors should not subsidize Incumbent Local Exchange Carriers in competitive markets. SB 72 allows AT&T to increase prices on its local customers and no longer be subject to price caps even in rural areas though AT&T already has the pricing freedom to reduce rates if needed. While Sprint is in favor of letting competition set market prices, our opposition is based on the fact that deregulated carriers will still be subsidized by wireless, long distance and competitive carriers and their customers in the form of Kansas Universal Service Fund (KUSF) payments.
- 2. No KUSF funds should go to a carrier that does not have COLR obligations. In a true competitive environment, competitors do not provide subsidy funding to other competitors. SB 72 allows "electing carriers" to be relieved of their Carrier of Last Resort Obligations (COLR) but still allows those carriers the ability to obtain millions of dollars annually from the KUSF.
- 3. A market is either competitive where each service provider should stand on its own or it is not competitive where subsidies can be considered. On one hand, AT&T is stating that "true competition exists" claiming that is the reason for deregulation, but on the other hand it still wants subsidies in the form of KUSF payments. AT&T should not be allowed to have it both ways at the expense of Kansas consumers.
- 4. The KUSF if already too large. At \$78 Million, Kansas has the third largest state USF behind only California and Texas. The current 6.18% KUSF assessment on customer's bill should be reduced, not increased.
- 5. Don't put the cart in front of the horse at the expense of Kansas consumers. Both the KCC and the FCC currently have pending dockets that will impact both the KUSF and the Federal USF. It is premature for the Kansas Legislature to pass SB 72 while these proceedings are taking place.
- 6. No COLR obligation, no KUSF subsidies from other consumers. At a minimum, SB 72 must be amended to prohibit AT&T or any "electing carrier" from receiving KUSF subsidies in any exchange where they choose to be relieved of their COLR obligation. Such an amendment would reduce the size of the KUSF and the KUSF surcharge on your constituent's phone bills.

Now is the time for the Kansas Legislature to reduce the size of the KUSF by preventing deregulated carriers from receiving KUSF subsidies in the same exchanges where they choose pricing flexibility and to walk away from their COLR obligation. All Kansas telecommunication customers will henefit from this change.

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Vote No on SB 72 Unless amended as follows:

Proposed Sprint amendment to SB 72:

Page 17, line 4:

66-2005(x)(5)

5) Notwithstanding any other provision of law to the contrary, an electing carrier that notifies the commission that the electing carrier chooses to be relieved of carrier of last resort obligations in specific urban exchanges or any local exchange carrier that does not have a carrier of last resort obligation shall not be eligible for KUSF funding for carrier of last resort obligations, as required by K.S.A. 66-2009, and amendments thereto, or high cost support in those specific exchanges, but would remain eligible for KUSF support for Kansas lifeline service program purposes.

Citizens' Utility Ratepayer Board

Board Members: Nancy Jackson, Chair A. W. Dirks, Vice-Chair Carol I. Faucher, Member Stephanie Kelton, Member Kenneth Baker, Member



David Springe, Consumer Counsel 1500 S.W. Arrowhead Road Topeka, Kansas 66604-4027 Phone: (785) 271-3200 Fax: (785) 271-3116 http://curb.kansas.gov

Testimony on Behalf of the Citizens' Utility Ratepayer Board
By David Springe, Consumer Counsel
Before the House Utility Committee
Re: Substitute for Senate Bill 72
March 15, 2011

Chairman Holmes and Members of the Committee:

Thank you for the opportunity to appear before you this afternoon on behalf of the Citizens' Utility Ratepayer Board (CURB) to testify in opposition to Substitute for Senate Bill 72. My name is David Springe and I am the Consumer Counsel for CURB.

CURB opposes Substitute for Senate Bill 72 for the following reasons:

- The Kansas Corporation Commission's 2011 Report to the Kansas Legislature on Price Deregulation does not support further deregulation in Kansas, but instead questions the effectiveness of competition in deregulated exchanges and recommends that the Legislature consider remedial steps for exchanges that exceed the statewide, weighted average rate adjusted for inflation comparison;
- The bill price deregulates small rural exchanges without any showing of competition, simply because the majority of AT&T's access lines have been price deregulated in its larger exchanges;
- The bill eliminates the existing annual price increase cap for residential and small business basic local service tied to the consumer price index;
- The bill eliminates the exchange-wide pricing requirement for deregulated exchanges;
- The bill abandons Kansas and federal universal service goals by eliminating the carrier of last resort obligation, yet still allows AT&T to receive universal service high cost subsidies from the KUSF. The provision denying AT&T access to KUSF funding for COLR obligations under K.S.A. 66-2009 is meaningless as no carrier has ever sought funding under this provision as it is already recovered in the high cost subsidy the carrier receives;
- The bill places Lifeline, low income, and elderly customers at risk for any resulting price increases;
- The price cap for rural exchanges tied to urban exchange prices is ineffective and illusory; and
- The bill does not allow the KCC to resume price cap regulation for violations of minimum quality of service standards or changes in the status of competition.

In 2005, AT&T (formerly Southwestern Bell) filed for price deregulation at the Kansas Corporation Commission (KCC or Commission) and the application was fully litigated. Extensive evidence and testimony was presented regarding whether sufficient and sustainable competition existed in the State's three largest exchanges (Kansas City, Topeka, and Wichita) to justify price deregulation. For the majority of AT&T's services, the KCC determined that sufficient and sustainable competition

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was not present, and declined AT&T's request for price deregulation for the majority of its services, including stand-alone residential and single line business service.

Notwithstanding the KCC's determination, the 2006 Legislature price deregulated the Kansas City, Topeka, and Wichita exchanges (exchanges with over 75,000 access lines) with no evidence of increased competition. In addition, the 2006 legislation changed the rules for price deregulation in all other exchanges, eliminating the requirement of sufficient and sustainable competition for comparable services. To obtain price deregulation, a local carrier must now merely demonstrate that two unaffiliated carriers, one which is facilities-based, provide local service to more than one customer in the exchange.

Under this much lower threshold, AT&T has obtained price deregulation in 59 exchanges, or 44% of its exchanges in Kansas. However, the majority of AT&T's access lines are price deregulated because the majority of the price deregulated exchanges are larger exchanges with more access lines. The remaining 75 AT&T exchanges that have not been price deregulated are small rural exchanges with fewer access lines.

Importantly, the 2006 Legislature included an annual price cap for basic residential service and up to four business lines for small business service based on the consumer price index for urban consumers. The Legislature also required exchange-wide pricing to prevent discriminatory pricing. Both of these provisions provide essential consumer protections for Kansas consumers. The annual price cap is one of the reasons AT&T has not increased its rates any more than \$1.00 per line for residential basic local service and \$1.75 per line for business basic local service since the 2006 deregulation legislation was enacted in Kansas.¹

Finally, the 2006 Legislature also required the Commission to annually compare the weighted average rate for basic local service in each price regulated exchange to the weighted, statewide average rate, adjusted for inflation, as an indicator of the effectiveness of competition. The Commission is required to report its findings in a report to the governor and the Legislature prior to February 1st each year. If the Commission finds that the weighted average rate of basic local service in price deregulated exchanges exceeds the weighted statewide average rate of basic local service, adjusted for inflation, or if the Commission believes that changes in state law are warranted due to the status of competition, the Commission shall recommend to the governor and the Legislature such changes in state law as the Commission deems appropriate.²

The Commission's 2011 Price Deregulation Report contains significant findings and recommendations that weigh heavily against passage of Substitute for Senate Bill 72. Rather than support further price deregulation in AT&T's service territory, the Commission's findings and recommendations support resuming price deregulation in exchanges that have been price deregulated. The Commission included in its 2011 Report on Price Deregulation other indicators of competition it examined in its evaluation of the status of competition. The Commission concluded:

"These indicators reviewed and reported <u>cast doubt on the effectiveness of competition</u>. Thus, the Commission makes the following recommendations to the Legislature:

² K.S.A. 66-2005 (q)(7); 2011 Price Deregulation Report, p. 9.

¹ 2011 Report to the Kansas Legislature on Price Deregulation (2011 Price Deregulation Report), p. 35.

- Change the CPI index utilized in the statute;
- The Legislature should consider requiring a carrier to resume price cap regulation if the weighted average rate for the price deregulated exchange exceeds the inflation-adjusted statewide, weighted average rate for a specified period, such as two, three, or four consecutive years, in the absence of evidence that the carrier has rates in price deregulated exchanges that have increased by an amount equal to or less than the change in the CPI for telecommunications services; and,
- The Legislature should consider including a "Safe Harbor" provision in price deregulated exchanges for those customers subscribing to stand-alone voice service ("basic local service")."³

Supporting the Commission's recommendations were the following findings:

- For the third consecutive year in a row, the weighted average rate in numerous price deregulated exchanges is higher than the inflation adjusted statewide, weighted average rate for the study period (statutory measure of effectiveness of competition).
 - o For residential service, the statutory measure of competition fails in thirty-seven of the fifty-eight price deregulated exchanges. (64%).
 - o For business service, the statutory measure of competition fails in <u>twenty-six of the forty-nine</u> price deregulated exchanges (53%).⁵
- Most of the price deregulated exchanges resemble a dominant-firm oligopoly market, where one firm dominates the market and many other small firms compete for the remaining fraction of the market. Market share information shows that AT&T is the dominant firm in 79.3 percent of the residential markets and 64.6 percent of the business markets in the price deregulated exchanges. AT&T has greater than 50 percent share of the market and there is no other firm that is a close rival in terms of market share.⁶
- A current Herfindahl-Hirschman Index (HHI) analysis for each of the price deregulated exchanges for both residential and business services exceeds the level considered to be highly concentrated market by the Department of Justice. Any measure over 1,800 is considered highly concentrated, and economic theory links higher market concentration to a greater likelihood of market power. The KCC's study finds market concentration well above the Department of Justice's standard indicator for highly concentrated markets, as all price deregulated exchanges had indicators in excess of 3,600 for residential markets and in excess of 3,000 for business markets.
- "Even with an adjustment to account for competition from wireless carriers, it would be <u>difficult</u> to conclude that there is effective competition in any of the deregulated exchanges." 9

The proponents of this bill claim there are consumer protections provided in the bill. To the contrary, the provisions of Substitute for Senate Bill 72 eliminate the remaining critical consumer

³ Cover letter to 2011 Report on Price Deregulation, pp. 1-2; see also, 2011 Report on Price Deregulation, pp. 46-50. ⁴ 2011 Report on Price Deregulation, p. 49.

⁵ *Id.*, pp. 9-10.

⁶ *Id.*, p. 22.

⁷ *Id.*, pp. 23-24.

⁸ *Id.*, p. 23-26.

⁹ *Id.*, p. 46 (emphasis added).

protections for residential and small business consumers in Kansas that apply to AT&T's 59 deregulated exchanges and the 75 exchanges that remain price cap regulated. I will address below the critical consumer protections that AT&T seeks to eliminate in Substitute for Senate Bill 72:

- Substitute for Senate Bill 72 price deregulates small rural exchanges without any showing of competition. The bill eliminates all pretence of demonstrating the existence of competition in its remaining 75 price capped exchanges to obtain price deregulation, but simply requires that the majority of AT&T's access lines have been price deregulated.
 - o The current statutory test for competition is already woefully low (2 alternative carriers serving just 2 customers with one carrier being facilities-based).
 - Rather than concede that competition simply does not exist in these small rural exchanges, AT&T seeks passage of Substitute for Senate Bill 72 to eliminate any required showing of competition in its remaining 75 rural exchanges to achieve price deregulation; instead, AT&T seeks deregulation of these small exchanges simply because it has achieved deregulation for the majority of its access lines in other larger exchanges.
 - O Customers in AT&T's remaining 75 price-capped rural exchanges will find no comfort in learning their exchanges were deregulated under this bill simply because AT&T has met the statutory test for price deregulation in other, larger, exchanges.
 - O Unlike current law, Substitute for Senate Bill 72 doesn't distinguish between residential and business lines, but instead deregulates all services simply because AT&T has achieved price deregulation for the majority of its lines in the State.
- Substitute for Senate Bill 72 eliminates the existing annual price increase cap for residential and small business basic local service tied to the consumer price index in price deregulated exchanges.
 - O This protection was provided to protect seniors, low income, and small business owners who just want basic local service, and has prevented substantial price increases in AT&T's 59 price deregulated exchanges since 2006.
 - o Eliminating this annual price increase cap will allow prices for residential and small business basic local service to skyrocket in Kansas as they have in California (22% in 2009, 23% in 2010)¹² and Missouri (47% in the past 3 years) after price deregulation.
 - O If the Committee goes forward with this bill, CURB urges you to amend the bill to include the Safe Harbor annual price increase cap for basic residential and up to four business lines tied to the consumer price index for telephone services, as recommended in the KCC's 2011 Report on Price Deregulation. The current annual price increase cap has prevented AT&T from significantly raising basic local service rates in deregulated exchanges since 2006. If you pass this bill without providing the Safe Harbor annual price increase cap, there will be no price protection to Kansas residential and small business customers for basic phone service, and prices will increase substantially.
 - o This "Safe Harbor" was added by the Senate Utilities Committee, on the motion of the Committee Chairman. This was publicly described as a "deal breaker" for AT&T, and stripped

¹⁰ AT&T has been denied price deregulation in several small exchanges because it was unable to demonstrate there were two unaffiliated carriers that served two customers.

K.S.A. 66-2005a(q)(1)(F). CURB sought and supported this cap in deregulated exchanges on annual price increases to basic residential service and up to four business lines – tied to the consumer price index.

¹² Since California deregulated vertical services in 2006, significant price increases have occurred, including price increases of 345% for an unlisted number, 226% for directory assistance, and 85% for call waiting.

from the bill. Our question is, "what deal?" AT&T has made no firm commitments to deploy broadband in rural areas to lessen the "rural/rural" divide, the absence of broadband in AT&T's rural exchanges versus other rural exchanges served by smaller rural companies. In fact, after a misleading telephone campaign into Senator Love's district leading constituents to believe passage of this bill would result in broadband deployment to those called, the President of AT&T Kansas was not able to say that broadband would be deployed to any of Senator Love's constituents as a result of this bill.

- Substitute for Senate Bill 72 eliminates the exchange-wide uniform pricing requirement for deregulated exchanges. Current law requires AT&T to price uniformly exchange wide, prohibiting different prices for customers with competition and those without competition. This places customers at risk of paying higher prices than similarly situated neighbors. Substitute for Senate Bill 72_will allow AT&T to charge different rates, use contracts, or attach "term" lengths (and related penalties) to residential customers residing in the same exchange.
- Substitute for Senate Bill 72 abandons Kansas and federal universal service goals by eliminating the carrier of last resort (COLR) obligation in urban exchanges, yet retains AT&T's right to receive high cost universal service subsidies from the KUSF.
 - O The bill eliminates AT&T's obligation to run wireline service to new homes or developments in urban exchanges. Kansans building new homes will not be entitled to have wireline service from AT&T because building infrastructure may not be consistent with its current business model, leaving those Kansans with only wireless service with the associated service quality and reliability problems.
 - o Wireless is not available at a price comparable to wireline service. Cell phone rates are typically much higher than landline rates.
 - o Wireless service typically limits the number of minutes, where landlines have unlimited local calling.
 - o Because AT&T and other wireless providers are not subject to service quality requirements for its wireless service, if the cell phones provided do not provide reasonable voice quality, the consumer will have no remedy at the KCC.
 - o The bill does not prohibit AT&T from discontinuing traditional wireline service to existing consumers and offering VoIP or wireless as an alternative.
 - o The KCC will have no ability to resume price regulation for quality of service problems with cell phones provided under modified COLR obligation.
 - The information provided by Commission Staff on KUSF support each carrier receives indicates that AT&T alone has received \$277 million in subsidies from Kansas ratepayers thru the KUSF, or 33.7% of the \$818 million paid since 1997. Century Link has received \$166 million, or 20.3% of the \$818 million paid since 1997. Combined, the 2 price cap carriers supporting this bill have received over \$442 million, or 54% of the KUSF subsidies paid since 1997. Now AT&T wants to be able to raise their prices at will and be relieved of its COLR obligations, yet continue to receive \$7 million annual subsidies from Kansas ratepayers.
 - A <u>truly competitive market</u> does not require continued subsidies, <u>especially to the dominant carrier in the market</u>. The carrier of last resort responsibility imposed by State law on incumbent carriers is a key justification for continuing universal service support. If AT&T receives no high cost KUSF support, competitive carriers will likewise receive no high cost KUSF subsidies, leveling the playing field for all carriers in what AT&T describes as a "competitive" market.

- o Why is it more important to retain the COLR in exchanges under 75,000 access lines, but not in urban exchanges? Universal service and new construction needs are not different rural vs. urban exchanges both require build-out to ensure universal service is available to all Kansans.
- O The provision denying AT&T access to KUSF funding for COLR obligations under K.S.A. 66-2009 is meaningless as no carrier has ever sought funding under this provision as it is already included in the high cost subsidy the carrier receives.
- Substitute for Senate Bill 72 places Lifeline, low income, and elderly customers at risk for any resulting price increases. While the bill may still require AT&T to continue to provide Lifeline service, Lifeline customers will be negatively impacted by this legislation because a recent KCC decision changed the way Lifeline is provided. The current Lifeline discount no longer insulates low income customers from price increases, ¹³ so price increases resulting from this bill will directly impact Lifeline customers, as well as other elderly and low income customers.
- Substitute for Senate Bill 72 contains an ineffective and illusory price cap for rural exchanges.
 - o First, without the current annual price increase cap, AT&T will be able to raise the price of basic local service in urban exchanges, which will immediately raise the urban price ceiling for rural exchanges under this provision.
 - Second, why don't medium-sized exchanges (between 6,000 and 75,000 access lines) receive the same urban price ceiling as rural exchanges? Are the consumers in the Dodge City, Emporia, Garden City, Great Bend, Hays, Hiawatha, Hutchinson, Junction City, Lawrence, Leavenworth/Lansing, Liberal, Manhattan, McPherson, Newton, Pittsburg, and Salina exchanges less deserving of the urban exchange price ceiling than rural AT&T exchanges?
 - o The urban price ceiling will not apply to Century Link, which has no urban exchanges. 14
 - o If the Committee decides to go forward with this bill, it should amend the bill to include the Safe Harbor annual cap on price increases for all basic residential and up to four business lines tied to the consumer price index or the Safe Harbor recommended by the KCC in the 2011 Price Deregulation Report.
- Substitute for Senate Bill 72 does not allow the KCC to resume price cap regulation for violations of minimum quality of service standards or changes in the status of competition.
 - O Current law allows the KCC to resume price cap or rate of return regulation if certain conditions occur, such as violation of minimum quality of service standards¹⁵ or changes in competitive environments.¹⁶ Substitute for Senate Bill 72 does not include this important consumer safeguard.
 - o Should the Committee decide to proceed with the bill, it should be amended to include authority for the KCC to resume price cap regulation for violation of quality of service standards or changes in the status of competition.

¹³ In KCC Docket No. 07-GIMT-1353-GIT, the KCC abandoned the "hold harmless" basis for Lifeline support which insulated lifeline customers from rate increases. Under the current "equal credit" approach, Lifeline customers receive the same Lifeline credit (currently \$7.77), which leaves them at risk to local rate increases.

¹⁴ SB 72 defines "urban exchange" to "mean any exchange in which there are 75,000 or more local exchange access lines served by all providers." SB 72, p. 14, lines 15-16.

¹⁵ K.S.A. 66-2005(b); K.S.A. 66-2005(q)(5).

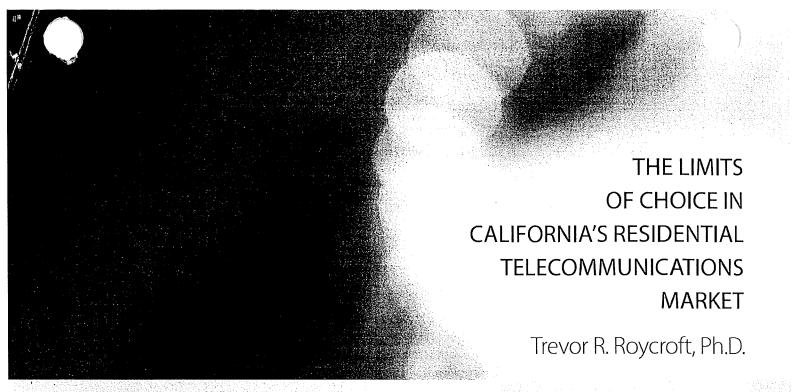
¹⁶ K.S.A. 66-2005(r)(

We heard during Senate hearings that passage of this bill will lead to more private investment, spur job growth, and lead to the faster development of an advanced communications network. However, AT&T has failed to make any commitment for specific investments in Kansas. AT&T has also implemented a misleading telephone campaign, leading Kansans to believe passage of this bill would result in broadband deployment to those called. However, when Senator Love asked the President of AT&T Kansas about whether his constituents would actually receive broadband as a result of this bill, Mr. Hahn could not give him that assurance.

With all due respect, AT&T has a history in this State of making promises regarding infrastructure investment commitments, assuring the Legislature it would fulfill those commitments, then failing to meet the commitments without alerting either the KCC or the Legislature. ¹⁷ If you intend to support this bill because of AT&T's indication it will invest in Kansas advanced telecommunication infrastructure, I strongly recommend you get specifics of that commitment amended into the bill itself. Make AT&T specify what "deal" it is actually proposing for Kansans.

On behalf of CURB, I urge you to vote against passage of Substitute for Senate Bill 72 in its entirety. However, should the Committee decide to proceed with the bill, CURB urges you to amend the bill to: (1) include the Safe Harbor annual cap on price increases for basic residential and up to four business lines tied to a telecommunications market consumer price index recommended by the Commission; (2) include an exchange-wide pricing requirement; (3) require any carrier electing complete deregulation under this bill to decline to receive any further federal and State high cost universal service subsidies; and (4) include authority for the KCC to resume price cap regulation for violation of quality of service standards or changes in the status of competition.

¹⁷ See, KCC Docket No. 98-SWBT-677-GIT, Response of Commission Staff to Southwestern Bell Telephone, L.P.'s Report Regarding DSL Deployment, ¶ 17: "Staff also finds it disturbing the declaration made by SWBT in this report that the company will not meet its commitment to complete the required deployment by the date required by the Stipulation and Agreement. This is the first indication that SWBT would not meet its deployment obligation. Through two legislative sessions, SWBT has touted that it would meet its commitment to deploy DSL in Kansas. Through the Stipulation and Agreement, SWBT is obligated to complete the DSL deployment by August 2003. It is not a mere "contemplation" or estimate of when SWBT could meet its obligation. It is a requirement..."



Why "Competition" is Failing to Protect Consumers



California consumers have experienced an ongoing stream of rate increases following the California Public Utilities Commission's decision to lift price caps, with the most recent increases for basic service likely to cost consumers over \$100 million per year.

"Pricing freedom" for telephone companies has turned into a travesty for consumers.



In August of 2006 the California Public Utilities Commission (CPUC) found that the states' four largest telephone companies1 "no longer possess market power" based on "the demonstrated presence of competitors" throughout their service territories.2 As a result, the CPUC has proceeded to dismantle almost all aspects of telecommunications regulation in California. Most significantly, the CPUC granted the state's dominant incumbent local exchange carriers (AT&T, Verizon, SureWest, and Citizens/Frontier) "broad pricing freedoms concerning almost all telecommunications services, new telecommunications products, bundles of services, promotion, and contracts."3

However, instead of price competition, California consumers have experienced an ongoing stream of rate increases, with the most recent increases for basic service likely to cost consumers over \$100 million per year. "Pricing freedom" for telephone companies has turned into a travesty for consumers, and the "competition" identified by the CPUC has turned out to be a myth.⁴

In order to investigate the outcomes of the CPUC's deregulatory policy, TURN commissioned a study of market conditions in California. This study, The Limits of Choice in California's Residential Telecommunications Market, clearly demonstrates that contrary to CPUC assumptions, consumers have extremely limited choices of telephone service providers and that the "pricing freedom" granted to the incumbent telephone carriers has resulted in an ongoing stream of rate hikes driving prices sky high.

A SAMPLING OF RATE INCREASES SINCE PRICE CAPS WERE LIFTED BY THE CPUC

AT&T Verizon Basic Service 26% Basic Service 13% 3-minute local toll call 163% 3-minute local toll call 188% Caller ID 62% Directory Assistance 171% Call Waiting 86% Returned Check Charge 121% Non-Published Directory Listing 346% Inside Wire Maintenance 66% Directory Assistance 226% Call Waiting 29% Returned Check Charge 276%

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RATE INCREASES DEMONSTRATE MARKET POWER

The CPUC's decision to remove the price cap framework that had previously protected consumers from market power was driven by the conclusion that "competition" would protect consumers. In other words, the market would self-regulate, and no firm would impose arbitrary rate increases on consumers. The CPUC accepted the conclusions of telephone company experts, such as Dr. Robert Harris, an economist who testified on behalf of AT&T California (formerly known as SBC).

Dr. Harris told the CPUC:

One of the reasons I'm confident in making the recommendations that I'm making to this Commission (i.e., to remove price caps) is that I'm firmly convinced that the stupidist thing SBC or Verizon could do was think, oh, we got some pricing flexibility now. Let's start jacking up local service rates.⁵

However, this is precisely what has occurred. Most recently, AT&T California and Verizon, the state's two largest telephone service providers, implemented, respectively, 23% and 13% increases for basic service rates. These rate increases alone are likely to cost California consumers more than \$100 million per year. These most recent rate increases come on top of other increases by AT&T California and other large telephone companies. Price increases of the magnitude implemented by AT&T California and other telephone companies are not consistent with a "self regulating" market where competition protects consumers.

This ongoing stream of price increases should be a wake-up call to the CPUC that self-regulation has failed to deliver the consumer protection that price-caps had previously provided.

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I was worried that I was going to be cut off from my doctors, from my family, and my elderly parents. ~Howard Vincini

PRICE INCREASES AND THE LIMITS OF CHOICE

The TURN study finds that market competition is failing to protect consumers. Not surprisingly, given the rate increases that have been imposed by telephone companies, the study finds that wireline telephone service has unique characteristics that are difficult to substitute for alternative voice technologies such as wireless services or voice over Internet protocol (VoIP) services. Because there are limits on consumers' ability to choose, telephone companies have found it profitable to "jack up rates."

Wireless Service Does Not Constrain Local Service Rates

The study finds that numerous factors contribute to the ability of telephone companies to increase rates. For example, the CPUC, in deciding to lift price caps, relied heavily on the conclusion that wireless mobility services are a close substitute for wireline telephone service. The study finds substantial evidence that this is not the case.

- ☑ California has one of the lowest rates of wireless-only households in the nation. Only 9% of California households have cut the cord and gone "wireless-only." The overwhelming majority of California households continue to purchase local telephone services provided over wireline facilities.
- Wireless substitution for wireline services is now recognized by the Federal Communications Commission as a niche-market phenomenon that affects a relative few households.
- The report analyzes data from recent surveys regarding telephone usage conducted by the Centers for Disease Control and Prevention, and demonstrates that there are statistically significant factors that make it more likely for a household to rely on wireline telephone service. These factors include:
 - Age of household head
 - Race of household head
 - Size of the household
 - Home ownership
- Marriage
- Presence of individuals with health problems
- · Presence of individuals with a disability
- Higher income levels

This analysis demonstrates that many consumers will not find it easy to substitute wireless for wireline service. Thus, the presence of wireless service providers will have limited impact on price increases for wireline service. If it is easy to substitute wireless for wireline services, why do telephone companies raise their rates?

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CLEC Competition has Evaporated

The CPUC, when deciding to lift price caps, identified competitive local exchange carriers (CLECs) as an important source of competition. The report finds that CLEC competition has declined dramatically since the CPUC issued its decision—there are now over 50% fewer CLEC lines in service compared to the peak of CLEC operations. The two largest residential CLECs, MCI and the legacy AT&T, merged with Verizon and SBC (now known as the new AT&T). Given this decline in competition, it is not surprising to find residential rates rising.

Cable Alternatives Have Significant Limits

The report also finds that while some cable television companies have begun to offer voice telephone services, there are substantial limitations on the ability of these services to constrain telephone company price increases. These limitations include the fact that:

- Not all cable companies sell voice services, and other cable companies that do sell voice services may not have these services ubiquitously deployed in their service areas.
- Those cable companies that sell telephone service have varying policies regarding how they sell those services:
 - Most cable companies that sell voice services offer only packages
 of voice services that combine local, long distance, and vertical
 features. These service packages are priced well above standalone local service rates, and eliminate consumers' ability to find
 à la carte alternatives to local telephone company services.
 - Most cable companies promote the purchase of service bundles that combine video programming, high-speed Internet access, and voice services. These bundles have prices that typically start at \$100 per month, and up.

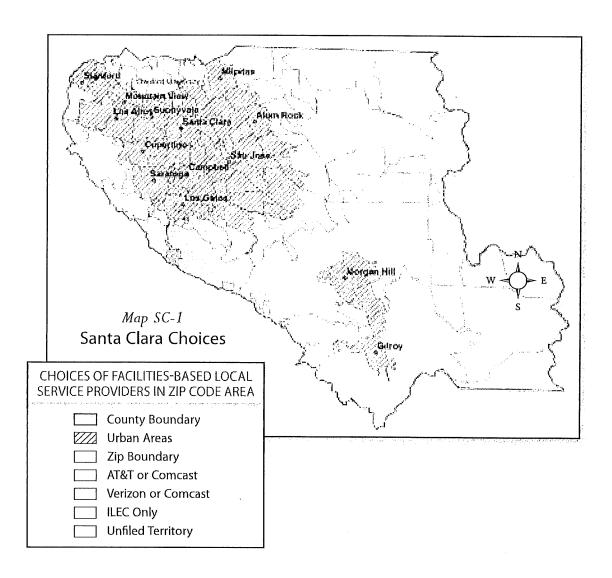
These factors reduce consumers' ability to choose alternatives to their local telephone company's service. If consumers have limits on their ability to choose alternatives, price increases are more likely.

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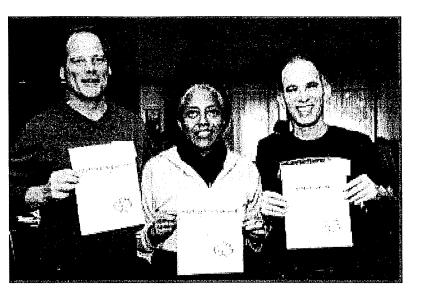
Market Maps Show Limited Choice

The report conducted research to identify the choices that California consumers can make among alternative providers of wireline telephone services, and found that most Californians are likely to have two choices—service available from their local telephone company (either service packages or à la carte options), or service available from their local cable company (typically a service package). The report studied these alternatives in nine California counties, where nearly 50% of California's population resides.



The results shown in the map above are typical of findings in the report.⁷ In and around urban areas, cable voice services are available, giving consumers one alternative to the local telephone company, while those consumers residing outside of urban areas are less likely to have any choice at all. This map also shows that consumers in the urban areas in the southern portion of Santa Clara county continue to face a monopoly—no cable voice services are available. This low level

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of choice inhibits price competition. Furthermore, if consumers do not want voice packages, or do not want to purchase an expensive bundle from the cable company, then consumers have little ability to substitute for telephone company services as their rates rise.

The report also reviews other services identified by the CPUC, such as voice over Internet protocol (VoIP) services provided by independent firms like Vonage. The report finds that these services have substantial limitations, and have experienced limited adoption by consumers. These limitations prevent VoIP services from effectively constraining telephone company rate increases.

CONCLUSIONS

The evidence evaluated in the report quantifies the lack of competition in the market for local telephone services in California. Many California consumers face a market with only one alternative to their local telephone company—this "choice" is not sufficient to provide consumer protection. Economists refer to this market structure as a duopoly. The report indicates that duopoly markets have not been observed to perform well from the standpoint of encouraging price competition and protecting consumers. The performance of the duopoly in California's residential telephone service market—an ongoing string of rate increases— indicates another market failure.

As the old saying goes, "the proof of the pudding is in the eating." If market competition is working, why the ongoing stream of price increases? Why have the main rivals to the local telephone company, the cable companies, increased rates following telephone company rate increases? Observed pricing behavior on the part of local telephone companies and their cable rivals does not reveal evidence of price competition. Rather, pricing reflects the actions of firms that recognize that consumers have little choice, resulting in dramatic rate increases for many California consumers.

In light of these findings, it is clear that the elimination of price caps is failing to protect California consumers. Unless corrective action is taken, consumers will pay prices that reflect the exercise of market power, leading to the undesirable outcomes of excessive prices, undue discrimination, and the unwarranted transfer of income from consumers to the providers of local telephone services.

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Wireless? My father, who is 91 years old? My father doesn't understand wireless.

~Bishop Aurea Lewis

POLICY RECOMMENDATIONS

As the last threads of price protection for basic service rates for most consumers will be removed in early 2011, it is imperative that the CPUC take action to reinstate reasonable price caps for local service rates. As the CPUC's decision also permits, beginning in 2011, geographic deaveraging, i.e., local telephone companies will gain the ability to target specific communities with basic service rate increases, it is imperative that this provision of the CPUC's decision also be reversed. The continuing market power identified in the companion report, combined with local telephone companies' ability to geographically target rate increases, can only increase the harms already experienced by California consumers.

The following actions should be taken:

- It is imperative that the CPUC take action to reinstate reasonable price caps for local service rates. The price caps should, at a minimum, constrain basic rate increases to no more than the rate of inflation.
- The geographic deaveraging provision of the CPUC's decision must also be reversed. The continuing market power identified in the companion report, combined with local telephone companies' ability to geographically target rate increases, can only increase the harms already experienced by California consumers.
- In addition to a price cap on basic rates, LifeLine rate increases should be reversed, and a uniform, affordable, LifeLine rate should be established statewide. The continued affordability of basic telephone service to low-income households is a pressing issue given the economic crisis that is gripping California.
- Finally, the CPUC should more closely monitor market outcomes associated with pricing, service quality, and the delivery of advanced services.

Market forces are failing to deliver the benefits that the telephone companies promised the CPUC as it made its decision to lift price caps. It is time to reestblish an effective regulatory framework that will protect consumers and ensure that high-quality telecommunications services are available to all Californians at reasonable rates

ENDNOTES

- 1. AT&T California, Verizon, SureWest, and Frontier.
- 2. D06-08-030 at 117.
- 3. D.06-08-030 at 1.
- 4. After TURN's competition report was completed TURN obtained access to a previously unreleased white paper prepared by the CPUC's Staff entitled "Market Share Analysis of Residential Voice Communications in California," California Public Utilities Commission Communications Division Policy Branch Staff White Paper, December 2008. In this paper the CPUC Staff calculates that between June, 2005 and June, 2007, market concentration increased in California for wireline voice services, wireless voice services, and broadband services, measured either separately or on a combined basis.

The CPUC's finding is startling, as it shows that even if one assumes that a wireline telephone, a wireless telephone, or a broadband connection are perfect substitutes for one another, market concentration has increased, not decreased. Economic

theory links higher market concentration to a greater likelihood of market power. The CPUC Staff study finds that market concentration, as measured by the Herfindahl-Hirschman Index, results in concentration measures well above the Department of Justice's standard indicator for highly concentrated markets.

To conduct its analysis, the CPUC Staff had access to proprietary data that was not available to TURN or our researcher. However, it is clear that the analysis performed by the Commission's own staff supports TURN's findings that because of the limited choices available, competition is not sufficient to protect California consumers from market power.

- From Dr. Harris' oral testimony. See, CPUC01-#220620-v1-R0505005_013006_Vol_2, at 364.
- 6. D.06-08-030 at 265 and 268.
- The report studied voice service choices by Zip Code area in nine California counties: Alameda, Fresno, Humboldt, Los Angeles, Madera, Sacramento, San Bernardino, Santa Clara, and Shasta.

We need to get the public part of this process back on the table.

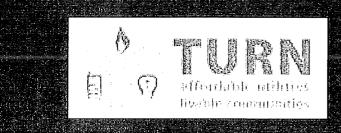
There is no public in the Commission.

~Charles McGee



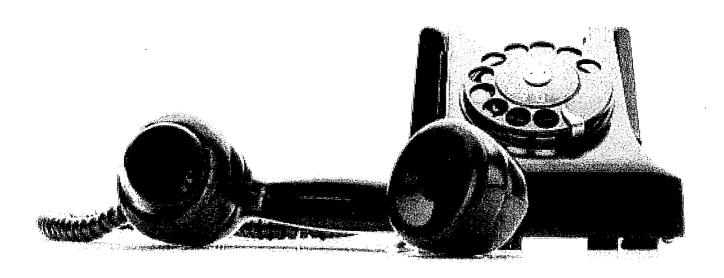
TURN — The Utility Reform Network March 25, 2009





The Utility Reform Network 711 Van Ness Avenue/Suite 350 San Francisco, CA 94102 (415) 929-8876 www.turn.org

affordable utilities / livable communities



1500 SW Arrowhead Road Topeka, KS 66604-4027

Thomas E. Wright, Chairman

Ward Loyd, Commissioner



phone: 785-271-3100 fax: 785-271-3354 http://kcc.ks.gov/

Corporation Commission

Sam Brownback, Governor

Testimony of Commissioner Ward Loyd In Opposition to 2011 Substitute for SB 72 March 16, 2011

Chairman Holmes and Committee Members:

In the short time I have been honored to serve as a Commissioner of the Kansas Corporation Commission, I have encountered nothing quite like the complexity of our nation's and state's telecommunication laws, nor anything that equals the frustration of trying to come to grips with all of the moving parts — to appreciate how it all works together, what works, and what does not. In reality, were I to come before you this time next year I likely will be saying the same thing.

The comments I make today and the opinions I express are mine alone, and certainly not the views or opinions of the Commission. I am able to testify because the KCC has no dockets currently before the Commission involving the issues presented in SB 72. Whether separate from or as a part of telecommunications, the KCC has not undertaken a study of broadband capacity, capability or needs, notwithstanding that a good case can be made that broadband is coming to be viewed to be as critically important as, if not synonymous with, telecommunications.

But the fact is that what we have in place nationally – the Federal Telecommunications Act of 1996 – and what we have in place in Kansas – the Kansas Telecommunications Act of 1996 – the laws which the KCC is subject to applying according to their terms, are designed and cover a telephone (voice) service built on a wireline system. I think of this as the "apple".

What AT&T asks for in Substitute for SB 72, and what is described in its testimony in support of the measure, is set in a Broadband (Internet Protocol, or IP-based technology) world. I think of this as the "orange", as everyone knows that apples and oranges are not the same thing. Yet AT&T's initiative is an effort to mix and confuse the two, and to allow the company to move to a Broadband telecommunications system, freed of obligation to support its traditional, wireline system.

As to Substitute for SB 72, and what AT&T will no longer be required to do (unlike any other carrier in Kansas), it is important to understand the charge the Kansas Legislature has given to the Kansas Corporation Commission. In general, and with regard to the Kansas Telecommunications Act of 1996, it is the obligation of the KCC to:

- Protect consumers;
- Safeguard universal service;
- Ensure that consumers have reaped the benefits of competition;
- Maximize the use of market forces;
- Promote development of the telecommunications infrastructure throughout the state; and,
- Recommend if and how the KUSF should be modified. See K.S.A. 66-2002.

HOUSE ENERGY AND UTILITIES DATE: 3/16/20 い
ATTACHMENT 7-1

'estimony of Commissioner Ward Loyd Before the House Energy & Utilities Committee In Opposition to 2011 Substitute for SB 72 March 16, 2011 Page 2 of 13

In light of those thoughts, let me attempt to explain what it is about Substitute for SB 72 that I see as problematic, and perhaps as not being in the best interest of Kansas consumers or our state as a whole.

1. Our Existing Laws Represent No Impediment to AT&T.

Everything about Substitute for SB 72 and AT&T's supportive comments seem to be directed at the growing use, and demand, for "broadband" services through both wireline and wireless facilities. And yet, as noted, our current Kansas telecom laws do not cover broadband in that context. Under current law, broadband is not considered a universal service for which ubiquitous access has been required.

Yet, AT&T is already in the wireless, broadband internet, broadband video, and broadband voice business. So, it does not appear that current laws are either barriers or impediments to AT&T providing these services.

Please consider the information appearing in AT&T's Report of Fourth-Quarter 2010 Earnings, which the company released January 27, 2011:

- Total wireless subscribers in service were 95.5 million;
- Wireless connected devices were up a record 1.5 million;
- Wireless data revenues up \$1.1 billion from year-earlier quarter;
- 9.9 percent growth in wireless revenues (9.6 percent wireless service);
- 28.5 percent growth in wireline consumer IP data revenues:
- 210,000 net gain in wireline broadband connections, with a wireline operating income margin of 13.0 percent, compared to 12.3 percent in the year-early quarter.

AT&T continues to emphasize the loss of landlines in Kansas. It laments (or appears to) that customers are moving to wireless in droves, although it nowhere reports the number of its wireless customers. I believe it was AT&T's testimony before the Senate that it reported there were more than 2.45 million wireless lines in service in Kansas, for a population of 2.85 million people. That is a lot of handsets.

Based upon extrapolated data reported in the September, 2010, *Trends in Telephone Service*, prepared by the FCC's Wireline Competition Bureau, and considering FCC and AT&T data which shows AT&T serving approximated 36.6% of the nation's wireless lines, AT&T would have in excess of 880,000 Kansas wireless customers. It is not losing business.

2. There are Fundamental Changes Proposed on the National Level.

There is a shift in policy being considered at the federal level through the National Broadband Plan, adopted in February, 2010, and the FCC's Notice of Proposed Rulemaking on Universal Service and Intercarrier Compensation Reform (USF/ICC NPRM), released February 9, 2011, which I will discuss further.

Festimony of Commissioner Ward Loyd Before the House Energy & Utilities Committee In Opposition to 2011 Substitute for SB 72 March 16, 2011 Page 3 of 13

Here in Kansas, Governor Brownback has called for an "... update to our telecommunications policy to facilitate greater investments in broadband and wireless deployment."

It is apparent, and I agree, that our laws and regulations are in need of update in light of the tremendous advances in technologies in recent years, and the remarkable and unexpected growth in wireless services. But we would be remiss if we overlook certain fundamental questions: What is our goal? What is it we want to achieve? How is it these goals can be accomplished in a manner that preserves what we have in place and does not do irreparable harm to the ability of those customers who live and work in the majority of the geographical area of our state to receive quality basic telecommunication services?

We have no broadband deployment program or strategy in Kansas. The task of developing such a policy or strategy has, appropriately, been assigned to the Kansas Department of Commerce and I have every confidence that Secretary Pat George will be up to the challenge. However, broadband is not just an issue of commerce, important though that is. The questions of the development and deployment of broadband, including whether broadband should be supported by the KUSF, are critical public policy issues. The issues cannot be properly addressed without active Legislative involvement.

The USF/ICC NPRM mentioned above is a remarkable document, in terms of what the FCC proposes to do. The NPRM is 289 pages in length, includes an uncounted number of "proposals", and asks for comments on in excess of 650 distinct issues. And, it requires comments on three issues addressed in Section XV within 30 days of the date the NPRM was published in the Federal Register (the comments are due April 1, 2011), and within 45 days of such publication on the proposed actions and the questions raised in the other 17 sections. The KCC staff has formulated a summary of the NPRM, which is attached as Exhibit A for your reference.

As you know, because of the USF/ICC NPRM, the KCC recently conducted two Roundtable Discussions. The discussions also touched on action proposed by the FCC for wireless telecommunication services, in the form of the creation of a Mobility Fund, and the action proposed by President Obama in what he refers to as a Wireless Innovation and Infrastructure (WIN) Initiative. There is every indication that FCC intends to restructure the Universal Service program, as well as intercarrier compensation, by the end of this calendar year. In fact, on March 15, 2011 the FCC announced on its Official Blog that it will be conducting a number of open, public workshops to identify solutions to key issues in the USF/ICC proceeding. The FCC said

When we voted unanimously to approve the USF/ICC Transformation NPRM last month, each of us made clear that we are committed to reforming the Universal Service Fund (USF) and the Intercarrier Compensation (ICC) system, and to doing (sic) so as soon as possible.

If the action taken is as currently proposed, there will be tremendous consequences for the Kansas Universal Service Fund (KUSF), and the entire state telecommunications system – irrespective of any action taken on Substitute for SB 72.

Festimony of Commissioner Ward Loyd Before the House Energy & Utilities Committee In Opposition to 2011 Substitute for SB 72 March 16, 2011 Page 4 of 13

The KCC cannot ignore the USF/ICC NPRM, fail to consider the issues raised, or to comment as necessary. In doing so, the Commission will be forced to review the Kansas Telecom Act of 1996 to determine impacts. If FCC takes the action it proposes, especially, the Commission will need to be on top of the issues in order to be able to make recommendations for the 2012 Legislature when it convenes.

3. The Existing Wireline Network is Indispensable & Must Be Preserved.

Broadband, and wireless service for that matter, cannot be provided or accessed except over wireline connections from one exchange to another. AT&T would have you believe that there is no place for the legacy network in a broadband world. In comments filed with the FCC¹ leading up to the adoption of the National Broadband Plan, AT&T stated:

[T]he POTS business is unsustainable for the long run. Yet a web of federal and state regulations has the cumulative effect of prolonging, unnecessarily, the life of POTS and the PSTN.

Due to technological advances, changes in consumer preference, and market forces, the question is *when*, not *if*, POTS service and the PSTN over which it is provided will become obsolete. In the meantime, however, the high <u>costs associated with the maintenance and the operation of the legacy network are diverting valuable resources</u> . . . that could be used to expand broadband access and to improve the quality of broadband service.

It is for that reason that one of the most important steps the Commission can take . . . is to <u>eliminate the . . . life of POTS and the PSTN</u>. [T]he PSTN and POTS are now relics of an earlier era.

"[L]egacy COLR and related obligations conflict with the federal policy objectives of universal broadband deployment.

That transition (away from PSTN to broadband and IP-based services) will <u>require the elimination not only of all legacy requirements that mandate the continued provision of POTS</u>, but <u>also such requirements that hinder the retirement of physical network assets used to provide POTS</u>.

In spite of AT&T's insistence in the above comments, the positions espoused were not approved or adopted by the FCC in its USF/ICC NPRM. The FCC recognizes that "... fixed networks

¹ FCC docket, GN Docket No. 09-137, <u>Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion</u>, Comments of AT&T on the Transition From the Legacy Circuit-Switched Network to Broadband, dated December 21, 2009. http://www.honeywellpower.com/techdocs/ATT%20Public%20Notice%2025.pdf

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remain essential for mobile services, which typically depend on fixed backhaul to connect cell towers and enable mobile communications to other networks." USF/ICC NPRM, ¶ 5. "We believe requiring carriers receiving high-cost... support to invest in modern broadband-capable networks [is] a logical extension of [the FCC] policy" *Id.*, ¶ 71. And, "... the program must preserve and advance voice service. Even as we refocus USF to support broadband, we are committed to ensuring that Americans have access to voice service, while recognizing that *over time*, *such voice service could be provided over broadband networks*, both fixed and mobile." *Id.*, ¶ 80 (emphasis added). The time frame suggested by the FCC is not found in the USF/ICC NPRM, but rather is in the Mobility Fund order of last October where an initial phase-in period of 10 years is indicated.

This is a complicated issue as you can appreciate. Because of the implications for Kansans, and a need to clarify exactly what it is AT&T seeks (and especially if it is to be freed from some obligation), this Substitute bill should be held in order to complete an assessment of action which is proposed by the FCC.

4. A Release of COLR Obligations Will Mean Kansas Consumers at Risk.

In my estimation, if we are considering the best interest of those Kansans we are elected or appointed to serve, we must recognize that the failure to maintain COLR duties in some form leaves in doubt the longevity, reliability, and affordability of the local exchange wireline telephone service we have declared that every resident is to have access to. Our COLR policies represent a historic commitment on the part of our state to Kansas consumers – a compact among the state, the telecommunication carrier, and the consumer.

- The duty to serve. A COLR must extend retail voice service to any potential customer within its franchise area on request, subject only to reasonable conditions, in accord with reasonable service quality standards, and without unreasonable discrimination.
- Line extensions. A COLR must extend its lines throughout its service territory, including unserved and newly built areas, subject to reimbursement by customers for certain construction costs.
- Exit barriers. A COLR must continue providing service until the Commission grants permission to exit. A COLR exit can occur voluntarily or involuntarily. The KCC already has on docket open to monitor Fairpoint's bankruptcy proceeding (the company purchased a number of Verizon wireline systems.) The Federal TA96 directs state commissions to determine which "common carrier" is "best able to provide such service" and then order that carrier to provide intrastate service. 47 U.S.C. §214(e)(3). Can Substitute for SB 72 be read to prohibit the KCC from designating AT&T as the carrier to provide such service, given that subsection (4) mandates that an electing carrier shall be relieved of the requirement to serve as a carrier of last resort? Can Kansas or AT&T preempt the Federal act?
- Other retail benefits. A COLR often is required to provide certain additional economic

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and service benefits to specified customers and former customers. Included:

- filed and approved tariffs;
- discounts or controlled costs for services to specific classes, low-income customers (Lifeline), or for disabled customers, such as hearing and visually impaired;
- emergency access (911 and E-911);
- soft dial tone, which is a service that allows a disconnected customer to make calls to 911 emergency services, and to the COLR's business office;
- ➤ <u>Carrier-to-carrier duties</u>. A COLR must provide certain interconnection and wholesale services needed by other carriers.

I do not mean to suggest that state COLR policies should not be revised in light of the existence of sustainable competitive markets. In fact, there are elements of AT&T's unidentified concerns that I might well agree with; at least, certainly, with a need for a selective review of the continuing usefulness of certain of the COLR obligations in a recognized competitive market.

A modern state COLR policy can be useful for four reasons: (1) ubiquity; (2) nondiscrimination; (d) adequate quality; and, (4) reliability, with each of the reasons deserving of more detailed discussion. The move to competition as the preferred telecommunications policy does not mean that COLR policies are no longer needed.

Exhibit C to this testimony is a White Paper entitled "Carriers of Last Resort, Eligible Telecommunications Carriers, and State Administrative Roles," dated February 7, 2011, and recently submitted to the State Members of the Federal-State Joint Board on Universal Service, by the Peter Bluhm, Natelle Dietrich, and John Ridgway. It is provided for your consideration because of its succinct discussion of the need for COLR duties (which the paper refers to as Provider of Last Resort, or POLR), and for the table on pages 6 – 11 which identifies all the various COLR obligations which should be considered, and includes excellent commentary on how certain of the traditional COLRs might be applied as POLR requirements in any new broadband telecommunication system.

In moving forward with any Substitute for SB 72 COLR revisions, it is important to consider that the courts presume that legislators know and understand existing law when enacting legislation. Moreover, that knowing these laws, if the legislature identifies specific obligations that parties will have, it intends that those existing obligations which are not identified were intended to be excluded or eliminated. Substitute for SB 72 identifies only a few COLR obligations that AT&T will continue to be subject to, thus implying that it is no longer obligated (unlike any of the other telecommunication carriers or local exchange carriers in the state) for those not listed. It would seem a far safer course, if the Committee believes that AT&T should be relieved of certain current obligations, that it require AT&T to specifically identify those it wants to be out from under, and identify in the bill those COLR obligations that will no longer apply to AT&T.

I recommend the bill be so amended.

5. Price Deregulation to Date.

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Under our current law, AT&T has to-date secured KCC approval for price cap deregulation in 16 of its 17 exchanges which have 6,000 or more lines served. See the attached Exhibit D which identifies those exchanges served by AT&T (including those deregulated) and CenturyLink. Only the Liberal exchange in the 6,000+ and larger category is not as yet deregulated. These 17 exchanges represent 77% of all local access exchange lines served by AT&T; which means that the remaining 117 AT&T exchanges are quite small on a comparative basis, having an average of only 1,300 served lines each.

Under current price cap regulation, AT&T is free to lower its prices. It has not yet elected to do so. So it would seem fair to conclude that the ability to adjust per line prices for services is not the motivating factor for Substitute for SB 72. That is, unless AT&T's concern is that it cannot raise prices as high as needed to meet those competitive forces it mentioned, but as yet has never identified.

6. Substitute for SB 72 Can Benefit Only AT&T.

Under Substitute for SB 72, to qualify to be an "electing carrier" a telecommunications carrier must first have elected to be subject to "price cap" regulation, rather than rate of return regulation. There are only two such carriers at present in Kansas – AT&T and CenturyLink.

Then, a price cap carrier must have a majority of all lines served (the carrier's local exchange access lines in the state) price deregulated. AT&T is automatically there, as the lines it serves in the three "urban" exchanges, Wichita, Topeka and Kansas City, greatly exceed the number of all other lines within its exchanges. CenturyLink, on the other hand, has no exchanges which are price deregulated. So, only AT&T qualifies for the SB 72 exemptions from the state telecom laws.

Presently there are 98 telecom carriers (ILECs and CLECs³) recognized and providing services in Kansas.

There are 530 "exchanges" in Kansas. I believe the KCC Staff has provided maps which depict the exchanges and those which are served by CenturyLink and AT&T, and for AT&T, which exchanges are price deregulated, and which are not.

Of the 530 Kansas telecommunication exchanges, 134 belong to AT&T, and 119 to CenturyLink. Together, these two carriers alone serve 48% of all Kansas telecommunication exchanges.

³ More detail is provided in the KCC's 2010 Price Deregulation Report. As it notes, the Commission has certified 131 Competitive LECs as of the end of 2010, but only 58 are actively providing services. Further, I have not included providers of wireless and paging services, or VoIP providers.)

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7. Engineering Considerations Pose Serious Questions Regarding Whether the FCC or AT&T Can Accomplish What Either Proposes, Especially in Rural Areas.

In response to an earlier FCC Request for Information, the Association of Communications Engineers (ACE) studied the FCC proposals in the National Broadband Plan, and filed with the FCC a paper entitled "Good Engineering Practices Relative to Broadband Deployment in Rural Areas." ("ACE Paper") A copy is attached as Exhibit E. (Remember that for telecommunication purposes, and Substitute for SB 72, "rural" means any area that has an exchange with less than 6,000 served lines.)

The ACE Paper started with the proposition that to accomplish the broadband build-out to unserved areas, good engineering practices must be employed. Then, four observations were made:

- 1. Broadband services are becoming essential services for citizens throughout the country; especially for citizens in rural areas that do not have easy access to retailers or consumers. Reliance upon these systems is increasing, and user demand continues to expand in terms of penetration and broadband speed.
- 2. Broadband delivery systems must be capable of providing the needed performance (speed), quality of service, availability and reliability and must accommodate future demands.
- 3. "One size" does not fit all; broadband system designs must accommodate the specific needs and restrictions of the area in which they are deployed.
- 4. Technology designs should produce the best possible long term value and usefulness, avoiding foreseeable obsolescence.

There are interesting observations on page 3 of the ACE Paper: During 2010 the common engineering practices anticipated that residential end user demand will exceed download broadband speeds of 20 Mbps, with projections reaching beyond 100 Mbps. Base calculations for voice, basic internet applications, and a single high definition broadcast video stream (the "triple play") result in a minimum 12 Mbps download requirement. NBP Smart Grid applications are expected to require between 100 Kbps and 500 Kbps. And, the advent and adoption of 3D TV and continued use of high-definition (HD) programming is projected to require at least 40 Mbps. See in particular the chart on that page which suggests that as soon as this year the average American home is expected to require download rates significantly higher than FCC's proposed 4 Mbps.

To use good engineering practices requires detailed maps, especially showing boundaries of unserved areas. Moreover, network planners must take into consideration capabilities of existing network assets, e.g. fiber sub loop, use and location of existing remote terminals, availability of existing conduit, pole attachments, and location of commercial power supplies.

The ACE Paper then considered the most prominent technologies deemed potential candidates for the provision of broadband services, as identified in the OBI Report. Namely, (1) 4G wireless

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(Long Term Evolution, or LTE) (2) 12 kft Digital Subscriber Line (DSL), (3) Fiber to the Premises (FTTP), (4) WiMAX (wireless), and (5) hybrid fiber-coaxial cable system (HFC).

Wireless – has as a major benefit the potential to accommodate mobility and portability. However, wireless signals are limited by a variety of factors, such as terrain, foliage and buildings. The OBI Report identifies 4G systems as operating with cell radius of 2, 3, 5 or 8 miles, depending on the terrain. Then there is the "noise" factor, or the signal-to-noise ratio (SNR) at the receiver. Low SNRs will first degrade the throughput, lowering the speed ("bandwidth") available to the end user; and, if it drops low enough, rendering the link unusable. Signal strength decreases from with distance from the cell site. For example, CDMA systems capable of delivering more than 2 Mbps near the cell site were found to commonly deliver speeds of only 300 to 800 Kbps. (Think of the AT&T experience with the i-Phone.)

A system designed for a 4 Mbps throughput will have limited ability to meet the expanding demands of the typical consumer. High bandwidth internet applications such as medical imaging and file transfer will strain the network. A single high-definition video stream will exhaust this 4 Mbps capacity.

Another significant concern is the lack of available spectrum. The high costs and lack of access to spectrum will be a major hindrance to rural operators. We have no information regarding the sufficiency of spectrum available for wireless broadband deployment in Kansas.

Wireline – is identified by the ACE Report as having the "value proposition" of its potential to deliver large amounts of bandwidth to a specific location. However, FTTP is not available in most Kansas exchanges. What the OBI and NBP considered was 12 kft DSL, described as Asynchronous Digital Subscriber Line "2+" deployed with a maximum loop lengths of 12,000 ft. While this technology is mature and widely deployed, most existing loops are 18,000 feet or longer, so systems have to be designed and converted from an 18 kft design to a 12 kft design, and new remote electronic equipment installed.

A theoretical wire center was described, where the central office is at the center of an 18 kft circle. That network would require 4 new remote cabinets, each with a reach of 12 kft, and replacement of the original electronics. Each of these remotes would need a high capacity circuit back to the central office. This likely would be done with new fiber cable to each remote cabinet, as fiber is now less expensive that copper.

However, in this theoretical wire center, if future bandwidth expansion is required (the above expansion provides 4 Mbps down/1 Mbps up), such as to 6 Mbps or any higher speed, another complete redesign effort, including new remote cabinets and the construction of additional fiber, would be necessary. One can realize AT&T's dilemma, as in most of its exchanges the system would not be constructed to handle high bandwidth, and the electronics are more likely than not out of date.

FTTP – its best when it is available. Capability and capacity of FTTP is discussed at page 8 of the ACE Report.

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Backhaul – sometimes referred to as the "second mile," is the critical but largely undiscussed component of any broadband distribution system. Consider that all broadband distribution systems, whether wireless, DSL, or fiber require a high capacity link to carry the communication both ways. The two most common techniques include construction of fiber or microwave links. You may review the ACE Report for the discussion detail.

The ACE Report also identifies economics consideration, that is, the economic life expectancy of any electronic system ultimately deployed. For example, it is reasonable to assume a lifespan of over 20 years for fiber and towers. Further, that over the 20-year period the replacement of electronics will be needed twice (once every 7 years).

Consider that mobile wireless systems have experienced a robust evolution. First there were analog cell phones, then we moved to "2nd generation" digital in 1996, 2.5 G (text messaging and email) in 2000, 3 G (web browsing and picture messaging) in 2005, and 4 G starting in 2009. "With roughly four years between generational advances and no end in sight, it is reasonable to anticipate that the emerging 4G LTE systems will be replaced within 7 years."

The discussion found in the ACE Report is important as we consider whether and how changes may be made to our system of telecommunication. It is also important in assessing the risks to the current network infrastructure for those existing AT&T exchanges where investment may not have been made for system upgrades to handle current bandwidth demand.

8. Other Concerns and Questions, Including Whether Provisions of Substitute for SB 72 Are Legal.

In my testimony before the Senate Utilities Committee I raised questions about whether Kansas can do what certain of the provisions of Substitute for SB 72 seem to propose.

- Can Substitute for SB 72 be read to prohibit the KCC from designating AT&T as the carrier best able to provide service when a COLR fails? The Federal TA96 requires state commissions to make that determination, but would we be able to do so if AT&T is not legally subject to those obligations, or would the designation of AT&T be off the table because of the exemption?
- Then there are the 14-point "competitive checklist" of expanded carrier-to-carrier duties which ILEC/RBOC must satisfy to provide toll services by mandate of the FCC. A copy of the "competitive checklist is attached as an Appendix. Would Kansas, via Substitute for SB 72, be attempting to preempt this Federal law insofar as Kansas customers are concerned given that certain of the duties there identified are not applicable to AT&T because of their omissions in the law? Or would the Kansas law be void because of having been preempted by Federal law?
- Both State USF law and Section 254 of Federal TA96 provides universal service support must be competitively neutral, not giving one provider an unfair advantage over another, or one technology over another, and charges states with the obligation of designating carriers as ETCs, and grants authority to impose obligations on the ETCs and to assure the

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obligations are met. So, if incumbent carrier ETCs are now required by federal law to comply, and if Substitute for SB 72 is seen by AT&T as removing the Commission's authority in any respect, would we not just be buying a lawsuit? Current levels of resources do not justify such a result, especially if holding any final action of the bill until the issues are studied and the questions answered would resolve those concerns.

Admittedly, I am a Johnny-come-lately. I do not yet have a full appreciation or grasp of our tele-communications laws. Because of that I may have identified what I think are legal issues that are not, or (which is more likely the case) not have recognized more significant issues in the interplay of state and federal law.

Over the past 15 years both federal and state policymakers have developed a complex system of what might best be described as a system of federal-state, public-private partnerships that supports the deployment of telephone service in areas that require a high cost to serve. Considering this complexity and the significant impact on that portion of the state which will be left behind by Substitute for SB 72, action on this bill should not be advanced without a prior written opinion of the Kansas Attorney General regarding whether the benefits Substitute for SB 72 seeks to bestow on AT&T are permissible, and legal.

Conclusion

We have a long-term commitment in Kansas to the universal availability of a quality telephone system, and the affordability of the provided services. It would seem to me to be much better were the issues raised in Substitute for SB 72 subjected to a specific, interim study by the Kansas Legislature, or vetted through a KCC docket. In that manner we could come to better understand and deal with those forces AT&T suggests are at work to its disadvantage, and how certain current legal and regulatory obligations might be modified to accommodate emerging technologies. Most importantly, we will have time to learn how any proposed changes in our law and system of telecommunications will impact the remaining service providers and the customers who remain.

If it's only about broadband, we are already behind in Kansas and another few months to make certain we get it right will not be a problem. We are all familiar with Moore's Law, but what is not as well known is that the historical growth of broadband technologies and capabilities indicates a doubling of speed roughly every four years. Omnibus Broadband Initiative, *Broadband Performance: OBI Technical Paper No. 4.* I do not think we catch up by ignoring an understanding of the functioning, capacity and capability of our telecommunication system. If anything, we preserve and build on the present system to facilitate broadband deployment and availability. That takes a different bill than Substitute for Senate Bill 72.

For AT&T the consequences that will flow from Substitute for SB 72 are intended. What we must work hard to do is to avoid the unintended consequences that time for reflection will allow. Too much is at risk for too many in Kansas for us to turn our head and walk away from our traditional, standalone telephone service (whether PSTN or POTS) or our commitment to and support of our entire system of local exchange carriers, whether incumbent or competitive.

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In closing, I pose one final question: If securing broadband access is what we must have, and if AT&T believes Substitute for SB 72 helps it attain a position where it can meet those unidentified competitive forces it warns us of and devote its efforts and capital at providing broadband access, why should the Kansas Legislature serve only AT&T's unspecified needs? Why is it that this policy would not be good for or needed by the other 97 local exchange carriers in the state, including CenturyLink? Looking at it another way, why would we want to give AT&T a competitive advantage over every other business in Kansas which is providing or striving to provide similar services in one form or another.

Mr. Chairman and Committee Members, I thank you for the opportunity to offer these comments for your consideration. I commend for your consideration on Substitute for SB 72 the thoughtful testimony offered by Christine Aarnes, the KCC's Chief of Telecommunications.

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Attachment – 1996 Telecom Act 14-point Checklist

The United States Congress passed the Telecommunications Act of 1996 in order to stimulate competition in all telecommunications markets. In doing so, it provided specific requirements (14-point competitive checklist) for opening the local telecommunications market to competition. It established a series of steps that incumbent local exchange carriers (ILECs) such as AT&T (Southwestern Bell) must follow in order to receive regulatory approval to offer long-distance services within their local markets. In general, Section 271 of the 1996 Act requires that ILECs allow new entrants in the local service market to connect their networks to the ILEC's networks. In short, ILECs must make available all services necessary for a competitive local exchange carrier (CLEC) to serve local customers.

The FCC must consult with state regulators to agree that an ILEC has met the 14-point competitive checklist required for long-distance approval. To have received regulatory approval to offer long-distance service, regulators (Federal and State) must agree that the company has met all 14 points on the checklist; the obligations of the checklist continue following regulatory approval. The checklist consists of the following criteria, which ILECs must meet:

- 1. Provide CLECs with interconnection or access to ILEC's wireline and wireless networks.
- 2. Provide CLECs with non-discriminatory access to network elements.
- 3. Provide CLECs with non-discriminatory access to poles, ducts, conduits and rights of way.
- 4. Provide CLECs with unbundled local loops (customer access lines).
- 5. Provide CLECs with unbundled local transport.
- 6. Provide CLECs with unbundled local switching.
- 7. Provide non-discriminatory access to 911, directory assistance and operator services.
- 8. Provide CLECs with white pages directory listings.
- 9. Provide CLECs with non-discriminatory access to telephone numbers.
- 10. Provide non-discriminatory access to databases and signaling.
- 11. Provide number portability (whereby telephone customers "own" their telephone number, and if they move to a new telephone company the same number is transferred to the new telephone company).
- 12. Local dialing parity (CLEC must have the same telephone dialing protocols as ILECs).
- 13. Provide CLEC with reciprocal compensation (the sharing of revenues collected by the ILECs for the termination).
- 14. ILEC must provide CLECs with the resale of their retailed telecommunications services.

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Table of Exhibits

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D	AT&T and CenturyLink Exchanges
E Paper by the A	"Good Engineering Practices Relative to Broadband Deployment in Rural Areas Association of Communications Engineers, dated July 9, 2010.

FCC's USF/ICC NPRM to Promote Broadband Summary of the Issues

I. Background

Since 1934, the focus of universal service has been on providing voice communications services to all Americans at reasonable charges. However, the focus for universal service is now changing to reflect the need for broadband infrastructure for many forms of communication, including voice communications. Thus, at the direction of Congress, the Federal Communications Commission (FCC) developed a National Broadband Plan (NBP) to ensure ubiquitous access to broadband services.

To further the NBP goal to promote broadband deployment, the FCC released on February 9, 2011, its Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking (NPRM) addressing the Universal Service Fund (USF) and Intercarrier Compensation (ICC) reform. Under these two broad topics, the FCC has requested comments on a myriad of issues aimed at "[b]ringing robust, affordable broadband to all Americans. ..." Indicating an intention to eliminate waste and inefficiency and to reorient USF and ICC to meet the nation's broadband availability challenge, the FCC proposes to fundamentally change the federal USF and ICC systems. Because the FCC believes broadband deployment, USF reform, and ICC reform are all interrelated, these issues are addressed in one NPRM.

The FCC indicates that while the current USF and ICC programs were developed over a decade ago to support telephone voice services, "... the communications landscape has changed dramatically[,]" since that time. For example, mobile services, broadband internet access, and Voice over Internet Protocol (VoIP) services have become more prevalent while traditional wireline telecommunications use has declined. In the view of the FCC, these industry changes provide additional rationale for revisiting and reforming USF and ICC.

The FCC acknowledges that USF and ICC are both federal-state systems. That is, both the FCC and state regulators have oversight responsibilities related to USF and ICC. Over the last fourteen years, the Kansas Corporation Commission (Commission) has implemented the Kansas Universal Service Fund (KUSF) and addressed those intercarrier compensation issues within its jurisdiction to promote the goals of the Kansas Telecommunications Act of 1996 (KTA). The Commission has incorporated FCC policies, where required and/or applicable, to encourage competition within the telecommunications industry in Kansas. As will become apparent as issues are outlined below, the FCC's reform proposals will substantially affect Kansans and the implementation of the KTA by the Commission. As the FCC revisits the definition of universal service and the role of advanced networks in today's world, Kansas must determine its priorities for providing communication services throughout Kansas and

² NPRM, ¶8.

¹ Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking (NPRM), FCC 11-13, *rel*. February 9, 2011, ¶1.

make policy recommendations to the FCC consistent with promotion of these priorities. Changes in FCC policies for USF and ICC may also lead to a need for change in Kansas policies and statutes. As the Commission seeks input for comments to the FCC, it does so with an eye on implications for changes that may be necessary in order to assure maintaining KUSF that is ". . . not inconsistent with the [FCC's] rules to preserve and advance universal service."³

It should also be noted that the FCC also released a NPRM on October 14, 2010 concerning the creation of a Mobility Fund to provide universal access to mobile voice service. The Mobility Fund is an element of USF reform we must keep in mind as the FCC considers these additional changes to long held policy. The creation of a Mobility Fund has direct implications on both the universal availability of voice service and universal availability of broadband services.

II. NPRM Issues

The FCC states that networks which provide only voice service are no longer adequate for this century's communications needs as Americans expect to access both fixed and mobile networks to experience the benefits of broadband. It also recognizes that fixed networks remain essential for mobile services which typically depend on wireline backhaul facilities to connect cell towers and enable mobile communications to other networks. In addressing USF and ICC, the FCC states that it will keep the following four principles in mind:

- Modernize USF and ICC for Broadband.
 Modernize and refocus USF and ICC to make affordable broadband available to all Americans and accelerate the transition from circuit-switched to IP networks, with voice ultimately one of many applications running over fixed and mobile broadband networks. Unserved communities across the nation cannot continue to be left behind.
- Fiscal Responsibility. Control the size of USF as it transitions to support broadband, including by reducing waste and inefficiency. We recognize that American consumers and businesses ultimately pay for USF, and that this contribution burden may undermine the benefits of the program by discouraging adoption.
- Accountability. Require accountability from companies receiving support, to ensure that

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³ 47 U.S.C. § 254(f).

⁴ Notice of Proposed Rulemaking (Mobility NPRM), FCC 10-182, rel. October 14, 2010.

public investments are used wisely to deliver intended results. Government must also be accountable for the administration of USF. including through clear goals and performance metrics for the program.

Market-Driven Policies. Transition to marketdriven and incentive-based policies that encourage technologies and services that maximize the value of scarce resources and the benefits to all consumers.⁵

The FCC also recognizes that in considering reforms it must balance the following priorities:

- Advance Broadband Service to All Americans
- Sustain and Expand Mobile Voice and Broadband Service
- Increase Adoption of Advanced Communications Services
- Minimize the Burden of USF Contributions on Consumers and Businesses⁶

The filing of comments has been scheduled as follows:

Comments Due for Section XV: April 1, 2011

Reply Comments Due for Section XV: April 18, 2011

Comments Due for Remaining Sections: April 18, 2011

Comments Due for State Members of the Federal-State Joint Board on Universal Service:

May 2, 2011

Reply Comments Due for Remaining Sections: May 23, 2011

A. USF Reform

The FCC plans to use USF support that is currently designated for providing voice service to high-cost, rural and insular areas for a new Connect America Fund (CAF). The CAF would focus on providing broadband services to areas that are currently unserved.

The FCC anticipates that it will address the reform of the USF in two phases. In the first phase, the FCC will work to reduce inefficiencies by setting guidelines for reimbursement of capital and operating expenses and limiting the total support per line that a carrier can receive. The FCC also plans to develop policies that encourage consolidation of service territories where it leads to more efficient operations. The "identical support" rule that guided the amount of support available to competitive eligible telecommunications carriers (ETC) will be eliminated. Finally, in the first phase,

⁵ Id, ¶ 10. ⁶ *Id.*, ¶ 16.

the FCC will continue to work on the final form of the CAF and proposes a competitive bidding process to build out broadband networks to unserved areas.

In the second phase, the FCC plans to transition all support to the CAF. The CAF would then provide support to maintain and advance broadband.

B. ICC Reform

Guided by the same four principles outlined above (*Modernize for Broadband, Fiscal Responsibility, Accountability, and Market-Driven Policies*), the FCC states that it will also address ICC to promote broadband deployment. As the FCC indicates, ICC is a "... system of payments between carriers to compensate each other for the origination, transport, and termination of telecommunications traffic." The FCC notes that while a few steps were taken in 2000 and 2001 to reform ICC, such reform has not addressed ". the fundamental, ongoing shifts in technology, consumer behavior, and competition." Thus, the FCC proposes comprehensive ICC reform.

The FCC intends to address access stimulation and phantom traffic 10 issues in the initial phase of reforming access charges, along with the status and compensation obligations (if any) of VoIP traffic. Access stimulation and phantom traffic issues have resulted in arbitrage and increased uncertainty in ICC payments. The FCC proposes that those carriers that have entered into revenue-sharing arrangements will be required to re-file interstate switched access tariffs to reflect a lower rate consistent with the actual volume of traffic. To address phantom traffic, the FCC proposes rules requiring appropriate signaling information be provided for all voice traffic, including VoIP traffic.

Over the long term, the FCC proposes that all per-minute charges be reduced and be consistent over all types of traffic. The FCC indicates that it may begin its reform by addressing interstate access charges. Because interstate access charges are higher than other forms of compensation, it will also assist in addressing arbitrage issues. As perminute charges are reduced, a revenue recovery mechanism will be implemented.

III. Overarching Issues for Consideration

As industry experts, regulators, legislators and community representatives, we face a number of immediate and significant challenges ahead. The FCC proposals discussed above will fundamentally affect the Kansas telecommunications system, and we must understand the impacts on Kansas.

⁷ Id., ¶ 494.

⁸ Id., ¶ 501.

⁹ Access stimulation refers to "arrangements in which carriers, often competitive carriers, profit from revenue-sharing agreements by operating in an area where the incumbent carrier has a relatively high perminute interstate access rate." *Id.*, ¶36.

¹⁰ Phantom traffic refers to calls that are received by the terminating provider with insufficient signaling data for the provider to identify and bill the appropriate carrier.

To assist the Commission in formulating its comments to the FCC, we request the roundtable participants provide information on the following questions through roundtable discussions and in written submissions to the Commission. The questions below are just a handful of the questions asked within the FCC's NPRM. Although we request comment on any and all of the questions identified below, a participant should not limit his or her response to these issues, if it is believed that additional issues should be identified and considered.

- A. What priorities should be used to guide Kansas comments?
- B. What are the current broadband and mobile voice deployment plans for Kansas?
- C. How should broadband be defined (the FCC proposes 4Mbps download speed and 1Mbps upload speed)? Should the funded network be scalable for future needs?
- D. What is the minimum broadband speed necessary to support wireless 3G services? 4G services?
- E. How do the Legacy funding mechanism, the CAF, and the Mobility Fund work together?
- F. What is the appropriate mechanism for providing access to broadband in unserved areas and determining support levels? Reverse auction? Other?
- G. What are the short-term and long-term effects of proposed changes on price-cap ILECs (BOC and mid-size), RLECs, CLECs, Wireless providers, and VoIP providers? On the KUSF?
- H. What is the risk of stranded investment or implications to Kansas carriers who have incurred substantial debt to build out their systems? Given the likely time frame for an FCC decision on this NPRM, will there be a chilling effect on current capital project planning?
- I. Is there a "rural-rural" divide in Kansas, where there are RLECs that have deployed broadband-capable lines, and other rural areas which have either not received sufficient support or failed to make necessary investment to build-out or upgrade to broadband capability? What information does the Commission need to make this determination? What is the best resource from which the Commission can obtain information on this issue?
- J. How can the Commission gather all necessary data (about broadband availability, mobile voice service availability, the cost associated with deployment to unserved areas, the effect of intercarrier compensation

- changes, etc.), without requiring companies to duplicate information that may have already been provided in response to others requests for data?
- K. What is required of Kansas carriers to move to an IP network? Can current switches bet updated with software for IP or are new switches needed? Are other network changes needed? What is the time frame & cost of deployment?
- L. Regarding the FCC's expressed interest in consolidating service territories to take advantage of scale efficiencies, what is the implication for Kansas service providers? Are there service territories in Kansas that could be the target of FCC consolidation efforts? Can the FCC force consolidation? Should the Commission consider this issue?
- M. What impact would mandatory disaggregation have on Kansas carriers?
- N. What service requirements or public interest obligations are appropriate for providers that receive USF support?
- O. Are the proposed transition time-frames for USF and ICC reform adequate?
- P. Is arbitrage a problem in Kansas? If so, what is the dollar impact (lost revenues or additional expense) related to arbitrage? What are the causes of arbitrage in Kansas (traffic pumping/access stimulation, phantom traffic, VoIP, etc)?
- Q. What steps has the industry taken to address arbitrage? Are the FCC's proposals appropriate or are there other issues that should be considered? Are other Commission actions warranted?
- R. Should Kansas and other "early adopter" states be provided some type of advantage, in access to CAF support or by other means, over other states that have not yet achieved parity with interstate access charges?
- S. What are the pros and cons of the FCC's proposal to deem all intercarrier compensation as reciprocal compensation?
- T. What is the effect of transitioning all intercarrier compensation to a bill-and-keep mechanism? Does per-minute compensation make sense in an all-IP network?
- U. How do interconnected VoIP providers interconnect to the network? Can all VoIP traffic be identified? Why or why not?

- V. Should VoIP calls be subject to switched access, special access, reciprocal compensation, or a special VoIP rate? What is the revenue impact of VoIP not paying compensation for access to the PSTN network? Should the FCC adopt a bill-and-keep methodology for VoIP? Should there be a VoIP-specific rate? Do per-minute intercarrier charges make sense in an IP world?
- W. What is the success rate for negotiating payment contracts with VoIP providers? What are the implications for existing commercial arrangements that may address compensation for VoIP traffic?
- X. The FCC has recognized that by having left open the status of VoIP, and its compensation obligations, it has created regulatory uncertainty, conflicts and litigation, which is deterring providers from rolling out advanced services. How has that uncertainty affected IP innovation and investment in Kansas?

KCC Roundtable – Broadband and Telecommunications on the Cusp



Presented by the Kansas Corporation Commission

for legislators, policy makers, the telecommunications industry, lenders and interested parties.

Friday, March 4, 2011 and Friday, March 11, 2011 • 9:00 am - 12:30 pm Kansas Association of School Boards (KASB) • 1420 SW Arrowhead Road, Topeka, KS 66604

Background

On February 9, 2011 the Federal Communication Commission (FCC) approved and issued a Notice of Proposed Rulemaking (NPRM). The NPRM combines nine open FCC dockets from the National Broadband Plan (NBP) to reforming the Federal Universal Service Fund (FUSF) to a complete restructure of Intercarrier Compensation.

The immediate challenge is that while the public in general (and State Regulatory Commissions in particular) are invited to provide written comments regarding the FCC proposals, only a 30-day period is allowed.

As industry experts, regulators, legislators and community representatives, we face a number of immediate and significant challenges: 1) to understand what the new FUSF regime will be and under it, who in Kansas will be eligible for funding; 2) determine what impact bringing broadband into telecom as a supported service will have on our Kansas system; 3) analyze what the new intercarrier compensation structure will be and how that will impact wire line service and Kansas carriers; 4) determine what will happen to the Kansas Universal Service Fund and what recommended changes will be necessary to protect Kansas customers and the Kansas telecom system.

Session | March 4

Robert Loube, Ph.D., Vice President, Rolka Loube Saltzer Associates, formerly of the FCC

Peter Bluhm, Consultant, Rolka Loube Saltzer Associates

Rolka Loube Saltzer Associates' expertise includes administering state and federal universal services funds, providing expert testimony on behalf of public agencies and drafting orders in regulatory proceedings.

Nationally recognized experts Loube and Bluhm will be onsite to present information regarding our current system and the system as now proposed in the NBP and the FCC NPRM, as well as how these proposed changes will impact Kansas. The KCC will also ask for input from policymakers and industry attendees to help formulate the items for discussion in Session II.

Session II March 11

The KCC and attendees will collaborate and provide information useful for identifying and informing comments for submission to the FCC.

Register by Noon March 2nd

Brenda Schirmer • (785) 271-3220 • b.schirmer@kcc.ks.gov

CARRIERS OF LAST RESORT, ELIGIBLE TELECOMMUNICATIONS CARRIERS, AND STATE ADMINISTRATIVE ROLES

A White Paper To The

State Members

Of The

Federal-State Joint Board

On

Universal Service

Peter Bluhm, Natelle Dietrich, and John Ridgway

February 7, 2011

DISCLAIMER

THIS WHITE PAPER HAS BEEN PREPARED BY MEMBERS OF THE STATE STAFF OF THE FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE AND ITS CONSULTANTS IN ORDER TO ASSIST THE RELEVANT DELIBERATIONS OF THE STATE MEMBERS OF THE JOINT BOARD. THE ANALYSIS AND VIEWS EXPRESSED IN THIS WHITE PAPER ARE THOSE OF THE AUTHORS AND DO NOT REFLECT THE FORMAL POSITIONS OR OPINIONS OF THE REMAINING STATE STAFF, STATE MEMBERS, OR GOVERNMENTAL/NON-GOVERNMENTAL ENTITIES THAT CURRENTLY EMPLOY THESE AUTHORS.

Carriers of Last Resort, Eligible Telecommunications Carriers, and State Administrative Roles

I. The need for provider of last resort policies

The National Broadband Plan (NBP) recently published by the Federal Communications Commission (FCC) includes several broad policy goals. One is to provide every American with affordable access to robust broadband service, and the means and skills to subscribe if they so choose. The NBP also proposes that support would be provided to not more than one provider in each area. Finally, the NBP proposes to limit support under the Connect America Fund (CAF) to areas where there is no private sector business case to provide broadband and high-quality voice-grade service (market failure areas).

These policies do not explain how broadband service will become ubiquitous. The NBP is unlikely to succeed unless this concept of support for market failure areas is well integrated into some method to define service areas that covers all areas of the country. Market forces on their own demonstrably do not serve all high-cost areas. Unless the FCC also adopts policies to define a provider for the least desirable areas, there is a risk that those areas will be left unserved.

The NBP goal of ubiquitous broadband is similar to, although more ambitious than, the traditional "universal service" principles that the states, the FCC, and Congress have applied for decades to voice networks. For voice service, the principle of "carrier-of-last-resort" (COLR) has historically been a key element of state universal service policy. Indeed, the concept arose from even older common law principles that have been around for centuries. Long before telephones were invented, English and then American citizens had developed expectations about the conduct of certain kinds of businesses that "affect the public interest." Common law imposed "common carrier" duties on certain forms of business, such as coaches, ferries and inns. State law also gave special benefits and duties to "franchised" enterprises that made capital improvements, allowing them to benefit exclusively from the services produced by those improvements. These common law roots led to the COLR doctrine when states and the federal government began to regulate utilities.

The NBP indicates that the FCC will continue to recognize COLR policy in some form, asserting that "recipients of funding should be subject to a broadband provider-of-last-resort obligation" (POLR) that includes verifying widespread broadband availability, as well as meeting service quality and reporting requirements.³ Defining the elements of POLR and

¹ NBP at 145.

² NBP at 145.

³ NBP at 145-46. *See also* NBP at 149. Hereafter, "POLR" will be used to describe a set of duties applicable to broadband Internet providers.

determining how they will be applied will be a key objective in achieving universal service goals for broadband.

In the future, POLR duties probably will be assigned to broadband providers using a different legal basis than applied historically to voice COLRs. Historically, COLR duties attached to telephone companies as a condition of their franchise. States imposed similar duties on all traditional telephone companies. In the future, although broadband POLR duties may have similar elements, those duties will most likely be imposed only on carriers receiving universal service support, not as a condition of a franchise to operate.

Administering broadband POLR duties will take several steps. First, the duties themselves must be defined. Then they must be assigned to particular carriers and particular areas. They must be enforced, and means must be found to supervise carrier exits from existing service areas. As the POLR duties are defined, it is important to recognize there may be a need for sufficient universal service support in order for the provider to meet its POLR duties.

II. Federal preemption and state participation

Federalism will be a key issue in developing a workable universal service system for broadband Internet service. While the FCC might want to directly administer POLR duties, it might be more advisable for it to delegate some or all of that work to state commissions.

The FCC may anticipate a large role for itself, particularly given its past emphasis on declaring the Internet to be interstate communications. In the wireless industry, the FCC historically defined the size of market areas, and it imposed conditions prescribing build-out requirements. For universal service, however, the jurisdictional questions are more complex. They involve both wireline and wireless services, and they involve both voice and broadband Internet services, and a much different statutory structure.

The FCC has held that that broadband Internet access is an interstate "information service" subject to "Title I" regulation under its "ancillary" authority. In April of 2010, the D.C. Circuit issued a decision that rejected the last part of that claim. The court held that the FCC must show that "each and every assertion of jurisdiction over cable television must be independently justified as reasonably ancillary" to some specific power under another statute. The court held the FCC had not "independently justified" each of its assertions of authority over Comcast's network management practices. The implications of the case were great, as it called into question the basis for the FCC's claim of authority over all forms of broadband Internet service.

It is not clear whether the FCC's (and the courts') jurisdictional rulings will eventually produce a sensible basis for administering POLR duties. At the moment, it seems fairly clear that the FCC continues to view broadband service as an "information service" that is "interstate." Under current law, this places the FCC's "ancillary jurisdiction" in considerable doubt. Nevertheless, the implications for POLR duties are largely undecided. The FCC also has explicit

⁴ Comcast Corp. v. FCC, 600 F.3d 642, 651 (D.C.Cir. 2010).

authority under Section 254 of the Telecommunications Act of 1996 (TA96 or Act) to use universal service funding to advance both telecommunications and "information services." This may also be a possible legal basis for asserting authority to impose POLR duties.

The Pennsylvania PUC (PaPUC) filed comments encouraging the FCC to allow states to set priorities for their respective deployments of broadband facilities and services that are and will be supported by both the federal universal service fund (USF) and other sources. The PaPUC said that individual states are in a better position to know and to manage their respective broadband deployment needs. Second, the PaPUC noted the value of states managing the flow of the federal USF support in conjunction with a periodic re-examination of the COLR duties.⁶

Staff urges the State Members of the Joint Board to advocate for a broad state role in defining and administering POLR duties. The states have unique capabilities that suit them well to administer the definition, assignment and enforcement of POLR duties. State commissions can hold local hearings in areas affected and hear from customers, something for which the FCC lacks sufficient resources to adequately address. State commissions also hear more frequently from local citizens when service is not right or is not available at all. State commissions are also held more accountable to local legislators who, in recent years, have been quite sensitive to the needs of unserved areas. Given the resource limitations of the FCC and the manner in which it conducts its business, it is hard to imagine the FCC effectively administering a nationwide POLR system. If the states do not audibly volunteer as POLR administrators, and if the FCC wrongly concludes that federal officials can perform all the necessary work, in staff's opinion the resulting system would be unlikely to meet universal service goals for broadband in a viable and sustainable manner.

It is also staff's opinion that the states should not be deterred from this advocacy by past jurisdictional rulings from the FCC. In the past, the voice network carried both intrastate and interstate switched traffic, yet states were the authors of COLR duties that most state commissions still enforce today. Those COLR policies advanced universal service, rather than creating conflicts. Even under TA96 – under which the concept of an Eligible Telecommunications Carrier (ETC) is analogous to COLR – the Congress assigned many of the decisions involving local participants and local effects to the states. The fact that the network is shifting to packets does not change the logic. State commissions are still the bodies most aware of local conditions in communications and are in the best position to determine which carriers are providing adequate service.

⁵ 47 U.S.C. § 254(b)(2).

⁶ FCC, Connect America Fund, WC Docket No. 10-90, Initial Comments of the Pennsylvania Public Utility Commission, filed July 12, 2010, at 38.

III. Defining POLR/ETC duties

A. The duty to serve

The preeminent duty of a voice COLR has been the "duty to serve." The NBP defines "carrier of last resort" as:

The carrier that commits (or is required by law) to provide service to any customer in a service area that requests it, even if serving that customer would not be economically viable at prevailing rates.⁷

Construction charges are an important limitation on the duty to serve. A carrier that can impose high construction charges on any line extension effectively has a duty to serve only areas where it has already built facilities. In addition, states sometimes have allowed recapture of construction charges from later-arriving-customers who connect within a fixed period of time to a new line paid for by another customer.

A broadband POLR requirement should be explicit about when carriers are authorized to impose construction charges on end users, and in what amounts. In may also be appropriate for a broadband POLR requirement, to specify a distance or cost limit beyond which a provider is exempt from its duty to serve without sufficient construction payment from end users.

COLR duties are broader than the duty to serve. COLRs have a variety of service quality requirements, public safety requirements and carrier-to-carrier requirements. These functions must be equally important in a broadband environment, and each should be evaluated on a case-by-case basis when defining the duties of broadband POLRs. For instance, a provider should not be awarded a service area and the associated support simply because it offers the least expensive alternative to serving the area. The provider should be required to submit service quality improvement plans and should be required to commit to similar COLR customer service quality commitments. Similarly, broadband POLR requirements should include carrier-to-carrier obligations such as providing direct and indirect physical connections with the ability to send packets to all end users. In other words, POLR duties must include many of the same obligations as current COLR requirements.

B. Comparing state COLR and federal ETC duties

The duties of ETCs under the Act restate many traditional COLR duties, and overlook others. Possibly the most important difference is that the ETC's duty to serve is qualified. Under the statute and current FCC rules, a carrier can be designated where it provides services through a combination of some of its own facilities, resale of another carrier's services, and use of unbundled network elements. These provisions have allowed Competitive ETCs (CETCs) be designated as ETCs without constructing a ubiquitous network.

⁷ NBP at 351.

⁸ 47 U.S.C. § 214(e)(1)(A); 47 C.F.R. § 54.205(e), (f).

No similar opportunities were historically presented to COLRs. When telephone service was being built in rural areas in the 1950s, there was simply no other carrier whose services could be resold. Until TA96, support was provided solely to COLRs. The existing ETC rules, therefore, are a kind of "COLR-lite" in which many COLR duties were redefined or eliminated in order to broaden support eligibility.

Although the FCC's rules are less rigorous than typical COLR obligations, the FCC has had second thoughts on that score. In 2004, the FCC decided two ETC cases, *Virginia Cellular*⁹ and *Highland Cellular*.¹⁰ These cases revealed that the FCC had evolved to view ETC designation issues as converging on traditional COLR policies. Several FCC commissioners said outright that compliance with state COLR obligations should be a precondition of ETC designation.¹¹ That, however, has never been an explicit requirement of FCC rules. Staff agrees with these past FCC commissioners who stated that compliance with state COLR obligations should be a precondition of ETC designation.¹²

In 2005, the FCC issued another order that moved closer to replicating COLR requirements. The order established the requirements for carriers seeking ETC designations from the FCC itself, and it suggested that states use similar standards in their own ETC proceedings. In several ways these 2005 changes converged on traditional COLR policies.

- States may now inquire about and impose conditions regarding an applicant's plans to build out its network, much as a state commission traditionally required COLRs to serve their entire service areas.
- States now may inquire about and impose conditions regarding service quality, once again paralleling state COLR policies.
- States may now consider the economic effects of competition on the incumbents, by authorizing an examination of cream skimming and the effects on the demand for universal service funding.

⁹ Virginia Cellular, LLC Petition for Designation as an Eligible Telecommunications Carrier for the Commonwealth of Virginia, CC Docket No. 96-45, Memorandum Opinion and Order, 19 FCC Rcd 1563 (2004) ("Virginia Cellular").

¹⁰ Federal-State Joint Board on Universal Service; Highland Cellular, Inc. Petition for Designation as an Eligible Telecommunications Carrier for the Commonwealth of Virginia, CC Docket No. 96-45, Memorandum Opinion and Order, 19 FCC Rcd 6422 (2004) ("Highland Cellular").

¹¹ Virginia Cellular, Separate statement of Chairman Michael K. Powell; Separate statement of Commissioner Kathleen Q. Abernathy (wireless networks must be "ready, willing, and able" to serve as carriers of last resort); Highland Cellular, Separate statement of Commissioner Kevin J. Martin (CETCs should have the same COLR obligations as incumbent service providers).

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C. The bundle of POLR duties

For wireline voice services, the states have historically been primarily responsible for assigning COLR duties. While states have not consistently codified the scope of these COLR duties, the duties themselves are extensive. The following table describes elements of voice COLR duties and describes corresponding FCC ETC duties, to the extent they exist. The last column proposes for discussion an analogous set of broadband POLR duties.

Table 1. COLR and ETC Duties and Possible Broadband POLR Duties

Topic	Sample State COLR Requirement	Current FCC ETC Rules	Possible Broadband POLR Requirement				
Facilities							
Geographic duty to serve	Offers retail and carrier-to- carrier services throughout the service area.	Offers retail service throughout the entire service area.	Retail and carrier-to-carrier services are offered throughout the service area.				
	Construction contributions can be required, subject to limits. Later-arriving-customers can be required to reimburse first-customers for recently paid construction charges of mutual benefit.		Construction contributions can be required, subject to limits. Later-arriving-customers can be required to reimburse first-customers for recently paid construction charges of mutual benefit.				
Facilities Ownership	COLRs generally must serve customers with their own facilities.	Facilities can be owned, rented (UNEs) or resold, so long as some are owned. § 54.201(d)(1).	POLRs must offer services using facilities that are either: 1) owned, 2) under long-term lease, or 3) under sufficient insurance or bonds to ensure continued availability if the provider fails.				
Duty in unserved and abandoned areas	State commission may order common carrier to serve unserved areas.	FCC and state commission may order common carrier to serve unserved areas. 47 U.S.C. § 214(e)(3)	Same as ETC.				

Topic	Sample State COLR Requirement	Current FCC ETC Rules	Possible Broadband POLR Requirement
		Where one of two or more ETCs relinquishes designation, state commission may order remaining ETC to build facilities. 47 U.S.C. § 214(e)(4)	Same as ETC.
Adequate distribution facilities	Single line service (no party lines)	Single line service (no party lines). § (a)(4)	Meets minimum speed requirements as periodically reviewed and determined by the FCC
	Network	Functions and Services	
Network	Accurate voice reproduction.	Transmits 300 to 3,000 Hertz audio range. § (a)(1)	Meets minimum speed requirements as periodically reviewed and determined by the FCC
	Equal access to IXCs (most states)	Access to IXCs.§ (a)(7)	
	Offers vertical services such as call waiting, call forwarding, 3-way calling.	Touch-tone (DTMF) dialing. § (a)(3)	
	Infrequent call blocking and call drops		Limited jitter and packet dropping.
	Limited network downtime due to internal problems	Reporting of network outages (2005 order)	Same as ETC
Network compatibility	No network features that are incompatible with service to persons with disabilities. (47 U.S.C. § 255)		No network features that are incompatible with service to persons with disabilities.
	No network features that are incompatible with interconnectivity requirements. (47 U.S.C. § 256)		No network features that are incompatible with interconnectivity requirements.

Торіс	Sample State COLR Requirement	Current FCC ETC Rules	Possible Broadband POLR Requirement
		Services	
Basic service	Voice service	Transmits and receives voice communications (including signaling and ringing). § (a)(1)	Transmits and receives IP data stream between subscriber and Internet
Fully interconnecte d Network	Subscriber can reach and receive calls from all working NANPA numbers.	Subscriber can send position and receive packets all locations generally available on the International Subscriber can send position and s	
Emergency services		Offers subscribers access to emergency services § (a)(5).	Offers subscribers access to emergency services.
	Coordination with E-911 authorities, including providing required customer information.		Coordination with E-911 authorities, including providing required customer information.
	Maintains emergency service continuity plan.		Maintains emergency service continuity plan.
Hearing impaired	"Relay" ("711") services for the hearing impaired		"Relay" ("711") services for the hearing impaired.
Ancillary services	Directory assistance	Directory assistance. § (a)(8)	N/A
	Operator services	Operator services. § (a)(6)	N/A
		Pricing	
Rate designs	Offers switched voice or equivalent service without requiring purchase of any other service.	Offers "local usage," meaning " an amount of minutes of use of exchange service, prescribed by the Commission, provided free of charge to end users." § (a)(2). The FCC never did prescribe that minimum.	Offers broadband Internet service without requiring purchase of any other service.

Торіс	Sample State COLR Requirement	Current FCC ETC Rules	Possible Broadband POLR Requirement
	Basic package is flat rated within local calling area for fixed monthly rate.		Basic package (at qualifying speed) is flat rated with either no bit limit or a reasonable upper limit on bits per month.
	·	Rates in all areas are reasonably comparable to national average urban rate (§ 254(b)(3))	Rate for the basic package is reasonably comparable to national average urban rate.
	Providers may impose higher rates for higher capacity service such as ISDN and T-1 lines.		Providers may impose higher rates for service with higher flow capacity or higher bits per month limit.
Programs for low-income customers	Offers Lifeline and Link- Up programs, using state- defined parameters for eligibility and benefits	Offers Lifeline and Link- Up	Participates in FCC and state programs for low-income broadband benefits.
	"Toll blocking," of outgoing direct-dialed toll calls	Toll limitation § (a)(9)	
	No	ondiscrimination	
Nondiscrim- ination	No unreasonable price discrimination		No unreasonable price discrimination
	No discrimination against lawful content		No blocking of lawful content, applications, services, or non-harmful devices, subject to reasonable network management (2010 order).
			No blocking of lawful websites, subject to reasonable network management.
			No unreasonable discrimination in transmitting lawful network traffic.

Topic	Sample State COLR Requirement	Current FCC ETC Rules	Possible Broadband POLR Requirement
		C2C	
Inter- connection	On request, interconnects with and trades traffic with other carriers		On request, interconnects with and trades traffic with other carriers and Internet service providers
	Offers physical access to poles and conduits (47 U.S.C. § 224).		Offers physical access to poles and conduits (47 U.S.C. § 224).
Carrier-to- carrier services and rates	Offers direct or indirect physical connections to all other telecommunications carriers at feasible points of interconnection within the POLR service area (47 U.S.C. § 251(a))		Offers direct or indirect physical connections to all other Internet service providers at feasible points of interconnection within the POLR service area
	Offers interconnecting carriers ability to terminate calls to all end users with dial tone lines		Offers interconnecting service providers ability to send packets to all end users
	Offers digital point-to-point lines to other carriers, including T-1 and T-3		Offers capacity-rated middle-mile services to other service providers, such as gigabit Ethernet
	Interconnection and transport rates are just and reasonable.		C2C rates are just and reasonable.
	Managem	ent and customer service	
Advertising		Advertise that services are available. § 214(e)(1)(B)	Advertise that services are available.
	Comply with state and federal truth-in-advertising rules.		Comply with state and federal truth-in-advertising rules.
			Publicly disclose accurate information regarding network management practices, performance, and commercial terms.

Торіс	Sample State COLR Requirement	Current FCC ETC Rules	Possible Broadband POLR Requirement
Capital planning		Submit five-year service quality improvement plan. (2005 Order)	Submit five-year service quality improvement plan.
Customer service quality	Goals for new service installation		Goals for new service installation
quanty		Reporting of unfulfilled service requests (2005 Order)	Same as ETC
	Limits on unscheduled outage times		Limits on unscheduled outage times
	Reporting of network downtime Reporting of network outages (2005 Order)		Same as ETC
	Limits on customer trouble occurrence rates		Limits on customer trouble occurrence rates
	Maximum average response time for trouble calls		Maximum average response time for trouble calls
	,	Reporting of complaints per 1,000 handsets or lines (2005 Order)	Same as ETC
Mapping	Develop maps of service area.		Develop and files GIS maps of service area.
Privacy	Protect privacy of customer information (47 U.S.C. § 222)		Protect privacy of customer information (47 U.S.C. § 222)
Exit	Follows state mass migration rules	Before relinquishing ETC, gives adequate notice to customers and state commission, engages in joint planning of exit with other carriers, and obtains advance approval of state commission. 47 U.S.C. § 214(e)(4)	Same as voice ETC. Follows state mass migration rules.

Staff recommends that the FCC should set a minimum set of POLR duties by rule, similar to the ETC standards now found in 47 C.F.R. § 54.101. The current list should be updated to reflect the fact that supported networks will and must offer both voice and broadband.

Eventually, it may be possible to drop voice-only requirements, but that day has not yet arrived. For the foreseeable future, ETCs should provide both broadband Internet service and voice service at rates reasonably comparable to urban areas. States should be able to add non-conflicting requirements. At minimum, states should be able to adopt specific supplementary rules regarding construction charges, service quality, rate designs, advertising, and exit.

IV. Which providers will be ETCs?

A. Designating ETCs

After POLR duties are defined, the next question is to which providers will they be assigned? Restated, the question is which providers will be designated as ETCs.

TA96 imposes some constraints on the FCC's federalism options. Section 214(e) of TA96 offers the states the opportunity to designate Eligible Telecommunications Carriers (ETCs). For their own reasons, some states have declined to exercise this role at all, or exercise it only for limited subsets of telecommunications providers. ¹³ The Act also recognizes states' authority in situations involving unserved areas and ETCs withdrawing from service. ¹⁴

The FCC cannot prohibit states from imposing additional requirements on carriers otherwise eligible for ETC designations. Instead, courts have held that section 241(e) speaks to the question of how many carriers a state commission may designate, but the Act does not prohibit states from imposing their own eligibility requirements.¹⁵

In 2005, the FCC suggested additional criteria that the states should review when conducting ETC cases. States have generally complied with those suggestions, although there have been variations from state to state. Staff recommends that the Joint Board endorse this method of proceeding for broadband ETCs.

B. Defining service areas

TA 96 allows states to define individual service areas for ETCs. ¹⁶ Staff recommends that the Joint Board say that states are not only legally authorized but best positioned to define individual service areas. States have the best local knowledge and expertise to understand what

¹³ 47 U.S.C. § 214(e). A few states, like Virginia, have declined the offered delegation to designate ETCs, but they are still apparently responsible under the Act to handle carrier exit issues. 47 U.S.C. § 214(e)(3) and (4). Largely due to limitations of state laws, other states have declined to designate wireless carriers (including AL, CT, DE, NH). Some states have changed their minds and now handle ETC cases for wireless carriers (including Florida, Massachusetts and Pennsylvania).

¹⁴ See 47 U.S.C. § 214(e)(3), (e)(4).

¹⁵ Texas Of'c of Public Util. Counsel v. FCC, 183 F.3d 393, 418 (5th Cir. 1999), cert. dismissed sub nom. GTE Serv. Corp. v. FCC, 531 U.S. 975, 121 S.Ct. 423, 148 L.Ed.2d 327 (2000).

¹⁶ 47 U.S.C. § 214(e)(2).

areas are unserved. States are also better positioned than the FCC to evaluate whether a proposed ETC is financially and technically qualified to serve as an ETC. As has been true in the past, even where the states are free to make a discretionary decision, advice from the FCC can be very useful.

As recognized by the Act, states are best positioned to balance the proper size of service areas. The task requires a difficult balancing of local factors. On the one hand, the desire to conserve resources suggests that support should be "targeted," meaning that the amount of support should be calculated after giving consideration only to the needs of a number of relatively small high-cost areas. The idea here is that by disregarding the economics of low-cost areas, support can be focused on truly needy areas, and perhaps the total amount of support can be reduced. Small service areas also make it easier for competitors to make offers to be substituted as ETCs, since less capital is needed to contest an ETC designation in a small area than a large area.

On the other hand, there are reasons to assign larger service areas. First, larger areas generate economies of scale. For example, if the FCC were to use a model to determine the cost of providing independent broadband service separately in every census block, several kinds of cost would increase, including transport and administrative overhead. The model would overstate true network cost because it would ignore actual economies of scale available to larger networks. Basing support on larger service areas therefore reduces the apparent need for support, reducing the demand on universal service funds.

Second, aggregating service areas into larger blocks reduces the variation in costs. Larger service areas are often criticized as relying on implicit contribution flows from low-cost to high-cost customers. It is true that a system that relies on measuring costs over a larger area necessarily assumes different levels of contribution to common costs from different customers. Nevertheless, such implicit contribution flows are inherent in any system in which uniform rates are set over areas with non-uniform costs. Moreover, the cost averaging within a larger service area reduces the apparent demand for support. 19

Staff also recommends that the Joint Board conclude that such implicit contribution flows do not violate the prohibition against implicit support. Rate averaging within a service area is not necessarily a form of implicit support prohibited by the statute.

¹⁷ The FCC's wireless auctions have tended to apply to large areas, often comprising entire metropolitan areas, entire states, and sometimes multistate areas. Therefore, wireless auction service areas have included both high-cost and low-cost areas.

¹⁸ Many wireless carriers offer nationwide rate designs, regardless of cost variations among states, regions and localities.

¹⁹ We note that in the NBP the FCC calculated a financial "gap" at the census block level, but then aggregated the results at the county level. The result was to allow cost averaging within counties. In some counties with some high-gap census blocks and some low-gap census blocks, the average gap came out to be zero or negative.

States are best positioned to make the actual decisions about service areas, although states would benefit from FCC guidance as to the criteria for defining service area sizes. As noted above, the NBP states that only one ETC per area should receive support. Once a new high-cost mechanism goes into effect for broadband, states will need to decide which carriers should receive the single ETC designation in each geographic area. Staff recommends that the Joint Board recommend to the states that when this new system is implemented, the states in most cases should initially designate the incumbent LEC and should define that LEC's study area as its service area for universal service purposes. This initial definition will fairly balance the factors discussed above in most cases, although some adjustments may be needed.

- In a very few cases where a CETC has overbuilt Incumbent Local Exchange Carrier (ILEC) facilities over a wide area, the state commission should, on petition, conduct a fact-specific proceeding to determine whether the ILEC or the CETC should be designated as the single supported carrier.
- In the future, a provider using a different technology (such as a wireless carrier or a cable voice provider) might want to be designated as the single supported ETC, thereby disqualifying the ILEC from further support in some or all of its existing service area. The state commission should, on petition, conduct a fact-specific proceeding to determine whether ILEC should be disqualified and replaced as the supported ETC. The details of how such a proceeding would work, and how such a transition might work, are details beyond the scope of this paper.

The existing statute allows state commissions to consider broad questions of public interest in these proceedings. In exercising its discretion in both kinds of cases, state commissions should consider, at minimum, the likely effect on the size of the federal and state universal service funds. In either case, dividing an existing study area could decrease the support demand in the overbuilt or challenged area, but increase the total support demand by cream skimming the high-profit customers from an existing study area.

C. Mapping Service Areas

Staff recommends that the Joint Board say that states should be actively involved in requiring ETCs to develop service area maps and ensuring they are filed with the FCC. Mapping of POLR areas would be useful for several purposes, at least if done with sufficient precision. Maps would allow state commissions to avoid service holes on the one hand and costly overlaps on the other. Maps would allow the FCC to better assess the national availability of broadband service. If the FCC wishes to use national models to calculate support or place upper limits on embedded costs, maps will facilitate using public GIS data for that purpose. Accurate maps will also allow state commissions to make better decisions about which service providers should be designated as ETCs. Finally, should the FCC pursue that course, maps will facilitate the administration of auctions.

To make maps as useful as possible, they should be GIS compatible and be prepared with accuracy matching that of modern GIS sources for roads and landmarks.

In sum, staff recommends that the Joint Board say that states remain best positioned to define service areas of ETCs. In addition, ETCs should be required to map their service areas to a specified level of precision and submit those maps in GIS format to the FCC and to state commissions.

V. Enforcing POLR violations, carrier exits

Once ETCs have been designated for defined service areas; someone must enforce the ETC's obligations. In the past, the FCC has relied on the states for this, requiring annual certifications that support has been used for the purposes intended. Staff believes this basic model is fundamentally sound, although it should be made more specific for particular POLR duties.

In the event the provider fails to meet its obligations, the FCC will need a mechanism to terminate POLR designation and assign ETC status to a new provider. Many states have adopted "mass migration" rules in the last 15 years to handle similar problems with exiting voice providers. This topic may require further discussion.

AT&T Kansas Exchanges by Size

(Shaded Exchanges are Price Deregulated)

Ex	chai	nge	Nan	<u>1e</u>	
1 -	999	Acc	cess	Li	nes

READING **HERNDON** NORCATUR **FLORENCE MCDONALD** MOLINE **JEWELL SEVERY**

HAMILTON / VIRGIL PAWNEE ROCK

ALMENA CHASE **CEDARVALE** HARTFORD SCANDIA **BIRD CITY**

CLINTON PROTECTION MOUNT HOPE

GYPSUM

BURNS

WILLIAMSBURG

LEON FOWLER CANTON SOLOMON **BUCKLIN ATTICA** ST. PAUL **HOWARD MANKATO BLUE RAPIDS** COFFEY/ DEARING

MINNEOLA CHETOPA

NICKERSON TOWANDA

FRANKFORT ANDALE

BLUE RPDS/WTRVL

PEABODY MARQUETTE

HANOVER / HOLLENBURG

COLDWATER

GARDEN PLAIN

STAFFORD CHAPMAN PLAINS LACROSSE **GREENSBURG**

Exchange Name

WASHINGTON

ERIE

STOCKTON

HOXIE

DOUGLASS CANEY LINCOLN **SUBLETTE**

YATES CENTER

1000 - 2499 Access Lines

SEDAN ATWOOD HARPER MEADE

DESOTO

COTTONWOOD FALLS

BELLEVILLE

KINSLEY **PLAINVILLE** HALSTEAD **MINNEAPOLIS**

SMITH CENTER HUMBOLDT

ST FRANCIS **OBERLIN HERINGTON**

MEDICINE LODGE CHERRYVALE

ANTHONY

MARION

NEODESHA OAKLEY CHENEY **EUDORA**

SABETHA **BELOIT**

LINDSBORG

LYONS **EUREKA**

NORTON

PHILLIPSBURG / KIRWIN

SENECA **MARYSVILLE**

KINGMAN LARNED SCOTT CITY

TONGANOXIE

BASEHOR

Exchange Name

2500 - 5999 Access Lines

CLAY CENTER CONCORDIA

ELLSWORTH / LORRAINE

GOODLAND

WELLINGTON

IOLA COLBY **PAOLA**

PRATT ABILENE

INDEPENDENCE

CHANUTE **PARSONS**

FORT SCOTT **ATCHISON**

COFFEYVILLE **EL DORADO** ARKANSAS CITY WINFIELD

OTTAWA

6000 - 29,999 Access Lines

MCPHERSON **LIBERAL**

GREAT BEND NEWTON **EMPORIA** HAYS PITTSBURG

DODGE CITY

LEAVENWORTH/LANSING

GARDEN CITY MANHATTAN HUTCHINSON SALINA LAWRENCE

30,000 or More Access Lines

TOPEKA WICHITA KANSAS CITY

CenturyLink Kansas Exchanges by Size

1-999 Access Lines	Evelonge Neme	Evahanga Nama	Evolungo Nome
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ASSOCIATION OF COMMUNICATIONS ENGINEERS

Good Engineering Practices Relative to Broadband Deployment in Rural Areas

Introduction

With the American Recovery and Reinvestment Act of 2009 (ARRA), Congress mandated that the FCC develop a National Broadband Plan "to ensure that all people of the United States have access to broadband capability." Keys to meeting this mandate in the most efficient and economical manner include maintaining the existing broadband infrastructure and deploying new broadband infrastructure in currently unserved areas. The National Broadband Plan prepared by the FCC falls short of meeting this mandate because its recommendations for accomplishing the broadband build out to unserved areas do not employ good engineering practices.

The Association of Communications Engineers (ACE) is made up of individual firms employing professional engineers dedicated to the improvement and advancement of telecommunications technologies throughout the United States. ACE member firms provide services related to telecommunications and other advanced technologies including planning, design, project management, economic analysis and construction management. For over 50 years, ACE engineers have helped companies deploy new technologies, extend services into rural areas, and provide cost effective solutions to complex problems. ACE has prepared this paper to highlight concerns about the FCC's National Broadband Plan.

Background

Good engineering practices applicable to the deployment of telecommunications systems require sound planning and careful consideration of the overall project or system objectives, alternatives, user requirements, proposed system capabilities, available resources, restrictions or limitations, economic life cycles, public health & safety and other social impacts. This paper outlines high level engineering considerations applicable to broadband telecommunications systems, especially as they relate to the derivation of Universal Service Funds for Broadband in the United States.

- 1. Broadband services are becoming essential services for citizens throughout the country; especially for citizens in rural areas that do not have easy access to retailers or consumers. Reliance upon these systems is increasing, and user demand continues to expand in terms of penetration and broadband speed.
- 2. Broadband delivery systems must be capable of providing the needed performance (speed), quality of service, availability and reliability and must accommodate future demands.

- 3. "One size" does not fit all; broadband system designs must accommodate the specific needs and restrictions of the area in which they are deployed. A national financial model is unlikely to reasonably represent the many factors that must be considered with the engineering design.
- 4. Technology designs should produce the best possible long term value and usefulness, avoiding foreseeable obsolescence.

Scoping

Engineering tasks take place in several steps beginning with the development of an initial idea for a product, system or activity. Engineering typically focuses on the technical aspects, as shaped by the business (financial) and marketing (user) objectives. Technical solutions tend to be bound by (1) technical feasibility, (2) available resources, and (3) time, all of which are interrelated. For broadband systems, a clear identification of the anticipated network capacity and functionality is required to support customer use over the life of the investments. Both long term and short term networking needs must be considered in the engineering plan.

The initial tasks of the engineer are to establish a set of requirements, identify possible solutions, estimate the cost and time necessary to implement the solutions, then determine if the available funding can reasonably support the technical solution and deliver the desired results within the allotted schedule. Once the fundamental requirements are established, the engineer develops the project details, addresses technical challenges, and prepares documentation necessary to implement the system.

Network designs must take into consideration current and projected network reliability and capacity requirements to meet consumer demand over the useful life of the construction project.

The Broadband Assessment Model (BAM) proposed by the FCC does not account for the iterative process essential to responsible engineering practices.

<u>Determination of Broadband Requirements</u>

The concept of "broadband" is relatively new. In 1999 the FCC first defined broadband as a data service with speeds of 200 Kbps in the last mile. In 2008 the definition of broadband was expanded, with a minimum downstream speed set to 768 Kbps. Round one of the broadband programs associated with the American Recovery and Reinvestment Act of 2009 (ARRA) retained this 768 Kbps downstream threshold as well as defining the upstream threshold at 200 Kbps. In the Notice of Funding Availability for Round two of the Broadband Initiatives Program, the Rural Utilities Service "... determined that rural areas without service at 5 Mbps (upstream and downstream combined) lack high speed broadband service sufficient to facilitate rural economic development as required by the Recovery Act." Whether the service is called "broadband" or "high speed", Americans are creating, transmitting and receiving data in increasingly large volumes, and are demanding that these data be transmitted very quickly. According to the Omnibus Broadband Initiative (OBI) Technical Paper No.1 (the OBI Report), bandwidth projections are found to be "doubling every three years".

During the planning and design process, the engineer must anticipate user demand and ultimate system capacity. The Golden Gate Bridge carried an average of 9,000 vehicles per day when it was opened in 1937. Today an average of 120,000 vehicles make the crossing each day. The comparison is far from perfect, however the concept is clear: Systems must be planned and designed to accommodate growth.

During 2010, common engineering practices anticipate that residential end user demand will exceed download speeds of 20 Mbps, with projections reaching beyond 100 Mbps. A base calculation will include 100-200 Kbps for voice, 3-4 Mbps for basic internet applications, and a minimum of 8 Mbps for a single high definition broadcast video stream, resulting in a minimum 12 Mbps of download requirement. The OBI notes that other applications may include 3 Mbps for streamed standard definition classroom lecture video, or 6 Mbps for 2-way video teleconference. The National Broadband Plan notes that Smart Grid applications are expected to require between 100 Kbps and 500 Kbps. The FCC has long held that video transmission is a fundamental component of "Advanced Services". Typical IPTV systems are designed to accommodate a minimum of 20 Mbps today, and are projected to require at least 40 Mbps with the advent and adoption of 3D TV and continued use of high-definition (HD) programming.

The National Broadband Plan notes that currently the average actual download speed in American households is 4 Mbps, and that bandwidth usage is doubling every three years, or about 25% per year. This rate of growth is charted in Figure 1, and shows that the average American home is expected to require download rates significantly higher than 4 Mbps as soon as next year. Some estimates, such as the Cisco's Visual Networking Index, predict faster growth in the next two years, with the rate of growth slowing after 2013.

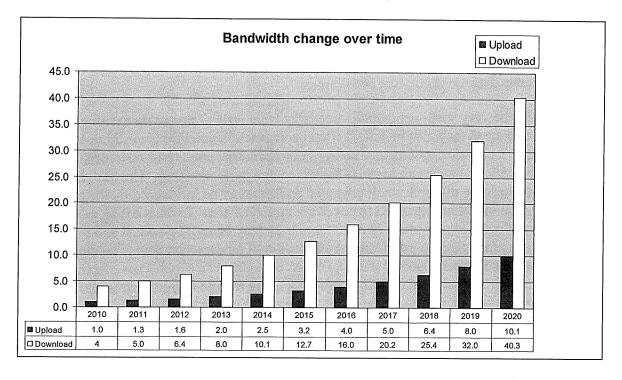


Figure 1: Bandwidth Growth based on "doubling every 3 years"

When considering the overall system requirements, the engineer will consider the needs of the users and the anticipated demand. If there are significant differences in user requirements from one area to another, the engineering criteria may be customized to local needs. As an example, broadband users in rural settings may have greater need for higher speeds as compared to their urban counterparts. For rural America, the economics of daily living and business include a higher cost for fuel and transportation, which translates to time and money. As examples, Telemedicine/Home Telecare, Distance Learning, public safety and remote security may have a greater impact in rural areas.

The above examples focus on residential uses. Every broadband delivery system must also serve other end-users, including businesses, schools and colleges, hospitals and medical facilities, cell sites, public safety entities, government facilities and other anchor institutions. These end-users have a wide variety of specific needs that are often greater than the typical home use. The National Broadband Plan recognized these needs by setting a goal 1 Gbps for all anchor institutions.

The National Broadband Plan specifically addresses the shortcomings of bandwidth to medical facilities, noting that a significant number of physician's offices do not have access to 4 Mbps broadband, and that this problem is seven times worse in rural areas compared to urban settings. Proper engineering practices will include identification of critical communications gaps such as Health Information Technology and will seek solutions to close these gaps.

The FCC has noted that high cost funding sources are to be used to extend broadband to "unserved" areas, defined as housing units that do not currently have access to 4 Mbps data services. For a successful program, it is essential that all parties agree on the geographic extent and details of these unserved areas. Detailed maps showing the boundaries of these unserved areas are essential to the development of a broadband system capable of serving the target areas. In the absence of official maps or reliable data, the engineer may need to conduct field research and validate available data to identify unserved areas.

Unserved areas may be very small geographic areas that have little or no usable existing infrastructure. These areas may also include difficult construction conditions resulting in high costs per subscriber. Low housing densities and/or poor economic conditions may also factor into the overall evaluation of a system to provide service in a particular area. The design of a technology solution to serve multiple small unserved pockets may be influenced by the presence of nearby systems that might be expanded to cover the unserved area. Even at a high cost per user, the extension of an existing system of any technology may be more practical and more cost effective overall than attempting to establish a small pocket of a new technology. To evaluate technology alternatives network planners must take into consideration capabilities of existing network assets e.g. fiber sub loop, use and location of existing remote terminals, availability of existing conduit, pole attachments, and location of commercial power supplies. Good planning and thorough engineering will consider all existing infrastructure and synergistic opportunities.

In summary, good engineering practices will ensure that broadband systems are designed to support future data speed requirements. Failure to anticipate these requirements may result in the construction of a system that is almost immediately obsolete, and which will require significant upgrades or possibly a complete replacement to meet these future needs.

July 9, 2010

The 4 Mbps download and 1 Mbps upload speeds proposed by the FCC for universal service fall short of reasonable network design criteria and do not align with responsible long term planning.

<u>Technology Selection</u>

The selection of a particular technology or delivery system may or may not be strictly driven by technical requirements. Factors that might influence this choice include existing infrastructure, interconnection with other broadband networks, local factors such as customer density and usage characteristics, local economic expansion or contraction, expertise, time to market, anticipated trends in technology development and operational costs.

Broadband delivery systems available today include a variety of wireless and wireline distribution techniques. The OBI Report describes several systems currently considered potential candidates for the provision of broadband services. The most prominent technologies described by the OBI are 4G wireless (Long Term Evolution, or LTE) and 12 kft Digital Subscriber Line (DSL). Other technologies have capabilities that may also be considered, including Fiber to the Premises (FTTP), WiMAX (wireless) and hybrid fiber-coaxial cable system (HFC).

Wireless

A major benefit to wireless distribution systems is the potential to accommodate mobility and portability. When moving from one location to another within coverage of the system, the user can access and deliver information with ease. In the case of medical care, an ambulance may be remotely connected to a hospital or trauma center and transmit critical patient information with the hospital or specialists at the scene of an accident and while in transit. As part of the technology selection, the engineer must identify which wireless systems support mobility, and which do not. As an example, a system designed for fixed wireless access may not support mobility.

Good engineering practices will consider the ultimate capacity of a wireless system in a real-world environment. Wireless technology will have a different value proposition, and may not be a good long term solution compared to fiber or fiber and copper based on bandwidth projections and rural engineering economics.

Wireless signals are limited by a variety of factors, such as the signal-to-noise ratio (SNR) available at the receiver. Depending on the frequency used, a line-of-sight or near-line-of-sight path may be required on a wireless link. Terrain, foliage and buildings are three significant obstacles for any wireless system to overcome. For short distances at low frequencies, 700 MHz will have the greatest success in non-line-of-sight applications. The OBI describes such 4G systems as operating at 700 MHz with cell radius distances of 2, 3, 5 or 8 miles, depending on terrain.

In a typical cellular network configuration, multiple sectors provide coverage in different directions from the base station. Depending on the system design, the same frequency may be used by adjacent sectors or by adjacent cells. An operator may need to implement one or more techniques to minimize interference between sectors and cells. Interference is a major

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contributor to the "noise" factor described above. When neighboring cells are operated by different companies, the options to control interference may be limited.

In any implementation, low signal to noise ratios will first degrade the throughput, lowering the speed ("bandwidth") available to the end user, and if the SNR drops below a certain threshold, the link will become unusable. For LTE, sophisticated modeling and operations management are necessary to predict and adapt to these conditions.

Small cell radii, such as the 2 to 8 mile distances noted above, are necessary to deliver an adequate SNR to the area subscribers. At greater distances, potential users are unable to obtain the desired upload and download speeds. A radio signal at 700 MHz, even though unusable (as designed), will propagate for many miles beyond the defined cell radius. It is common for faint 700 MHz signals to extend well beyond 35 miles from their point of origin. Signals reaching beyond the desired cell radius are considered noise in the analysis and operation of a system, and may significantly degrade the performance of neighboring systems.

Every wireless system experiences a decrease of signal strength with greater distances from the cell site, and an increase in noise. The result is a decrease of SNR, and a corresponding decrease in effective throughput. For example, CDMA systems capable of delivering more than 2 Mbps near the cell site are found to commonly deliver user speeds of only 300 to 800 Kbps.

The actual usable bandwidth capabilities of wireless systems are dependent on many factors, including the signal to noise ratio described above. Estimates of usable bandwidths at speeds of 10, 20 or even 80 Mbps have not been supported in real-world deployments. Practical download speeds with wireless systems appear to be in the 8-10 Mbps range for close proximity to the cell site. A system designed for a throughput of 4 Mbps at the edge of the cell will have limited ability to meet the expanding demands of the typical consumer. High bandwidth internet applications such as medical imaging and file transfer will strain the network. In addition, a single stream of standard definition video will strain the network and a single high-definition video stream will exhaust this 4 Mbps capacity. As the speed requirements for many existing and new applications continue to increase, key data components of the wireless network would require great leaps in technology. Wireless might be an attractive choice compared to fiber or fiber/copper if capacity or consumer use in a local area is not expected to scale quickly or increase by any significant amount over time.

Realities of real world terrain conditions and natural and manmade obstructions vary greatly with the earth's geological features. Good engineering practices require the use of propagation prediction studies and detailed analysis of predicted signal strengths as well as interference from both internal sources (self-interference) and external sources (neighbors). Frequency coordination is a mandatory function of wireless design and deployment.

Another challenge with some wireless solutions is the lack of "real world" testing. For example, LTE systems are in the very early stages of deployment. As a result, there is not a sufficient bank of data available to validate its modeling or speed projections. As a result, techniques needed to optimize the performance of the LTE systems are still being developed by the operators and the users. While a few large carriers are able to invest in large scale systems, smaller operators have limited options to purchase, test and deploy LTE base station equipment.

There are few, if any LTE user devices such as hand held computers or plug-in adapters available for purchase in the US market. Only after commercial deployments by major operators are completed will concerns about the technical viability of these systems be answered by real world test data and urban end-user experiences. While manufacturers will eventually make equipment available to smaller operators, actual cost of the infrastructure and user devices in a rural setting can only be estimated. Today equipment pricing can only be based on the pricing leverage and economies of scale enjoyed by large operators.

WiMAX base stations and CPE are commercially available, and represent a viable short-term technology choice for some operators. Engineers and planners should be aware that the capabilities of this technology may quickly be overshadowed and possibly rendered obsolete by the predicted wide scale use of LTE

Another significant concern is the lack of available spectrum. The OBI Report accurately notes that "no U.S. service provider currently has more than 2x10MHz of contiguous spectrum in the 700MHz band.", while acknowledging that Verizon Wireless and AT&T have significant spectrum holdings. The high costs and lack of access to spectrum is a major hindrance to rural operators who might otherwise consider the use of 4G wireless technologies. Even if new spectrum is released in the near future, the lag time between release of spectrum and availability of low-cost, mass produced equipment will delay usability of such spectrum for many years to come.

Technology changes or upgrades for wireless systems are often forced upon the provider with the incremental technology developments in data speed, coupled with the consumer's move to the fastest speeds available with each new handset replacement. A responsible engineer will anticipate significant advancements beyond the initial technology.

The FCC's Omnibus Broadband Initiative and the Broadband Assessment Model oversimplify the challenges of deploying a stable, reliable and effective wireless system, and make significant assumptions about the as-yet unproven LTE technology.

<u>Wireline</u>

The "value proposition" for wireline systems is the potential to deliver large amounts of bandwidth to a specific location. Wireline systems include all technologies based on the placement of a physical cable between the operators' central location and the customer's premises. This section focuses on 12 kft DSL and Fiber-To-The-Premises (FTTP). Other technologies such as hybrid-fiber-coax may have comparable capabilities, and may be the best choice for specific operators.

12 kft DSL is described by the OBI as Asynchronous Digital Subscriber Line "2+" (ADSL 2+) deployed with a maximum loop lengths of 12,000 ft. ADSL 2+ technology, based on the International Telecommunications Union (ITU) G.992.5 Standard is mature and widely deployed, although typically with 18,000 ft. or longer loops. To convert a system from an 18 kft design to a 12 kft design, the engineer must re-evaluate the size and location of all copper cables in the serving area, and identify new locations for the remote electronic equipment. In a theoretical wire center with the central office at the center of an 18 kft circle, a minimum of 4

new remote cabinets, each with a reach of 12 kft, would be required to replace the original electronics. Each of these remotes would need a high capacity circuit back to the central office. This high capacity link might be accomplished with bonded copper pairs, but most likely would require the construction of new fiber cable to each remote cabinet. Most exchanges have non-ideal geometries, and the number of new remote cabinets would need to be designed for each existing DSL serving area based on these unique local conditions.

The engineer should carefully consider future bandwidth expansion requirements before deploying a 12 kft DSL system, as a requirement to increase system capacity from 4 Mbps to 6 Mbps or 8 Mbps would require another complete redesign effort, purchase of new remote cabinets, and the construction of additional fiber.

FTTP designs currently encompass two major architecture design concepts: Gigabit Passive Optic Networks (GPON) and Active Optic networks. With GPON system, the optical signal is passively split between many users, usually with a maximum ratio of 64:1. In order to maximize each subscriber's bandwidth, many operators do not exceed a 32:1 split. GPON can deliver speeds of 2.4 Gbps on the downlink and 1.2 Gbps on the uplink to be shared by either 32 or 64 subscribers at distances of at least 12 miles, depending on the splitters used. Next Generation XPON networks are expected to increase the available bandwidth to 280 Mbps per user. Compared to active systems, GPON systems require lower fiber counts, and may require fewer miles of new construction in a particular serving area. With an active solution, each user has a direct fiber connection, which enables a much higher ultimate bandwidth capability than GPON. Speeds in excess of 1 Gbps are possible with active networks today. With careful design, OSP facilities may be flexible enough to accommodate either an active solution or a PON solution, or to be migrated from PON to active in the future. Standard engineering practices will consider the fact that the fiber investment will likely be a 20 to 30 year investment while the electronics are a 5-7 year investment.

The engineer should be mindful that demand for copper cable had decreased, and the costs of manufacturing copper cable have increased. As a result, installation of fiber cable is generally a less expensive option compared to copper cable.

The FCC underestimates or ignores the new construction that will be necessary to convert to or deploy a 12 kft Digital Subscriber Loop solution, and does not consider the short economic life span of this bandwidth limited technology.

Backhaul

For any broadband distribution system, the overall planning and design must include consideration of backhaul, or the "second mile" between the distribution electronics and the central facility. All of the distribution systems described above (12 kft DSL, LTE or WiMAX, FTTH) require a high capacity link in this second mile. The two most common techniques include construction of fiber or microwave links.

Fiber construction for the second mile involves the same techniques, challenges and risks of a FTTP system. Fiber systems can be implemented as "protected" with an appropriate choice of

electronics for failover switching. The capacity of a fiber backhaul is usually limited only by the capabilities of the terminal electronics.

Microwave backhaul systems may utilize licensed or unlicensed frequencies, and may or may not be protected. Often a protected terminal includes all of the components of a non-protected terminal, resulting in twice the cost. In congested areas it may be difficult or impossible to obtain licensed spectrum, and the unlicensed spectrum may be affected by interference. More rural areas will have fewer challenges related to spectrum. Microwave antennas may require significant loading capabilities for the tower or support structure, depending on the size and quantity of antennas proposed at a location. Each microwave backhaul link must be individually engineered to ensure that the line of sight is clear and to make sure the system will perform properly in all seasons and all weather conditions. Systems operating on longer links at higher frequencies (18 and 23 GHz and higher) may be significantly affected by weather.

Microwave backhaul is more common with wireless systems as the same tower that is used for the LTE (or WiMAX) antennas might be used for the microwave dish. However, with the backhaul bandwidth requirements required by LTE systems (requiring up to Gigabit bandwidths), fiber backhaul is often the optimal choice. Microwave is less commonly used for FTTP and DSL systems due to the fact that it is more likely that new towers may be required for the microwave antennas.

Interconnections and interoperability with neighboring networks or transiting systems must also be considered when planning network routes and capacity requirements.

The FCC's model does not allow for the multiple real-world challenges of designing efficient and reliable backhaul systems.

Restrictions and Limitation Considerations

As part of the planning and implementation of a broadband system, the engineer must account for "real-world" restrictions and limitation of all types. For wireline systems, these include varying soil conditions, local depth requirements, significant physical or geographic barriers (rivers, railroads, interstates), local planning & zoning restrictions, considerations of planned growth, access to easements or rights of way (or lack thereof), etc.

Good engineering practices include the consideration of alternatives, which may include the use of various routes, techniques or technologies. For example, railroad and interstate crossings tend to be very expensive due to the extra safety precautions and other unique requirements that must be considered. The use of aerial construction along some wireline routes may be a more economical choice compared to buried techniques in areas where buried cables have tight corridors or are expensive to construct. A more expensive choice of utilizing flexible duct as opposed to directly burying a cable may be prudent in congested areas where dig-ins are likely, or where multiple buried utilities are present. Similarly, a longer route may be preferable to a shorter route along busy highways or interstates, to avoid a greater risk to workers and passing drivers both during construction and subsequent maintenance.

Construction costs in rural areas differ greatly and conditions could vary widely within the same serving territory. In some areas, rural construction is relatively inexpensive (cable plow with

minimal directional boring). In others, it is expensive (rocky areas requiring rock saw or congested corridors). There is no "ubiquitous" set of rural construction costs that apply to every situation.

During the design of a wireless system, local Planning and Zoning requirements may be imposed, including height restrictions, masking or hiding antennas, landscaping, etc. These types of special accommodations often result in delays and significantly increased costs. Often existing towers are found to be inadequate due to limitation of structure loading, ground space, height, or specific location. The owner of an existing tower is not obligated to lease space, and may withhold permission either for competitive reasons or in an effort to obtain higher rental fees. Terrain conditions and natural and manmade obstructions vary greatly from location to location, often changing significantly over a distance of just a few hundred feet. Two towers in close proximity may yield very different coverage characteristics.

When considering the implementation of a fixed wireless system, the engineer will consider the challenges of using directional antennas for customer locations. These types of antennas are often used where an indoor unit is not capable of receiving a usable signal. Typically a directional antenna will be installed on the outside of a building or on a pole or tower, usually by the service provider. Costs for installing a fixed wireless system at the customer premises are often greater than the cost of the electronics, and may significantly affect the economic viability of a network deployment.

The Broadband Assessment Model proposed by the FCC cannot anticipate and resolve the multiple challenges and complications faced by operators and engineers on a daily basis, let alone track these challenges as they evolve over time.

Example Technology Comparison - FTTP vs. 12K DSL or LTE

Engineers should test assumptions when considering a technology choice. As an example, a 12 kft DSL system may be more expensive than a FTTP design in thinly populated rural areas along roads that radiate away from a population center. With loaded copper plant, the loops may extend out to 20 miles or more. Consider a road, 20 miles in length, leaving a community and generally following the bottom of a river valley. For such a case, the road is not straight but instead follows the twists and turns of the valley. It is common for farms and ranches to be located along the road and in the valley, with a few located in the higher ground on spurs from the main road. To generalize the design parameters, assume that the node electronics for both 12 kft DSL and LTE are spaced 4 miles apart to allow a reach of 2 miles in each direction.

The minimum number of nodes necessary to serve this area is 5, with the first located 2 miles out of town, and the others at 6, 10, 14 and 18 miles respectively. The "second mile" fiber necessary to support all five nodes will require 18 miles of fiber construction. The incremental cost to extend fiber to each home along the roadway is minimal as the fiber drop needs only be extended from the nearest point on the road to the home. Homes located on the higher ground, off "spur" roads will require varying amounts of construction, depending on the exact geography. In a carefully designed system, it may be possible to provide broadband to these "spur" homes with DSL technologies, however there is no known wireless implementation that will economically

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extend from a backbone to serve one or two homes. Costs to serve these homes are clearly higher than a comparable number of homes located in a densely populated area such as a town.

The cost to serve this same area with a 12 kft DSL design would presumably be lower due to reuse of existing copper drop cables; however the DSL network would have a limited bandwidth expansion capability.

The cost to serve this same area with an LTE design would presumably be lower if the cost of installing fiber drop cables exceeded the cost of installing Fixed Wireless Access CPE equipment. In many real-world examples, towers will not exist at the necessary strategic locations, and even if they did, intervening terrain will likely affect the coverage capability of the towers.

The broad assumptions included in the FCC's Broadband Assessment Module do not allow for local conditions or special considerations which may drive up the cost for all possible solutions.

Engineering Economics

Proper engineering practices require the engineer to ensure that engineering economic principals are considered and reviewed with the finance, operations and marketing resources for any project. Each component of the system will have a different economic life expectancy. Most electronic systems have an economic life of about 7 years. Some highly evolving products, such as personal computers and wireless handsets, have a turn-over of 2-3 years. Other, more stable technologies may reasonably be expected to function for 10 to 13 years, depending on the useful life of the equipment. The assets with the longest economic lives are cable plant and towers, which may be useful for 30 years or longer. It is reasonable to assume a lifespan of over 20 years for fiber and towers. If an economic study is to consider the value of a system over a 20 year period, a good economic model will account for the replacement of electronics at least twice during this period (once every 7 years). Mobile wireless systems have experienced a particularly robust evolution, moving from analog cell phones to "2nd generation" digital in 1996, 2-1/2 G (text messaging and e-mail) in 2000, 3 G (web browsing and picture messaging) in 2005 and 4G in 2009. With roughly four years between generational advances and no end in sight, it is reasonable to anticipate that the emerging 4G LTE systems will be replaced within 7 years.

Ideally the design of broadband systems could be simplified to a pre-defined process, even modeled by a set of standardized equations to identify least cost solutions. Preliminary estimates of a project cost may be based on relatively simple mathematics, as an example. The practicing engineer recognizes that such an approach can only be applied to an accurate, consistent and repeatable data set. During the design process, the engineer will consider the whole set of unique requirements and limitations applicable to a specific service area. As more variables are introduced to a model, the likelihood and magnitude of an error increases dramatically. The National Broadband Plan refers to a highly sophisticated and complex analytical model for estimating construction and operating costs for broadband systems, to be applied across the nation. Application of a generic financial model may result in a project budget that limits the ability of the engineer to implement a system capable of delivering the desired broadband services to the targeted service area. In addition, the application of a generic financial model

may result in a more expensive solution because the modeled solution was under-designed and reached the end of its useful life before reaching the end of its economic life.

Environmental Considerations

Rural network constructions must consider the cost and delays associated with special studies required to secure construction permits to address issues with all types of systems. In particular, the National Environmental Protection Act criteria must be addressed. These include a site-specific examination of the potential impact to endangered species, culturally sensitive areas, historic impacts, wetlands, state or federal ownership, tribal or Native American needs, and social impacts of construction activities. As part of the engineering process, the engineer will incorporate the requirements for these entities into the overall project analysis.

Conclusion

The application of good engineering practices result in the best long term use of available capital, provide the operator with the maximum opportunity to accomplish the intended goals, and target the available technologies to the specific needs of the customer base and/or general public. The examples cited in this paper illustrate the difficulty of applying a single set of criteria nationwide, and emphasize the evaluation of local user needs, local restrictions and limitations as well as the alternatives available with the various technology options. The Broadband Assessment Model cannot anticipate or predict the real world deployment challenges faced by engineers and service providers in the provision of broadband services to all the people of the United States. As a whole, the National Broadband Plan underestimates the bandwidth needed in rural areas, and overlooks the realities and complexities of creating sound designs and sustainable, usable broadband systems.

Respectfully Submitted;



ASSOCIATION OF COMMUNICATIONS ENGINEERS

Thomas B. Fulton, P.E. President

Communications Engineers Inc. Charles A. Watts, P.E. Springfield, Illinois

Communications Network Engineers, Inc. Gary M. Larson, P.E. New London, Minnesota

Engineering Associates Tom Harter, P.E. Alpharetta, Georgia

Fail Engineering Rob Sandhaus, P.E. Bay Springs, Mississippi

Finley Engineering, Inc. Steve Senne, P.E. Lamar, Missouri

Fulton Engineering, Inc. Thomas B. Fulton, P.E. Broomfield, Colorado

HunTel Engineering Leo Zoucha, P.E. Blair, Nebraska

Ladd Engineering Charles Landstreet, P.E. Fort Payne, Alabama McCall-Thomas Engineering Company Ryan J. Smoak, P.E. Orangeburg, S. Carolina

Mid-State Consultants, Inc. Michael Riley, P.E. Nephi, Utah

Monte R. Lee & Company Lynn Merrill, P.E. Oklahoma City, Oklahoma

N-Com, Inc. Tom Lewis, P.E. Lubbock, Texas

Palmetto Engineering Chris L. Roland, P.E. St. Matthews, S. Carolina

RVW, Inc. Robert J. Tupper, P.E. Columbus, Nebraska

Vantage Point Solutions John M. DeWitte, P.E. Mitchell, South Dakota



March 14, 2011

AARP Kansas 555 S. Kansas Avenue Suite 201 Topeka, KS 66603

1-800 -48-3619 F 785-232-8259 TTY 1-877-434-7598 www.aarp.org/ks

The Honorable Carl Holmes, Chair House Energy and Utilities Committee

Reference: Sub Senate Bill 72 – AT&T Kansas 2011 Modernization Legislation

Good morning Chairman Holmes and members of the House Energy and Utilities Committee. My name is David Wilson and I am the Volunteer State President for AARP Kansas. Thank you for this opportunity to express our comments on Sub SB 72, the Proposed 2011 Modernization Legislation. AARP opposes Sub SB 72 because it will allow telephone companies to raise rates for service where there is little competition and eliminate necessary consumer protections. Overall, Sub SB 72 fails to provide a meaningful benefit to consumers.

AARP has more than 340,000 members living in rural and urban Kansas who rely on phone service to meet basic needs. Sub SB 72 will disproportionately impact AARP members and other Kansans aged 50-plus who live on fixed and low incomes, as well as other lower-income households that rely on basic stand alone telephone service. Telephone communication is a basic necessity that allows older people to maintain social contact, preserve health and safety, and gain assistance in an emergency. Even as more people use wireless phones and "cut the cord," people age 65 and older are more likely than any other age group to have traditional wireline telephone service. Older households (age 65 and older) spend about twice as much of their income (4 percent) as younger households (2 percent) just to use the average amount of telephone service.

Basic Local Phone Service is Not Competitive

Residential customers have a limited choice of providers, especially in rural areas. The choices available to residential customers exist only for those consumers who are interested in purchasing a package of multiple services, such as phone service with additional features, including video and Internet. Those who rely on stand alone basic service have little or no price-comparable options, and we have no indication that this will change.

HOUSE ENERGY AND UTILITIES

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While some wireless carriers may be marketing their service as a competitive local service alternative and some consumers are "cutting the cord," the high majority of consumers use wireless much more as a supplement to, not an alternative for, wireline local service. Research suggests that about 17.5% of consumers have cut their wireline cord, with most of these being age 30 or under. In contrast, only 2.8% of persons aged 65 and older live in households with only wireless phones. It's important to bear in mind that, in contrast to basic local telephone service, wireless service is generally more expensive, the service quality is not nearly as good, and consumers are charged for incoming as well as outgoing calls.

Similarly, Voice over Internet Protocol (VoIP) service is not a true competitor to basic local phone service. VoIP is inherently more expensive than local telephone service, since a consumer must first have and pay for a monthly broadband connection in order to subscribe to VoIP. Consumers also have to put up with additional hassles that are not an issue for wireline subscribers, such as the risk that VoIP service will not function during a power outage, a nuisance that does not happen with wireline service.

Sub Senate Bill 72 Will Result in Rate Increases

Because Sub SB 72 eliminates rate regulation for electing carriers, we are confident that rates will increase if this bill passes, because that's just what has happened in other states that have adopted similar measures. A 2008 survey conducted by the National Association of State Utility Consumer Advocates found rate increases in all but two of the surveyed jurisdictions (no rates were reduced). These rate increases ranged from \$2 to \$3.22 per month for basic service to increases as high as 185% for non-basic services (which include features such as Caller ID and Call Waiting). In 2010, AT&T raised basic service rates in California by 22% following a 23% increase in 2009. Charges for non-basic service also increased by as much as 226%.

Sub SB 72, if passed, will hit low-income Lifeline customers especially hard. The Lifeline discount that is meant to keep phone service affordable for lower income households reduces phone bills by applying a discount to the current rate. The discount does not rise as phone bills increase. As basic service rates rise, the discount will become

less significant and we expect that even Lifeline rates will become unaffordable for some consumers.

Moreover, rates in rural parts of the state will almost certainly rise. An electing carrier must price stand-alone basic service in rural areas no higher than in urban parts of the state. Because urban rates are currently higher than rural rates, the rates for rural customers will most likely increase to match the higher rates paid by urban customers. More importantly, without a rate cap, this ceiling on rural states is meaningless, because urban rates will continue to rise.

Sub Senate Bill 72 Eliminates the "Carrier of Last Resort" Obligation

Carrier of last resort (COLR) is a protection that has existed for decades which ensures that consumers will always have access to telecommunications service. Sub SB 72 removes the COLR obligation in urban areas. Consumers could be left without access to viable or affordable phone service..

Conclusion

The deregulation permitted in this bill is not justified by current market conditions and will have a detrimental impact on consumers, especially those who live on lower and fixed incomes. If this bill passes, our members and others who rely on basic service are sure to see significant price increases. AARP urges you to vote against Sub Senate Bill 72. At a minimum, the current cap on price increases for basic local service should be maintained and the COLR obligation should not be eliminated in urban and larger, non-rural exchanges to ensure that Kansas consumers are adequately served into the future.

Thank you for the opportunity to offer comments in opposition to Sub Senate Bill 72.

David Wilson

"Advocating for Quality Long-Term Care" since 1. 5

Kansas Advocates for Better Care

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House Energy and Utilities Committee

March 16, 2011

Dear Chairman Holmes and Committee Members,

Kansas Advocates for Better Care is a not for profit organization with 650 members in Kansas. Our mission is to advocate on behalf of frail elders living in nursing homes and assisted living facilities in Kansas. On behalf of our members and the elders in long-term care facilities we respectfully **oppose Sub SB 72**, the Proposed 2011 Modernization Legislation.

Elders more often than the rest of us in Kansas, rely on land lines as their sole or primary phone service. This is especially true for the 18,000 elders who live in Kansas nursing homes. Each Kansas county has at least one nursing home and most of the residents who can afford a phone, have a land line in their room. It is a lifeline, allowing them to stay connected to family and friends. Staying connected to others and the relationships that have sustained them for a lifetime, is critical for their mental, emotional and physical well-being. The telephone is often that lifeline. A familiar, reliable, affordable link to children and grandchildren living out of state, to neighbors and extension club members, to fellow church members. Should an elder be abused or neglected in a nursing facility, using their phone may be a lifeline of a different sort.

In rural areas of the state such as Coldwater or St. Francis there is little if any real competition for service which will make these areas more likely to see increase in rates. In protections from increases currently in place and the assurance of service will both be gone for elders living in the many non-urban counties of Kansas.

The assumption that elders will transition to cell phones or to using Voice over Internet phones is not well founded. Try as I might, I could not get my mother to use the cell phones I bought for her, and she took great delight in pointing out to me their unreliability when we were out of service range, which happens frequently in the hills and on the plains in the west.

Additionally we would request that you not remove the utility's responsibility as carrier of last resort. To do so would in essence deprive many elders of phone service and vital social and emergency connection.

Adults living in long-term care settings have lost many things, they should not lose their ability to keep up with friends and loved ones by talking on their phones.

Thank you,

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HOUSE ENERGY AND UTILITIES

DATE: 3/16/2011

ATTACHMENT 9

913 Tennessee Suite 2 Lawrence, Kansas 66044-6904

phone: 785.842.3088 fax: 785.749.0029 toll-free: 800.525.1782 e-mail: info@kabc.org website: www.kabc.org