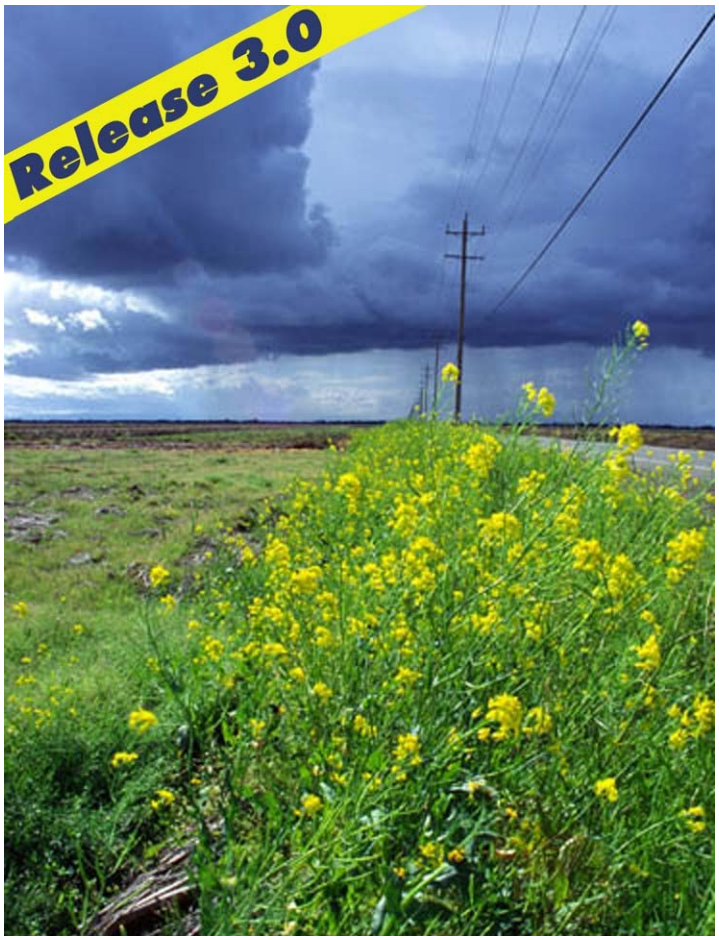
Universal Service

Rural Infrastructure at Risk



McLean & Brown

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Preface

In March of 2005, McLean & Brown released the initial version of *Universal Service – Rural Infrastructure at Risk* . In April of 2006 we published Release 2.0. The current Release 3.0 of this document contains updated data, charts and tables, as well a new section describing recent Public Notices releases by the Federal-State Joint Board on Universal Service that signal the potential for significant changes in federal universal service policy . Major policy findings contained in Release 3.0 include:

- **Support to wireless ETCs continues to grow, and is now well over $1 billion annually. The FCC has projected that annual support to competitive ETC will be approximately $2.5 billion by 2009 if major changes in USF policy are not implemented.**
- **While support to wireless ETCs grows dramatically, support to incumbent wireline carriers has remained essentially constant since 2002.**
- **In many high-cost rural study areas two, three or as many as six or more wireless carriers have been designated for receipt of high-cost support.**
- **The Current ETC designation and fund distribution process is still fatally flawed and must be fundamentally reformed.**
- **On May 1, 2007 the Federal-State Joint Board on Universal Service released a Recommended Decision and Public Notice signaling potentially significant changes in universal service distribution policy, including an end to the "equal-per-line" support rule.**
- **On September 6, 2007 the Joint Board issued another Public Notice providing further insight into the major shifts in universal service policy that are under consideration.**

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Executive Summary

Universal service – the concept that all Americans, no matter where they live, should have access to high-quality telephone service at reasonable rates – has been a hallmark of federal telecommunications policy for over 70 years. The principle of universal service was initially codified in the Communications Act of 1934, and expanded upon in the Telecommunications Act of 1996 ("1996 Act"). As Congress considers changes to the 1996 Act in light of current technology and the evolving regulatory environment, the principle of universal service should remain a hallmark of our telecommunications policy. But to accomplish that goal, the current universal service program needs reform.

The 1996 Act adopted the twin goals of universal service and competition as a means to promote advanced infrastructure deployment to benefit all Americans. Unfortunately, in implementing the universal service provisions of the Act, regulators at both the federal and state level focused almost entirely on "creating competition" and lost sight of the true purpose of universal service funding which is to ensure that Americans living outside of major population centers have access to comparable services at similar rates as those enjoyed by Americans living in metropolitan areas. The consequences of this misplaced priority are now becoming evident. Telephone consumers across the country, both urban and rural, are being called on to provide rapidly escalating amounts of support to new entrants, but these new entrants have limited requirements to use these funds for expanding their infrastructure into unserved high-cost areas. The ones hurt by these policies are rural Americans who reside in some of the most remote, high-cost

regions of the nation. Any backsliding from the goal of universal service puts these Americans at risk in the information economy. The universal service fund has enabled them to have access to basic and advanced telecommunications made possible by networks built by rural telephone companies. The question for Congress now is: Will the networks that provide consumers with this access remain viable in the face of escalating demands on the fund?

The promotion of infrastructure development stands out as one of the foremost objectives of the 1996 Act. The 1996 Act's Conference Report states the intent of Congress to establish a "national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunication and information technologies and services to all Americans."[1] For those areas that can economically sustain competition, Congress adopted policies in the 1996 Act that use it as a prod to spur infrastructure development. But in those high-cost areas that need support, Congress took a different approach and adopted a universal service funding mechanism to ensure that rural Americans also would realize the benefits of advanced infrastructure deployment that is so critical to rural economic vitality and the quality of life in the 21st century. Rural telephone companies, which for decades have delivered on the goal of universal service by fulfilling their "Carrier of Last Resort" obligations, have been at the forefront of deploying advanced infrastructure to serve rural communities.

There has been much talk recently about new services, such as VoIP, that offer consumers a new way to communicate. Those services may well be exciting, but what is not as well understood is that the rural networks made possible by the universal service fund in the vast majority of cases carry VoIP services to rural consumers. Simply put,

[1] Conf. Rept. No. 104-104, Telecommunications Act of 1996, at 1.

VoIP requires a broadband connection to the Internet, and for many rural consumers that connection occurs over the local telephone network. This network allows many rural VoIP customers to connect to the Internet, and allows all VoIP users to reach rural businesses and residential subscribers that do not use this service. Without this infrastructure in place, the service offerings of VoIP providers would be dramatically limited. In many areas this network also serves as the backbone that ties together the towers utilized to provide wireless services.

In recent years there have been a number of initiatives in Congress to reform or otherwise address the universal service fund. Some have gone as far as to suggest that the purpose of universal service has been addressed and the fund should be eliminated altogether. Others have suggested that the fund be capped, or that the fund be divided up into “Block Grants” that would be administered by the states. Other proposals have called for a redefinition of who should be paying into the fund and how the fund should be distributed to its recipients.

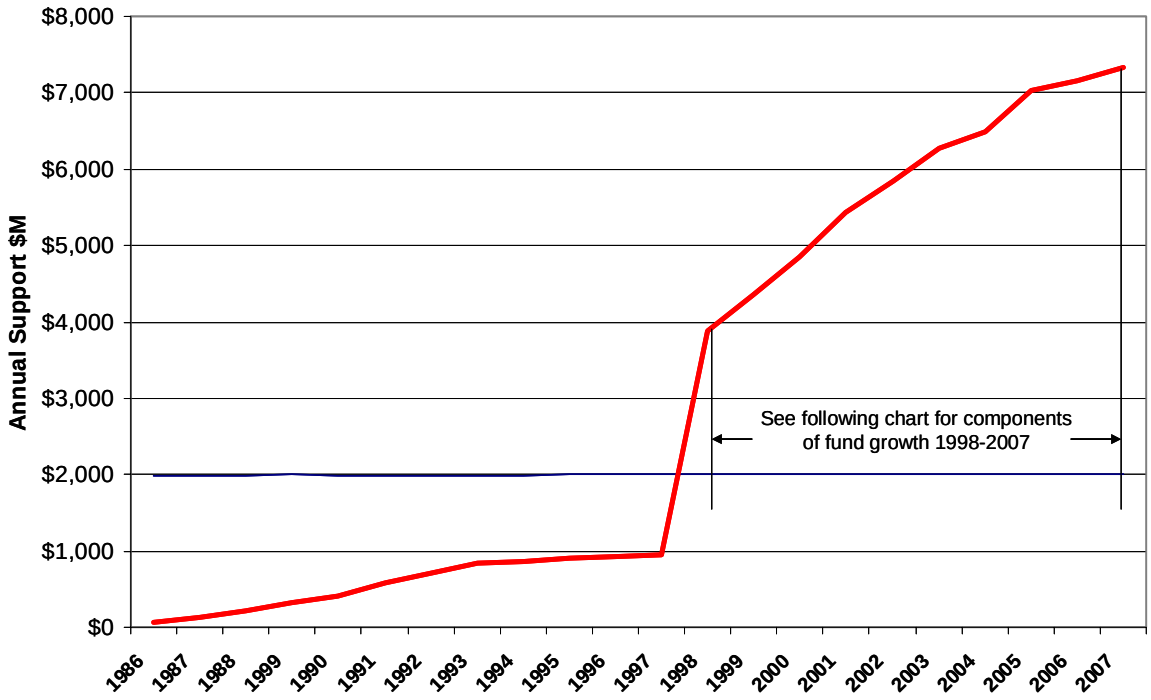
The long-term ability of rural America to continue to enjoy affordable access to basic and advanced telecommunications services is in doubt, because the universal service fund that supports the rural telecommunications infrastructure is headed towards crisis. The combination of a collection mechanism that is no longer sustainable, and growing demands on the fund’s resources, threaten the sustainability of the USF. The system needs reform now to prevent irreparable harm to this vital national policy which has served our country so well. Here are the factors threatening the survival of universal service:

THE CURRENT USF CONTRIBUTION MECHANISM IS NOT SUSTAINABLE

- The USF Contribution Factor for the fourth quarter of 2007 is 11.0%.
- The current USF collection mechanism, based on interstate and international revenues, is unsustainable, as revenues from these services are declining.
- The mechanism is particularly unsustainable if IP-enabled services such as VoIP are not included in the funding base.
    - IP-enabled services are becoming the next generation of telecommunications.
    - These services depend on ubiquitous and affordable network connections provided by rural telephone company networks.

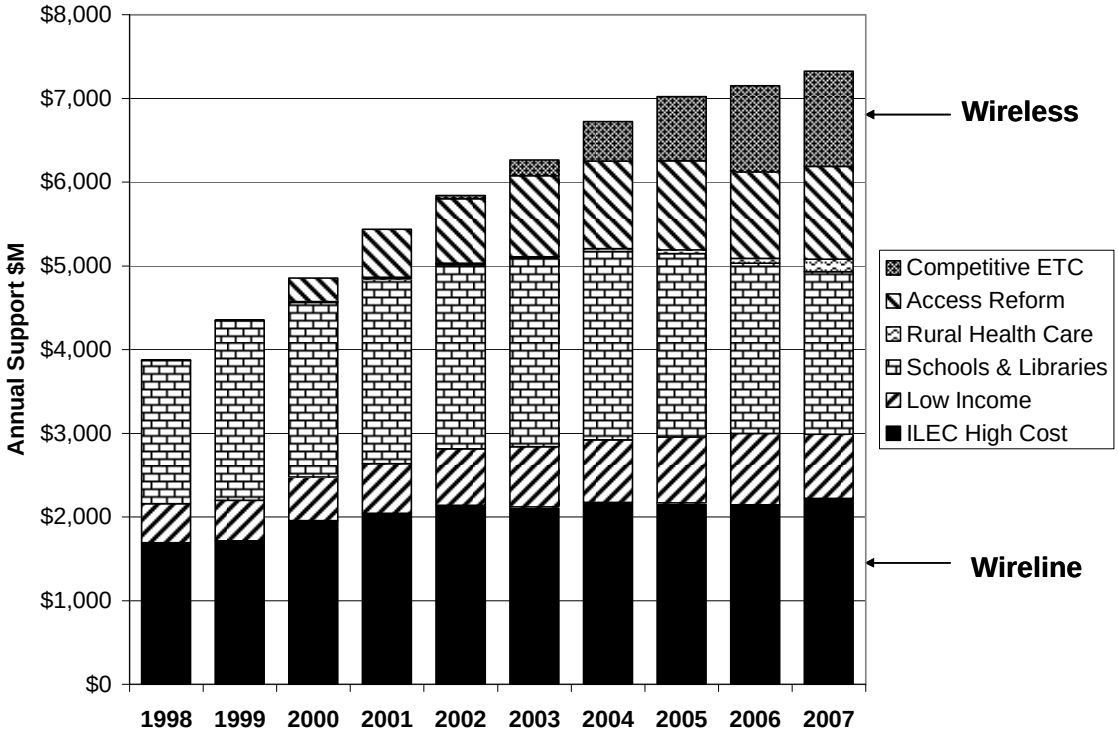
RAPID GROWTH OF THE USF

- The USF has grown from $955 million in 1996 to over $7 billion in 2007.
- This chart illustrates the dramatic growth in the fund since 1996:

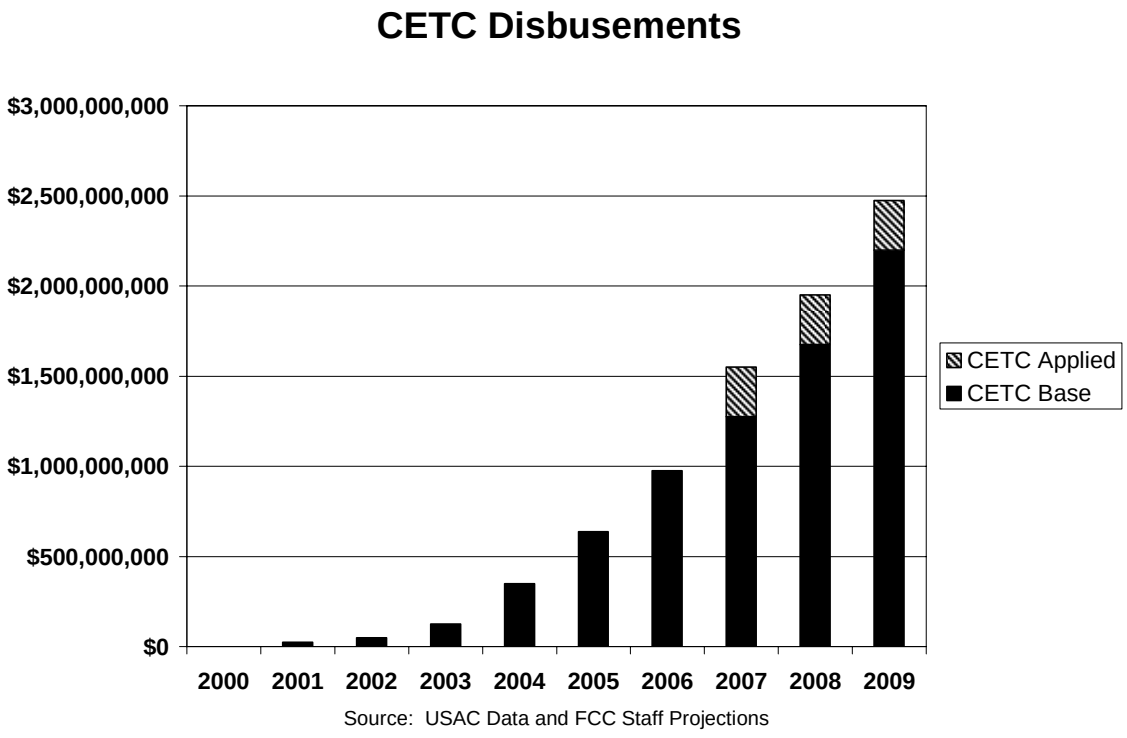


- This rapid growth further adds to the unsustainability of the fund.

COMPONENTS OF FUND GROWTH



- From 2002 through 2007, support to wireless ETCs has grown dramatically, while high-cost support to incumbent wireline carriers has remained stable.



Source: USAC Data and FCC Staff Projections

WIRELESS ETC DESIGNATIONS

- Support to CETCs now is well over $1 billion annually, and the FCC projects that unless significant changes are made it will be $2.5 billion or more annually by 2009, overwhelming current USF resources.
- Competitive ETCs (CETCs) continue to be approved at a rapid pace, with no clear evidence that they advance the goal of universal service.
- In many ILEC study areas multiple wireless CETCs have been designated:
  - 58% of study areas have two or more wireless CETC (in addition to the wireline incumbent).
  - 29% of study areas have three or more wireless CETCs.
  - Supporting multiple ETCs in the same rural area further grows the fund without a commensurate growth in consumer benefits.
  - This also raises the inevitable question of how many ETCs or Carriers of Last Resort (COLR) consumers need, or can afford, in high-cost rural areas.

IN MARCH OF 2005, THE FCC MADE IMPROVEMENTS IN THE ETC DESIGNATION PROCESS

- The FCC adopted a set of mandatory minimum criteria for ETC designation.
- These requirements only apply to cases where the FCC itself makes the ETC designation, and states have been encouraged to adopt similar policies.
- The FCC has required ETCs that it has previously designated to submit plans consistent with these standards by October 1, 2006.
- These changes still fall short of ensuring that Congressional universal policy goals are met.

THE CURRENT ETC DESIGNATION AND FUND DISTRIBUTION PROCESS IS FATALLY FLAWED AND MUST BE FUNDAMENTALLY REFORMED

- Wireless carriers continue to receive hundreds of millions of dollars of "high-cost" support for their existing customer base, with limited requirement that they expand their network infrastructure into currently unserved high-cost areas.
- Basing funding to CETCs on the per-line support provided to the wireline incumbent is not economically rational and invites abuse.
- There has been little serious consideration of the costs and benefits of the current system for CETC designation.
- The current ETC designation process does not provide the appropriate incentives for high-cost rural wireless infrastructure investment.
- Fundamental reform of the USF distribution process is necessary to assure that rural consumers benefit from telecommunications infrastructure investment in high-cost rural areas.

THE FCC SHOULD IMPLEMENT THE FOLLOWING POLICY CHANGES TO ENSURE THAT UNIVERSAL SERVICE GOALS CONTINUE TO BE ACHIEVED.

1. **Fix the USF collection mechanism:**
   - A more sustainable vehicle must be developed to collect universal service funds;
   - The base of contributors must be broadened to include all communications service providers, including VoIP providers, that benefit from the availability of ubiquitous and affordable network connections;
   - The USF collection mechanism must be fundamentally reformed – perhaps through assessments on telephone numbers and high-speed connections;
2. **Establish uniform criteria for identifying rural areas that can support just one Carrier of Last Resort:**
   - The experience since the 1996 Act shows that not all areas can sustain multiple carriers without massively inefficient support;
   - Use a rebuttable presumption in high-cost rural areas that support should only be provided to one Carrier of Last Resort (COLR);
   - Target high-cost support to high-cost rural areas where infrastructure would not otherwise be economically viable;
   - Do not provide high-cost support to densely populated areas that can sustain multiple service providers without explicit funding support.
   - Incentives should be created to accelerate the development of infrastructure capable of supporting broadband services in high-cost rural areas.
3. **Establish separate funding mechanisms for wireline and wireless carriers:**
   - Wireline and wireless service are, for most consumers, complimentary products; each valued by consumers for different reasons.
   - Where it is found to be in the public interest, a separate funding mechanism should be established to provide support for wireless infrastructure in high-cost rural areas:
     - Goals and objectives specific to wireless infrastructure and services should be established;
     - Support should be provided to one wireless COLR in each service area based on that carrier's reasonable costs of achieving defined policy goals for rural wireless infrastructure investment;
4. **Reform intercarrier compensation consistent with universal service goals:**
   - Rural carriers have a right to fair compensation for use of their networks;
   - Mandatory "bill and keep" would harm rural consumers. It would add an additional $2 billion of demands on the USF and could result in higher local service rates in rural areas;
   - The appropriate metric for intercarrier compensation reform, as with USF reform, should be the ability and incentives that it provides for investment in rural telecommunications infrastructure.
   - The "Missoula Plan," filed with the FCC on July 24, 2006, provides a comprehensive plan for intercarrier compensation reform that is consistent with the universal service principles contained in this white paper.

CERTAIN PROPOSALS FOR LEGISLATIVE AND/OR POLICY REFORM WOULD ACTUALLY MAKE THE SITUATION WORSE FOR RURAL CONSUMERS

- **Cap the Size of the Fund**
  - The 1996 Act requires that universal service funding be "sufficient."
  - The Act also requires that universal service be an "evolving" level of service.
  - Placing arbitrary caps on the size of the fund will hinder policy makers in achieving these goals and harm rural consumers.
  - An arbitrary cap on the size of the fund would make it difficult, if not impossible, to achieve the national goal of ubiquitously delivering broadband services to rural consumers.
- **Convert the Fund to Block Grants to the States**
  - A block grant system would increase the regulatory bureaucracy and result in unequal service to rural consumers across the nation.
  - It would inevitably lead to a political food fight among the states for funding resources.
  - Policy resources would be better spent defining national policy goals, and administering a system that encourages investment in rural telecommunications infrastructure in the most efficient manner possible.
- **Provide Funding to Individuals in the Form of Vouchers**
  - Telecommunications networks are essential to the delivery of services to rural consumers.
  - Networks require substantial investment in fixed facilities.
  - If funding is provided directly to consumers it is highly unlikely that advanced telecommunications networks will be built in high-cost rural areas.
- **Determine Funding Levels Through an Auction Process**
  - An auction process ignores the critical nature of the quality of rural infrastructure to deliver advanced services to consumers.
  - An auction system that awards universal service funding to the low bidder will lead to a "race to the bottom" that will harm rural consumers.
  - If high cost funding is targeted to only high-cost areas, and separate wireline and wireless funds are established, then current incentives for abuse of the fund will have been greatly eliminated.
- **Eliminate Funding in Study Areas With Multiple Providers**
  - Even in the most rural areas of the country, service in towns and areas where population is clustered is relatively inexpensive, and multiple providers can prosper.
  - It is the consumer at the outer edge of the service territory, in the most remote and sparsely populated areas, for whom universal service is intended.
  - The universal service system exists to provide the resources to serve the consumers at the extremes of the network.
  - Support should be provided to the one carrier that assumes Carrier of Last Resort responsibilities to provide service to all rural consumers in the service area.

RECENT PUBLIC NOTICES ISSUED BY THE JOINT BOARD INDICATE THAT MAJOR CHANGES MAY SOON OCCUR IN FEDERAL UNIVERSAL SERVICE FUNDING POLICY

- On May 1, 2007 the Federal-State Joint Board on Universal Service issued a Recommended Decision in which the Joint Board:
  - Recommended that the FCC impose an interim, emergency cap on the amount of high-cost support that Competitive ETCs (CETCs) may receive in each state based on the average level of CETC support distributed in that state in 2006.
  - Recommended that the Joint Board and the FCC further explore comprehensive high-cost universal service distribution reform.
  - In a companion Public Notice, the Joint board sought comment on various proposals to reform the high-cost distribution system including:
    - Reverse auctions;
    - GIS technology and network cost modeling;
    - Disaggregation of support;
    - The basis for CETC support, including whether the FCC should replace the current equal support rule with a requirement that CETCs demonstrate their own costs in order to receive support;
    - Adding broadband to the list of supported services.
  - The Joint Board committed to making further recommendations regarding comprehensive high-cost universal service reform within six months.
- On September 6, 2007, the Joint Board released a Public Notice in which it stated that it is taking a fresh look at high-cost universal service support, and has tentatively agreed that:
  - Support mechanisms for the future will focus on voice, broadband and mobility;
  - In addition to the principles set forth in the statute, support mechanisms for the future will be guided by the principles of cost control, accountability, state participation, and infrastructure build out in unserved areas;
  - The equal support rule will not be part of future support mechanisms.

I. BACKGROUND AND INTRODUCTION

A. The Origins of Universal Service

Universal service – the concept that all Americans, no matter where they live, no matter how costly they may be to serve, should have access to comparable services to those available in urban areas, at comparable prices – has been a hallmark of federal telecommunications policy for over 70 years. The principle of universal service was initially codified in the Communications Act of 1934, which states in its preamble:

> …to make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communications service with adequate facilities at reasonable charges….[2]

The concept of universal service stems from the telephone pioneers in the early part of the last century who reasoned that the telephone network became more valuable to everyone as each additional subscriber was connected to it. The strategy of these pioneers and policymakers was to make the telephone so convenient and so affordable that every working family could have a phone in their home. In order to make the price of basic residential service affordable to average Americans, the industry and its regulators developed a pricing strategy that overpriced long distance services and business services so that basic residential service would be affordable to all consumers.

One of the major challenges in achieving the goal of universal service was getting affordable telecommunications services to consumers in remote rural areas of the nation. The provision of telephone service in sparsely populated rural areas is very costly. Indeed, in the early days of telephony, the Bell System network was built in the cities and towns, but stopped when it could no longer be economically provisioned due to low

[2]Communications Act of 1934, § 1

customer density, great distances between consumers, or the difficult nature of the terrain. In most cases where an area is served by an independent company today, it is because at some time in the past Bell chose not to serve it – precisely because it was too costly for them to serve. Thus, the thousand or more incumbent rural carriers in existence today reflect an era of self-help when rural communities saw the need to have the same communications links as their urban neighbors and started telephone companies to accomplish that. To enable these small rural carriers to continue to meet the needs of rural consumers, policymakers developed the universal service support system that we know today.

Until the break-up of the old AT&T in 1984, the high cost of supporting rural telephone networks was administered internally within the telephone industry. By mutual agreement, all telephone companies pooled their long distance revenues, and each company received recovery of its costs from this "Division of Revenue" process. The AT&T divestiture separated the local telephone operations from the long distance operations of the old Bell System, and replaced the Division of Revenue process with a system of "access charges." These access charges were billed by local telephone companies to long distance or "interexchange carriers" for providing the local connections necessary for originating and terminating long distance calls. One of the problems that this change created, however, was that the higher costs of serving rural areas that were previously hidden in the toll pooling process were now exposed in higher, cost-based access charges. If rural companies were to set their access prices based on the costs they had previously recovered through the Division of Revenue process, then long distance companies would have little incentive to serve high-cost rural areas. If these

costs were shifted to end-user subscribers, then rates would rise to unaffordable levels, violating one of the basic tenets of universal service.

To address these concerns, and to enable rural carriers to deploy infrastructure in high-cost areas to meet the needs of rural America, a system of explicit universal service support mechanisms was created in the 1980s. These mechanisms have enabled rural telephone companies to invest in infrastructure to deliver basic and advanced telecommunications services to even the most remote and high-cost areas of America. Without this support, such investment would be too risky and recovery too uncertain. These universal service mechanisms help to ensure that all Americans have at least one Carrier of Last Resort (COLR) capable of providing basic telephone service wherever they may live.[3]

In recent years universal service funds have aided in the development of a telecommunications infrastructure that provides growing numbers of rural consumers with access to broadband and other advanced services, comparable to those available in urban areas. This mission, not yet achieved, is critical because advanced telecommunications services are the economic life-blood of modern communities. Like the rivers and canals of the 18th century, the railroads of the 19th century, and the interstate highways of the 20th century, advanced telecommunications infrastructure gives people, communities and enterprises the tools needed for success in the 21st century. Rural economic development is critical for our country, and the wide deployment of infrastructure capable of delivering broadband services will be a key element of revitalizing rural economies. The continued viability of the universal service

[3] In addition to the support mechanism for high-cost areas, the early USF contained a Lifeline Assistance component to provide offsets to monthly Subscriber Line Charges for low-income individuals.

fund will be critical to enable investment in the telecommunications infrastructure that will help deliver broadband services throughout rural America.

B. The Purpose of Universal Service Support

The purpose of high-cost universal service funding is to encourage and support infrastructure investment in rural areas that would not otherwise be able to support such investment. Two factors play a primary role in making telecommunications services more costly to provide in rural areas – distance and density. The farther a rural customer is from the population centers, the higher the cost of reaching the customer. Also, the more sparsely populated the area, the higher the costs to connect individual customers to the network. (Additional information on the relationship of distance and density to the cost of serving rural areas can be found in Appendix A.)

The extent to which rural telephone companies rely on high-cost funding to serve rural consumers can be clearly seen in the distribution of the current high-cost fund to incumbent wireline carriers. The largest amount of support goes to a very small percentage of the lines and study areas served by carriers that operate in the most remote and sparsely populated parts of the nation. Chart 1 shows the distribution of high-cost funding to incumbent wireline carriers (rural and non-rural) by decile groupings, ordered by the amount of support received per line.[4]

[4] Each decile represents a ten percent "slice" of the universal service funding going to wireline incumbent carriers. Support data and lines are taken from USAC HC01 and HC05 for 1Q05. Serving area is developed using study area boundaries from MapInfo Exchange Info Plus. Density is shown as lines per square mile. A full explanation of the factors that make serving rural areas more costly can be found in Appendix A.

ILEC Recipients of Universal Service Funding

Decile	Study Areas	Cumulative Percentage		Average Density	Average Monthly Support per Line
		HC Fund	Lines		
1st	113	10%	0.1%	0.6	$123.40
2nd	147	20%	0.4%	1.7	$57.22
3rd	158	30%	0.8%	2.2	$37.44
4th	181	40%	1.3%	3.4	$27.63
5th	209	50%	2.0%	7.4	$20.47
6th	208	60%	3.1%	9.4	$14.25
7th	175	70%	5.1%	18.7	$8.78
8th	76	80%	7.3%	32.4	$5.29
9th	76	90%	14.1%	40.3	$2.40
10th	95	100%	100.0%	114.5	$0.17

Chart 1

As shown on the first line of this Chart, ten percent of all high-cost support goes to just 0.1 percent of all lines nationwide (or about two hundred thousand households), and the 113 study areas in this first grouping receive an average of $123.40 per line per month in high cost support. Furthermore, the average density in these study areas is only 0.6 lines per square mile. Reading further down Chart 1, half of all high cost funding goes to support only 2 percent of all lines (about 3.5 million households), and 80% of funding supports just 7.3 percent of all lines nationwide (about 13 million households). In the final grouping, 86% of lines nationwide receive the last ten percent of funding, and the 95 study areas that serve these lines receive an average of only $0.17 per line per month of high-cost support.

Chart 1 helps to illustrate several things.

- Most support goes to a relatively small percentage of lines serving consumers in the most rural and sparsely populated regions of the nation.

- The cost of serving these customers at the extreme is very high, and carriers serving these areas require significant amounts of monthly support to be able to continue serving these customers at affordable rates.
- If it were not for this high-cost support, many of these customers would likely have no service at all, and if they did have service, it would likely be at rates that were not affordable except for the very rich.

C. The Implementation of the Telecommunications Act of 1996

The 1996 Act expanded universal service to include support for schools, libraries and rural health care facilities. In addition, it required that all support mechanisms previously embedded in access charges be removed and explicitly identified. The Act fundamentally changed the telecommunications landscape by adopting twin goals of competition and universal service while at the same time promoting advanced infrastructure deployment to benefit all Americans. While the Act adopted notable goals and embodied fundamental principles, the manner in which they have been implemented by the FCC and by state commissions threatens the universal service accomplishments of the past 70 years. In particular, the 1996 Act stated that high-cost universal service funding may be provided to competing carriers in rural areas only if this were found to be in the public interest. Unfortunately, in implementing these provisions, regulators focused almost entirely on "creating competition" as the primary public interest goal, and they lost sight of the true purpose of universal service funding which is to keep consumers in remote, high-cost areas connected to our society and economy by giving them access to advanced infrastructure.

As a result of this misguided focus, regulators have allowed wireless carriers to receive ever increasing amounts of "high-cost" funding without accepting an obligation to build infrastructure to serve high-cost areas. This activity hurts all telephone consumers since everyone has to pay a fee to support the USF. It most directly harms

rural consumers because it is causing unsustainable growth in the system on which they depend for access to affordable telecommunications services.

D. Wireless Networks in Rural Areas

Though wireless service uses a fundamentally different technology to connect to its end-users, the costs of serving remote and rural areas using wireless technology are driven by many of the same factors that influence the cost of wireline networks. One of the primary cost drivers in a wireless network is customer density. A wireless tower and its related radio gear costs hundreds of thousands of dollars to build, and each tower is capable of serving a specific geographic area.[5] Depending on the number of customers within that footprint, the cost per customer can either be very high or very low. In cities and towns and along major highways where the density of mobile customers is high, the per-customer cost is low. In very sparsely populated rural areas, however, the cost can be prohibitively high because the fixed cost of the tower and radio gear is spread over very few customers.

It is not surprising, then, that as wireless carriers built out their networks, they placed their towers in cities and towns and along major highways – areas where customer concentration was greatest, and costs were lowest. The areas where wireless service is generally poor or non-existent lie between the population centers and off the beaten track where customer density is low, and the cost of providing wireless service is high.

One of the major problems that will be discussed later in this paper is that wireless carriers in large numbers are requesting, and in most cases receiving, high-cost

[5] The exact size of this footprint is driven by a number of factors such as terrain, the height of the tower and the power of the radio transmitter. It also is dependent on the type and power of the customer equipment. It is not uncommon for the area where high-quality wireless service can be obtained using a handheld phone to be a radius of 10 to 15 miles around a tower site, assuming relatively flat terrain.

support at the same levels as the wireline incumbent, without taking on equivalent obligations to provide service throughout the service territory and serving as a Carrier of Last Resort. These problems are compounded by the fact that in many rural areas two, three, or as many as seven or more wireless carriers have applied for and have been approved to receive high-cost universal service support. Multiple ETC designations such as this do little to advance the goals of universal service, and in fact may work against the policy objective of improving consumer access high-quality wireless services in remote, high-cost areas of the Nation. The rapid growth in funding to such carriers is also causing the fund to grow at a rate that threatens the sustainability of the entire universal service system, and yet the benefits to the goal of universal service are unclear.

This is not to suggest that funding for wireless carriers is never in the public interest. Many areas of the nation, including Indian territory, lack wireless coverage, and public money might effectively be used in these areas to expand the availability of wireless services to rural consumers and the traveling public. The problem is that universal service funds are being granted to wireless carriers with few specific obligations or strategy to build-out networks to serve high-cost areas, and without meaningful oversight that the funds are being used for their intended purposes. One of the policy recommendations later in this paper proposes that funding be provided to one wireline and, where found to be appropriate, one wireless carrier in high-cost rural areas, and that technology-specific goals and objectives for rural infrastructure deployment be developed and enforced.

II. THE TELECOMMUNICATIONS ACT OF 1996

A. Universal Service Provisions and Goals of the 1996 Act

One of the primary goals of the 1996 Act was to accelerate the deployment of advanced services through the introduction of competition into telecommunications markets in areas where competition made sense. The preamble of the Act states:

> To promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.[6]

Congress realized, however, that if telecommunications services were deregulated and subject only to the incentives of the competitive marketplace, then many high-cost regions of the nation would not be well-served. In the debate leading to the passage of the Act, many legislators drew analogies to the deregulation of the airline industry two decades earlier:

> Airline deregulation had at its roots the notion of let the marketplace decide who gets air service, at what price, and what convenience in this country. We know what has happened with airline deregulation.… If you live in rural America and you access airline service, you have less choice and higher prices. It is a plain fact.[7]

Today, flights into and out of rural areas are less frequent, cost more and service quality is poor, while urban areas are receiving expanded service, lower prices and more competition. The sensitivity of both the airline industry and telecommunications industry to population and population density are similar and a similar fate would have happened to rural telecommunications consumers if rural networks were not appropriately supported.

[6]Telecommunications Act of 1996, Pub. L. 104-104.

[7] 141 Congressional Record S7976 (June 8, 1995) (Remarks of Senator Byron Dorgan).

To address these concerns, the 1996 Act established special universal service provisions to assure that rural consumers received comparable services to those available in urban areas, at comparable prices. In essence, the 1996 Act provides a framework where the competitive market will drive services as far as it is economically viable, and universal service will provide the incentive and resources to fill in the gaps and support the investment in telecommunications infrastructure that will deliver comparable services ubiquitously and at reasonable rates.

A number of provisions of the 1996 Act specifically address universal service issues. Section 254 of the Communications Act (as added by the 1996 Act) defines six fundamental principles of universal service:

1. Quality services should be available at just, reasonable and affordable rates;
2. Access to advanced telecommunications and information services should be provided in all regions of the nation;
3. Consumers in all regions of the Nation, including those in rural insular and high-cost areas, should have access to telecommunications and information services that are reasonably comparable to those in urban areas, at reasonably comparable rates;
4. All providers of telecommunications services should make equitable and non-discriminatory contributions to universal service;
5. There should be specific, predictable and sufficient Federal and state mechanisms to preserve and advance universal service;
6. Schools, health care providers and libraries should have access to advanced telecommunications services.[8]

Section 254 also charges the FCC to oversee the implementation of these universal service provisions and directs the appointment of a Federal-State Joint Board on Universal Service to recommend changes in the FCC's rules to accomplish these

[8] Communications Act of 1934, § 254(b)(1)-(6).

objectives. As part of its implementation process, the Joint Board recommended, and the FCC approved, another universal service principle: competitive neutrality.[9]

Section 214(e) sets out the procedures for designating carriers that will be eligible to receive federal high-cost support. Section 214(e)(1) provides that an Eligible Telecommunications Carrier (ETC) must do two things:

- Offer the services supported by the federal universal service support mechanisms throughout the service area for which the designation is received, and
- Advertise the availability of such services and the charges therefore using media of general distribution.[10]

Section 214(e)(2) assigns the primary responsibility for making ETC designations to the state commissions. In particular, it provides the following guidance regarding the designation of multiple ETCs in a given service area:

> Upon request and consistent with the public interest, convenience, and necessity, the state commission may, in the case of an area served by a rural telephone company, and shall, in the case of all other areas, designate more than one common carrier as an ETC. … Before designating an additional ETC for an area served by a rural telephone company, the state commission shall find that the designation is in the public interest.[11]

Thus, Congress specifically acknowledged that it would not necessarily be in the public interest to support multiple ETCs in all rural service areas.

Finally, Section 254(e) defines how ETCs must use federal universal service support. It states: "A carrier that receives such support shall use that support only for the provision, maintenance and upgrading of facilities and services for which the support is

[9] Federal-State Joint Board on Universal Service, Report and Order, CC Docket 96-45, FCC 97-157 (May 8, 1997), ¶ 47. The Order states: "COMPETITIVE NEUTRALITY – Universal service support mechanisms and rules should be competitively neutral. In this context, competitive neutrality means that universal service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another."

[10] Communications Act of 1934, § 214(e)(1).

[11] Communications Act of 1934, § 214(e)(2) (emphasis added).

intended." An important question, nevertheless, is what are those intended purposes? The answer comes from the purposes of the 1996 Act and 70 years of Federal policy: the intended purpose of universal service funding is to support infrastructure investment to assure that rural consumers have access to comparable services as in urban areas, at comparable prices.

B. Gaps in the 1996 Act

The universal service goals stated in Section 254(b) lay out a simple, straight-forward and profound vision for universal service. All Americans should participate in the telecommunications revolution. Because of inherent differences in the cost of providing telecommunications service, which is essential to civic and economic life, some Americans living in the most remote and highest-cost areas of the nation will need support to have access to comparable services, including broadband services, at comparable rates. The provision of these services should be supported by "specific, predictable and sufficient" mechanisms to preserve and advance universal service, and universal service should reflect an "evolving level" of services. Finally, all carriers will contribute financial support to the preservation of universal service. It would be difficult to craft a better overall mission statement for federal universal service initiatives and programs.

A decade of experience under the 1996 Act, however, shows that in some key areas this mission statement needs refinement and clarification. As Congress revisits its universal service directives, the following changes are needed:

1. **Better align responsibility for ETC designations with accountability for the expenditure of scarce public funds.**

   While the 1996 Act gave the states the job of awarding ETC status, and the federal universal service funds that go with it, the states bear none of the costs

of supplying the necessary funds. Additional federal guidelines or oversight of state ETC designation may be appropriate to ensure that universal service funds pooled at the federal level are administered prudently.

2. **Define the specific terms and obligations that a carrier assumes when it requests ETC status and accepts public money for serving high cost areas.**

   The receipt of public funds should be accompanied by accountability for how those funds are spent and the services that they provide. Section 214(e)(1) states clearly that supported services are to be provided "throughout the service area." A condition for the receipt of high-cost support should be an enforceable commitment to invest to build out the carrier's network to deliver high-quality services throughout the service area within a reasonable period of time. Carriers that are unable or unwilling to make such a commitment should not be granted public money. Rather than supporting multiple wireless carriers in a particular geographic area, a single carrier should be provided with public funding to build necessary infrastructure, with the understanding that such infrastructure would be available on reasonable terms for use by other carriers.

3. **Define factors for assessing whether the "public interest" is served by designating multiple ETCs in all rural service areas.**

   In many of the ETC proceedings conducted by the states and the FCC, the public interest has been assumed on the grounds that ETC designation promotes "competition." But the 1996 Act establishes that the purpose of universal service is to provide comparable service to all Americans, particularly those in rural, insular and high-cost areas. It is time for Congress to ask the question: Is the public interest actually being served, from a cost/benefit perspective, in supporting multiple carriers in high-cost rural areas?

III. IMPLEMENTATION OF THE 1996 ACT – WHAT WENT WRONG

Many factors have contributed to the current situation where universal service funding commitments are growing at a rate that is quickly outstripping the available resources of the current fund mechanisms. Unless these problems are promptly addressed, the long term viability of universal service is at risk. The following factors threaten universal service:

- The growth in the fund's size, combined with major structural changes in the telecommunications industry, render the current interstate-only revenue-based USF collection mechanism unsustainable.[12]

- The USF contribution factor that appears on customer's bills is now well above 10% of interstate end-user revenues and will likely increase.

- A major factor in the recent USF growth is the designation of large numbers of wireless carriers as ETCs based upon a fundamentally unsound public interest review and analysis process.

- Wireless carriers receive hundreds of millions of high-cost dollars for serving their current customer base, with little expectation or requirement that they expand their networks into currently unserved high-cost rural areas.

- The current ETC designation process is fatally flawed:
  - There is no clear statement or understanding of the obligations of CETCs;
  - The provision of funding to CETCs based upon the per-line support amounts received by the wireline incumbent is not economically rational and invites abuse;
  - By supporting multiple service providers in remote high-cost areas, the current policy may actually make it more difficult for any carrier to construct facilities to serve throughout the entire service territory.

- While the FCC appeared to have made progress in defining a more rigorous and rational ETC review and designation process in the March 17, 2005 *ETC Designation Order,* more fundamental reform of the high-cost distribution mechanism is necessary.

[12] The current funding mechanism applies a Contribution Factor to interstate and international end-user revenues.

Policymakers need to think hard about how finite high-cost support funds can be best used to foster a telecommunications infrastructure capable of delivering broadband services to rural consumers.

A. Growth of the Universal Service Fund

The federal universal service fund has grown from approximately $955 million in 1996 to well over $7 billion in 2007. The growth in the fund over time is shown on Chart 2. While some of the growth in the fund is the result of growth within the telephone industry in general, several key events and changes since the passage of the 1996 Act have added significantly to the size of the fund:

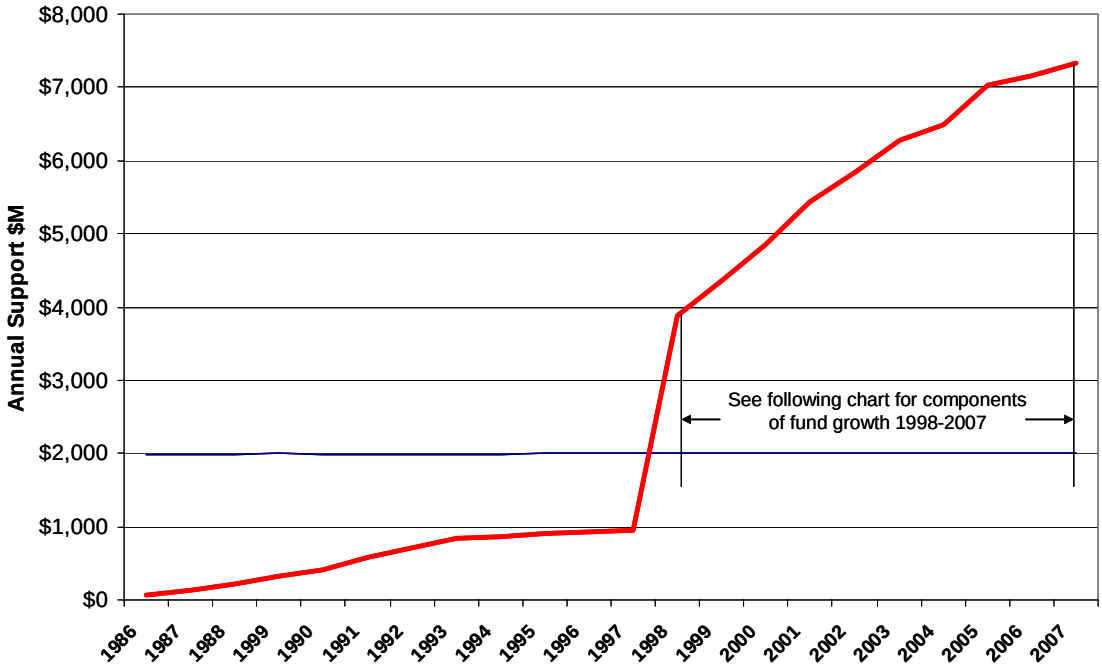


Chart 2

Access Charge Changes – Section 254(e) states that universal service support should be "explicit." The FCC created two new universal service mechanisms to recover a portion of loop costs that had previously been recovered through per-minute access charges to interexchange carriers. The Interstate Access Support (IAS) mechanism was created in 2001 for carriers operating under Price Cap

regulation.[13] The Interstate Common Line Support (ICLS) mechanism was created in 2002 for rate-of-return carriers.[14] In 2007, IAS and ICLS will add over $2.1 billion to the overall size of the fund. However, IAS and ICLS did not represent new money for incumbent carriers, since this new explicit funding was offset by reductions in interstate access charges. Also, under the "equal support" rule, wireless ETCs that never received access charges also receive IAS and ICLS. This further increases growth in the fund as the number of wireless ETCs increases.

Portability of Support to Wireless ETCs – Beginning in the fourth quarter of 2001, competitive ETCs (primarily wireless carriers) began receiving universal service support. As more fully explained below, this funding has grown from an annualized level of $11 million in the fourth quarter of 2001 to over $1 billion in 2007. The FCC has estimated that funding to wireless CETCs could exceed $2.5B in 2009 unless significant changes are made in how CETCs are funded.[15]

Re-Indexing of Caps from the High Cost Loop (HCL) Fund – Since 1993, the largest component of universal service support to rural carriers had been subject to an indexed cap on its overall size. Because the 1996 Act states that universal service support should be "sufficient" to preserve and advance universal service, the Rural Task Force concluded that this cap should be re-based to levels reflecting rural telephone companies actual costs for the year 2000. This modification added approximately $236 million to the fund.

Schools and Libraries Fund – One of the first actions taken by the FCC following the passage of the 1996 Act was to implement the Schools and Libraries Fund (sometimes referred to as the "E-Rate program"). Sections 254(b)(6) and 254(h) specifically directed the creation of a fund to help schools and libraries obtain "advanced telecommunications services. This program began operation in 1999. The FCC rules cap the Schools and Libraries fund at $2.25 billion per year.[16]

[13] Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers, Sixth Report and Order, CC Docket Nos. 96-262 and 94-1, Report and Order, CC Docket No. 99-249, Eleventh Report and Order, CC Docket No. 96-45, FCC 00-193 (May 31, 2000).

[14] Multi-Association Group Plan for Regulation of Inter-State Services of Non-Price Corp Incumbent Local Exchange Carriers and Interexchange Carriers, Second Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 00-256, Fifteenth Report and Order, CC Docket No. 96-45, and Report and Order, CC Docket Nos. 98-77 and 98-166, FCC 01-304 (November 8, 2001).

[15] Remarks of FCC Chairman Kevin Martin at the Federal-State Joint Board En-Banc hearing February 20, 2007.

[16] The Act also established a Rural Health Care fund; however, funding requirements for this have been small. In 2004, the Rural Health Care fund was approximately $36 million.

The impact of the various components of the fund on its growth since 1998 can be seen in the following Chart 3:

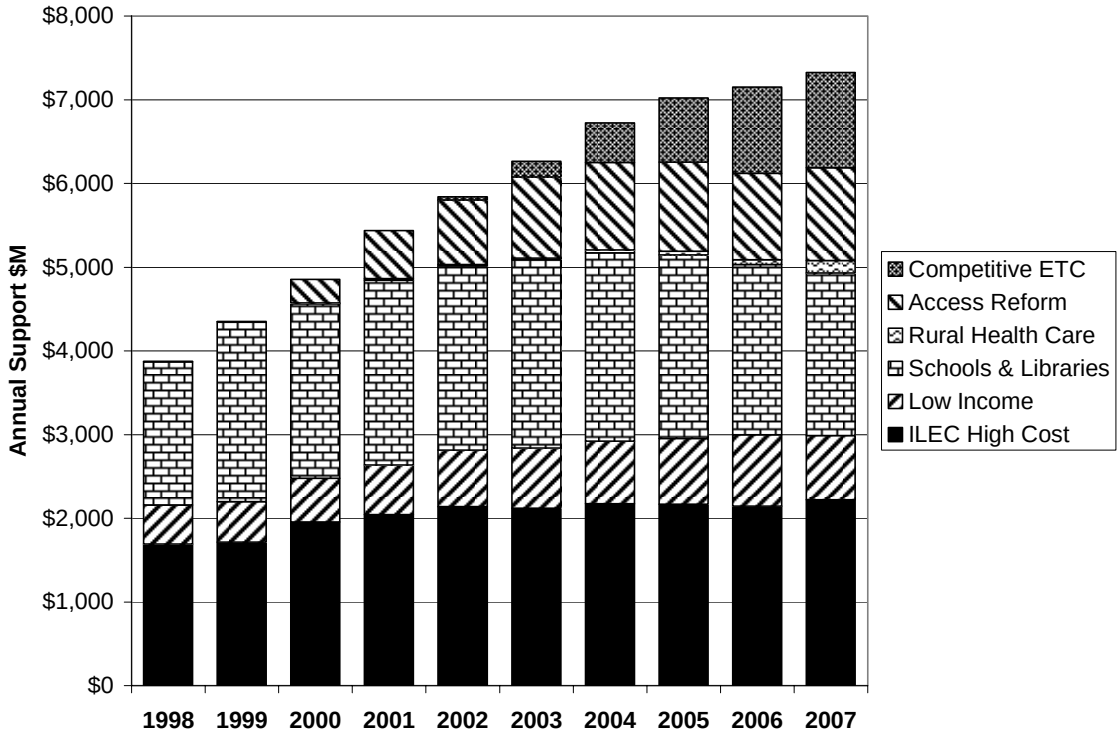


Chart 3

As can be clearly seen, the introduction of the Schools and Libraries fund in 1998 caused a major increase in the size of the fund. Since that time the two major sources of growth have been the inclusion of access reform beginning in 2000, and the funding of competitive ETCs (predominantly wireless) beginning in 2002. As noted previously, Access Reform did not represent new money to the ILECs, as this replaced mandated reductions in access charges. Wireless ETC funding (which did represent new money to wireless carriers) has been the largest contributor to fund growth since 2003.

B. The USF Collection Mechanism

Section 254(d) of the Communications Act states that "[e]very telecommunications carrier that provides interstate telecommunications services shall contribute, on an equitable and non-discriminatory basis, to the specific, predictable, and sufficient mechanisms established by the Commission to preserve and advance universal service." Currently, the universal service fund is financed through an assessment on the interstate and international end-user revenues of all telecommunications service providers. Service providers are required to report their projected revenues to the Universal Service Administrative Company (USAC) quarterly. USAC then divides the projected funding needs for the coming quarter by the projected revenue base to determine the quarterly "Contribution Factor" that will be multiplied by each carrier's interstate end-user revenues to determine its contribution to the fund. This contribution factor has been growing recently and its long-term viability is in doubt. The math behind the problem is obvious:

- The demand for funds – the numerator – is growing, as outlined above;
- Interstate end-user revenues – the denominator – have generally been declining, as shown on the following Chart 4.
- In addition, the growing popularity of packaged service plans that offer bundles of local and long distance minutes, or unlimited calling, without regard to distance or jurisdiction, further reduces the revenue base.

These forces have worked together over the past several years to produce rapid growth in the Contribution Factor.

Quarterly USF Contribution Factor (Solid) vs. Funding Base (Dashed)

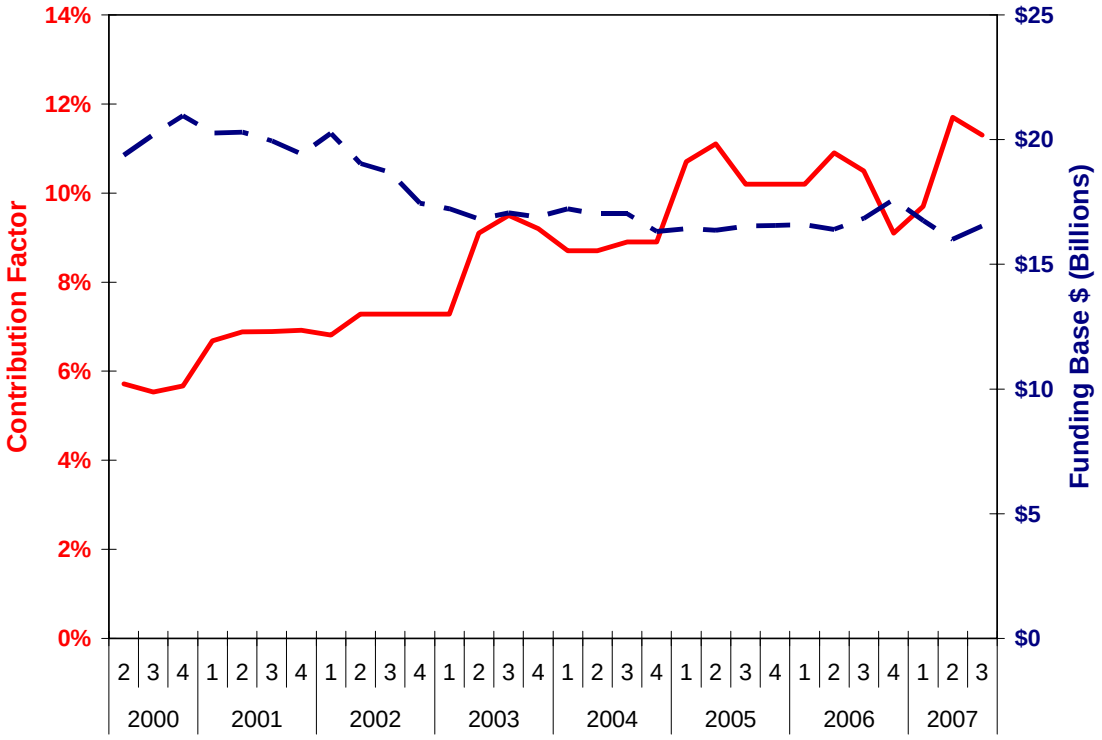


Chart 4

In any event, without substantial policy changes, the existing pressures in the system will push the contribution factor higher, to politically and economically unsustainable levels. Consequently, some new funding mechanism is needed for universal service to remain available to rural consumers.

C. Growth in Funding for Wireless ETCs

Beginning in late 2001, and continuing today, the number of competitive ETCs (CETCs) has been growing rapidly. As the following charts show, the number of CETCs and the annualized high-cost funding projected by USAC to go to these CETCs is growing dramatically.

Number of CETCs[17]

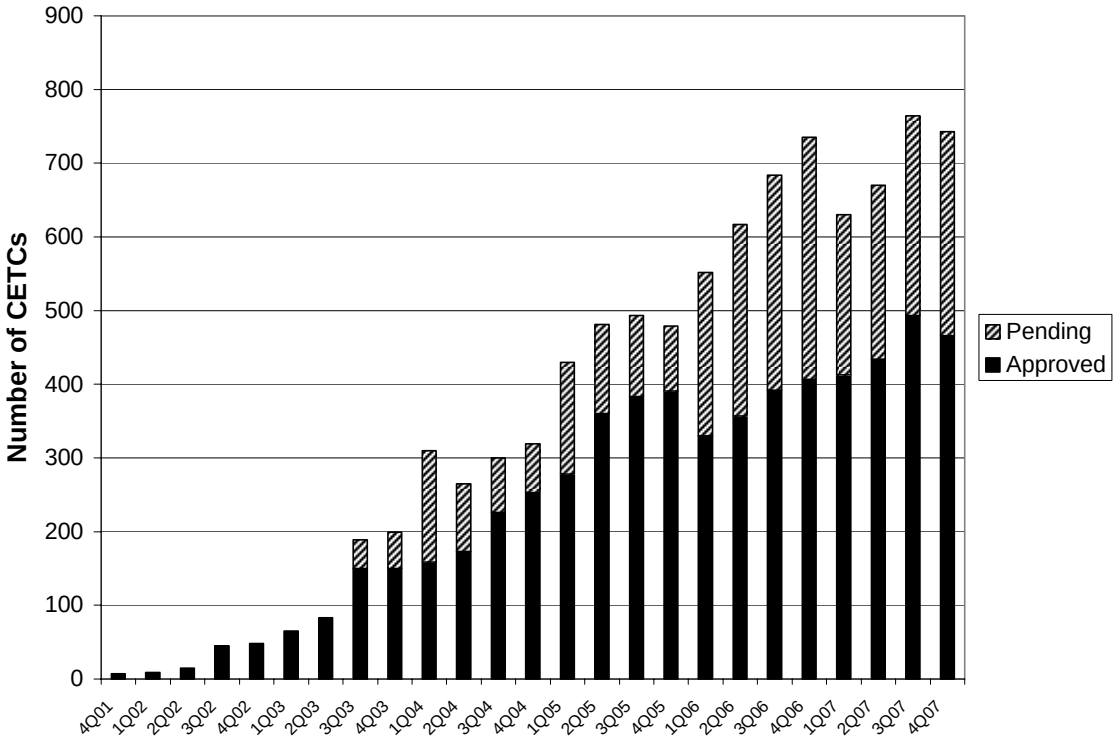


Chart 5

[17] The data shown on these charts has been developed from USAC Reports HC01 from 4Q01 through 4Q07 Beginning in 3Q03, USAC began showing both CETCs that had been approved, and pending applications for ETC status that had not completed the approval process.

Funding to CETCs

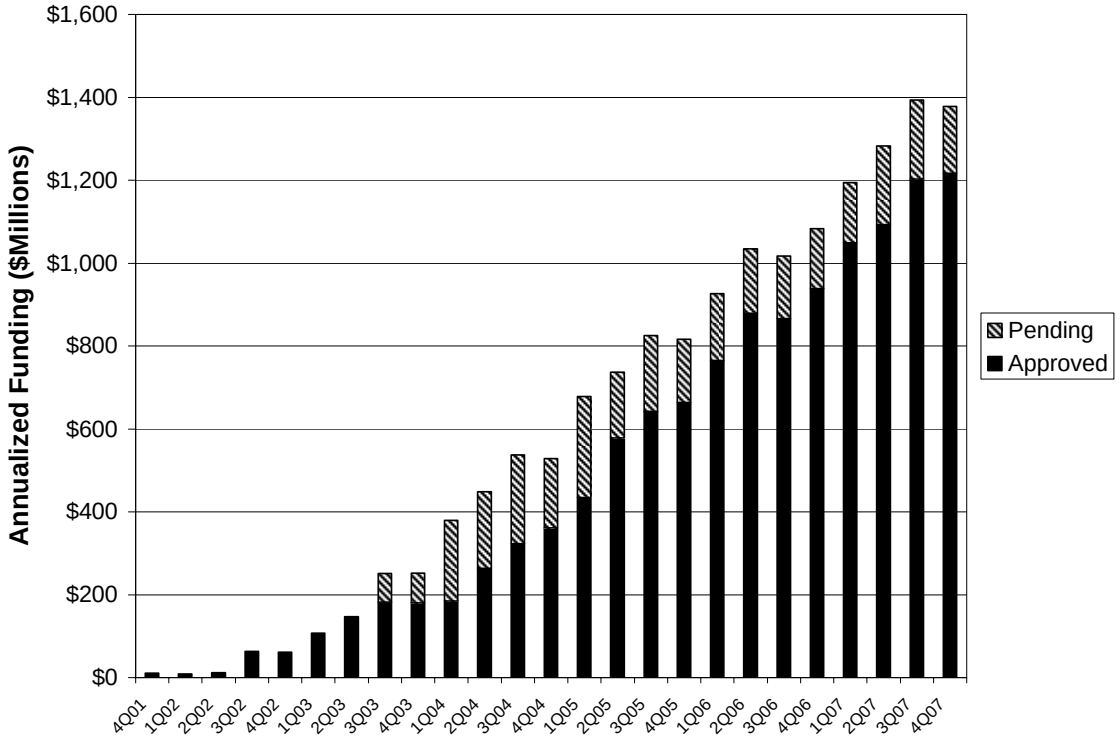


Chart 6

This upward trend in both the number of CETCs and the amount of funds flowing to CETCs has no apparent end in sight. Including both approved and pending CETC applications, annual high-cost finding dedicated to CETCs is now over one billion dollars per year. Wireless carriers make up, by far, the largest share of the CETC universe.

In February of 2007, FCC Chairman Kevin Martin addressed an en-banc hearing of the Federal-State Joint Board on Universal Service Funding. In describing the growth in funding to competitive ETCs in recent years Chairman Martin said:

> When I first arrived at the Commission in 2001, I dissented from the Commission's policy of using universal support as a means of creating government-managed "competition" for phone service in high-cost areas. I was hesitant to subsidize multiple competitors to serve areas in which costs are prohibitively expensive for even one carrier. In fact at that time I warned that this policy would make it difficult for any one carrier to achieve the economies of scale necessary to serve all of the customers in a rural area, leading to inefficient

and/or stranded investment and a ballooning universal service fund. Today, I am sad to report that is exactly where we are.[18]

As part of his presentation to the Joint Board, Chairman Martin used the following chart to illustrate the projected growth in support to CETCs even if no additional CETC designations are made beyond those that have currently applied.

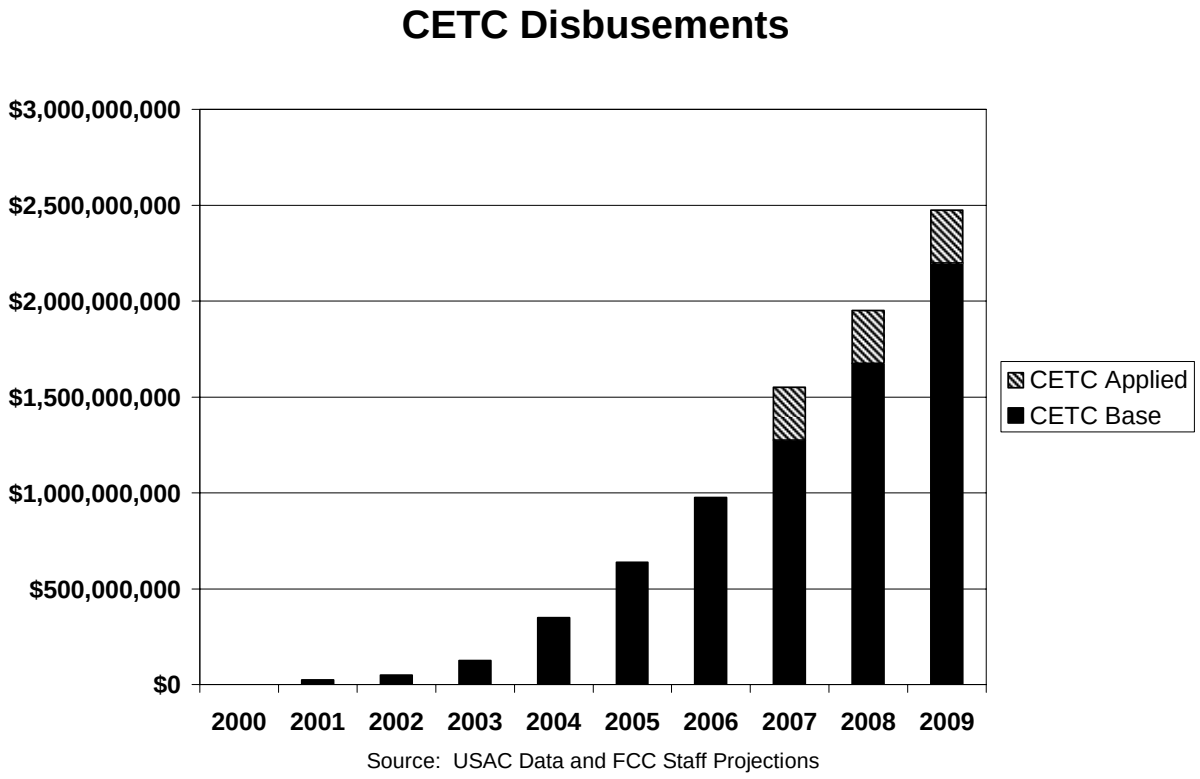


Chart 7

[18] Remarks of FCC Chairman Kevin Martin at the Federal-State Joint Board En-Banc hearing February 20, 2007 (emphasis in original).

Here are the "Top 10" CETC recipients, all of which are wireless carriers. These ten carriers receive approximately 78% of all CETC funding.

"Top 10" CETC Recipients

Company	Annual Funding ($M)
Alltel	$343.0
AT&T	$199.2
US Cellular	$131.3
Sprint/Nextel	$120.0
CellSouth	$59.5
Centennial	$54.5
Dobson	$52.8
RCC	$48.4
Verizon	$36.6
American Cellular	$22.6
(Source: USAC Report HC01 4Q07)	

Chart 8

Where is all this money going?

While it is easy to see the amount of high-cost support that is going to wireless ETCs, it is not so easy to see the public benefits of this massive infusion of public money. Under the FCC's current CETC rules, once a wireless carrier receives CETC designation, it begins receiving high-cost support for its entire existing customer base within the territory for which it was approved, at the same per-line amount as the wireline incumbent. In essence, the wireless carrier gets "high-cost" support merely for continuing to serve its existing (and rational economic analysis tells us, low-cost) base of customers. This leads one to ask: If wireless CETCs can serve a customer today without USF support, why do they need support? The current system provides little incentive for wireless ETCs to use high-cost support to build-out their networks into higher-cost areas that it currently does not serve.

Where is the accountability for how this money is spent?

Wireless carriers have little or no regulatory oversight for how they spend the high-cost universal service funds they receive. In contrast, wireline telephone companies operate with extensive regulation. State commissions regularly monitor service quality and customer complaints of wireline incumbents. Incumbent carriers must provide service throughout their service territory, and they must comply with regulations regarding how well they respond to requests for new service. While states have the responsibility to certify annually ETC status, many states do not require wireless carriers to present data on the quality of the services that they provide, or on how the high-cost funds that they received have been used to expand their service coverage into previously unserved areas.

D. The Current CETC Designation and Funding Process Is Fatally Flawed

1. The primary purpose of universal service funding is to support investment in rural infrastructure, not subsidizing competition.

Section 254(b) of the Communications Act states clearly that the purpose of universal service funding is to assure that consumers in rural, insular and high-cost areas have access to basic and advanced services reasonably comparable to those available in urban areas. Somehow, however, in the early decisions implementing the ETC designation process, the primary focus became the creation of "competition."

In an early FCC decision that became the template for many subsequent state ETC decisions, the Commission stated that the ETC application "serves the public interest by promoting competition and the provision of new technologies to consumers in

high-cost and rural areas of Alabama."[19] The Commission, without analysis, dismissed concerns raised by parties about the impact of this ETC designation on the size of the USF and its impact on rural consumers: "We find that these concerns are beyond the scope of this Order, which considers whether to designate a particular carrier as an ETC."[20]

Not all of the FCC Commissioners share the view that the purpose of universal service funding is to promote competition. In November of 2001, FCC Chairman (then. Commissioner) Kevin Martin has stated:

> I also note that I have some concerns with the Commission's policy – adopted long before this Order – of using universal service support as a means of creating "competition" in high cost areas. I am hesitant to subsidize multiple competitors to serve areas in which costs are prohibitively expensive for even one carrier. This policy may make it difficult for any one carrier to achieve the economies of scale necessary to serve all of the customers in a rural area, leading to inefficient and/or stranded investment and a ballooning universal service fund.[21]

As mentioned earlier in this white paper, at the Joint Board en-banc hearing in February of 2007, Chairman Martin referred back to his earlier statement and concluded "Today I am sad to report that is exactly where we are."

A good example of how the focus on "competition" has caused policymakers to take their eye off the ball of universal service can be found in the case of Western Wireless in Wyoming. In the decision granting Western Wireless ETC status, the Commission concludes summarily, "Designation of competitive ETCs promotes

[19] Federal-State Joint Board on Universal Service, RCC Holdings, Inc. Petition for Designation as an Eligible Telecommunications Carrier Throughout its Licensed Service Area in the State of Alabama, Memorandum, Opinion and Order, DA 02-3181 (November 27, 2002), ¶ 11.

[20] Id. ¶ 32.

[21] Multi-Association Group Plan for Regulation of Interstate Services of Non-Price Corp Incumbent Local Exchange Carriers and Interexchange Carriers, Second Report and Order, CC Docket No. 00-256, Fifteenth Report and Order, CC Docket No. 96-45, and Report and Order, CC Docket Nos. 98-77 and 98-166 (November 8, 2001) (Separate Statement of Commissioner Kevin J. Martin).

competition and benefits consumers in rural and high-cost areas by increasing customer choice, innovative services, and new technologies."[22]

Taking a look back, how did Wyoming customers benefit from this universal service funding? USAC reports indicate that Western Wireless received $6.2 million of high-cost support in 2003, and $8.2 million in 2004.[23] While Western Wireless received over $14 million, it added no new towers to expand its service footprint into rural and high-cost areas of Wyoming.[24] Western Wireless continued to serve its customers from its pre-existing towers in the larger towns and along the major highways of Wyoming. What happened to $14.4 million in "high-cost" support that Western Wireless received? Where are the promised consumer benefits to the consumers in the rural and high-cost areas of Wyoming? Certainly, the benefits to the company are obvious. In early 2003 Western Wireless' CEO John Stanton had a meeting with the investment community, and one analyst wrote in response, "The USF subsidy represents an incremental revenue source, which we believe should improve our revenue and EBITDA estimates [for Western Wireless] by $6-8 million during the first quarter and $24-30 million during

[22] Federal-State Joint Board on Universal Service, Western Wireless Corporation Petition for Designation as an Eligible Telecommunications Carrier in the State of Wyoming, Memorandum Opinion and Order, DA 00-286 (December 26, 2000), ¶ 17.

[23] USAC reports HC01 for 1Q03 through 4Q04.

[24] This conclusion was reached after a thorough review of records in the FCC tower registration and antenna licensing data bases. Recently McLean & Brown updated the Wyoming study to see if things had changed materially since 2004. The USAC web site reflects that Western Wireless/Alltel (in 2005 Alltel acquired Western Wireless) had received $7.3 million of high-cost support in 2005, $8.0 million in 2006, and $4.6 million in the first half of 2007 in Wyoming. That makes $34.3 million in high-cost support since 2004. We went back to the FCC database to see if any new tower locations had been added since we had last looked at the end of 2004. It turns out that one new tower actually had been added since 2004 – in Cheyenne, the state capitol.

2003 as the incremental revenue is almost all margin."[25] But where is the public interest benefit?

If universal service is to survive, policymakers must clearly articulate the purpose for which the funding is provided, the obligations that carriers must accept as a condition of receiving this public money, and establish appropriate oversight to ensure that this money is well spent.

2. The obligations of CETCs have been ill-defined.

In any other area of government, a private party that seeks tens or hundreds of millions of dollars of public funding, for whatever purpose, must establish a need for the funds, and then demonstrate that the money was well spent. Surprisingly, however, in many of the ETC decisions to date, at both the state and federal level, there has been little discussion of what the CETC should or must achieve with all of this universal service funding. The notion that this funding would somehow foster competition has seemed to be enough. But this is not the goal of the USF. Since the goal of universal service is to assure that all consumers have access to basic and advanced telecommunications services, grant of ETC status should trigger an obligation to build-out infrastructure to serve throughout the entire service area.

While prior to 2005 there were few decisions that have focused on the specific obligations of wireless CETCs, interestingly there were decisions stating what CETCs do not have to do. In a ruling issued in 2000, the Commission stated: "We believe that interpreting section 214(e)(1) to require the provision of service throughout the service area prior to ETC designation prohibits or has the effect of prohibiting the ability of

[25] "Western Wireless (WWCA): USF Provides Upside To Our EBITDA Estimate," Salomon Smith Barney Research Note (January 9, 2003), at 2.

competitive carriers to provide telecommunications service, in violation of Section 253(a) of the Act."[26] Later in this decision the Commission stated that a prospective ETC applicant simply must "make a reasonable demonstration to the state commission of its capability and commitment to provide universal service without the actual provision of the proposed service."[27]

At its core, universal service is about delivering high-quality telecommunication services to all consumers throughout a carrier's service area and serving as a Carrier of Last Resort for all consumers. Unless a carrier requesting ETC designation is willing to enter into an enforceable commitment to provide high-quality service throughout the service territory in some reasonable time frame, then the carrier is likely to simply take the money and run, as in the previously cited example. The economic rationale is simple. Most customers live in the more densely populated areas that the carrier already serves. Once the carrier has the "high-cost" funding in hand for these customers, it faces a very different set of business incentives regarding investments to expand its network into the more remote areas. Construction of these facilities will generate substantial cost, yet yield relatively little incremental revenue. Therefore, the carrier has little incentive to make investments that make no business sense.[28]

In March of 2005 the FCC issued a decision in which it established mandatory minimum requirements for a telecommunications carrier to be designated as an ETC in

[26] Federal-State Joint Board on Universal Service, Western Wireless Corporation Petition for Preemption of an Order of the South Dakota Public Utilities Commission, Declaratory Ruling, CC Docket No. 96-45, FCC 00-248 (August 10, 2000), ¶ 2.

[27] Id. ¶ 24.

[28] This would also hold true if high-cost funding were provided based upon a proxy model or some other funding vehicle that did not also include an expectation and enforceable requirement that the carrier actually provide service throughout the service area, including remote and high-cost areas.

proceedings where the FCC has jurisdiction to make this designation. The FCC describes these standards as follows:

- Provide a five-year plan demonstrating how high-cost universal service support will be used to improve its coverage, service quality or capacity in every wire center for which it seeks designation and expects to receive universal service support;
- Demonstrate its ability to remain functional in emergency situations;
- Demonstrate that it will satisfy consumer protection and service quality standards;
- Offer local usage plans comparable to those offered by the incumbent local exchange carrier (LEC) in the areas for which it seeks designation; and
- Acknowledge that it may be required to provide equal access if all other ETCs in the designated service area relinquish their designations pursuant to section 214(e)(4) of the Act.

The FCC states that these standards will be applied in cases where it is responsible for making the ETC designation, and encourages states to adopt similar standards. The FCC also required carriers that it had previously designated to make filings by October 1, 2006 providing this data.

While an improvement over the prior regime, these new designation guidelines suffer from many of the same problems of the prior regime. Perhaps the most fundamental problem is that there is no explicit statement of what the wireless ETC is expected to do with the money. Furthermore, as will be explained in the next two sections, the distribution mechanism still bases the support for wireless ETCs on the per-line support of the wireline incumbent, and in many high-cost ILEC study areas two, three or as many as seven or more wireless ETCs have been designated.

3. The provision of funding to CETCs based upon the per-line support amounts received by the wireline incumbent is not economically rational and invites abuse.

The FCC also erred when it ruled, in the name of "competitive neutrality," that CETCs should be given the same per-line high-cost support as the wireline incumbent. This only makes sense only if the ETC applicant:

(i) serves the same geographic areas (including the remote high-cost regions);

(ii) provides the same quality of service (including access to broadband services, equal access to long distance carriers, access to emergency service, regulatory accountability, and in most areas, unlimited local usage); and

(iii) offers comparable services at comparable prices.

That is almost never the case. As described in the previous section, providing "high-cost" support to wireless carriers as though they were actually serving the high-cost areas has the unintended consequence of encouraging them to not invest to serve the most remote parts of the service area.

Incumbent wireline carriers receive high-cost support based on their actual costs of providing service, and based upon the investments they have made to serve rural high-cost areas. Importantly, incumbent carriers only receive high-cost support after they have made the high-cost investments. This provides the proper incentives to invest to serve high-cost customers. If wireless ETC applicants were to receive high-cost support based on their actual costs of serving the remote high-cost areas, and if this support were only provided after they had made such investments, then many of the current problems would go away, and consumers would benefit through more efficient usage of high-cost funds and a wider availability of wireless calling services.

4. The current ETC designation procedures have resulted in situations where multiple wireless carriers have been designated as ETCs in the same sparsely populated rural service area

As stated repeatedly in this paper, the purpose of universal service funding is to assure that infrastructure investment is made in high-cost rural areas where it would not otherwise be economically viable. By doing this, consumers in these areas can have access to communications services comparable to those available in urban areas, as Congress intended. However as a result of the poorly structured and ill-defined ETC designation system that is currently in place, in many high-cost rural areas multiple wireless carriers have been designated as ETCs and as wireless Carriers of Last Resort. Appendix B provides data showing, by state, the number of ETCs that have been designated for study areas that have at least one wireless ETC. This data shows that:

- 58% of study areas have two or more wireless CETC (in addition to the wireline incumbent).
- 29% of study areas have three or more wireless CETCs.
- Supporting multiple ETCs in the same rural area further grows the fund without a commensurate growth in consumer benefits.
- This also raises the inevitable question of how many ETCs or Carriers of Last Resort (COLR) consumers need, or can afford, in high-cost rural areas.

5. The lack of financial accountability results in a failure to assure that the public benefit from supporting multiple carriers exceeds the public costs.

The public interest is served when the benefits created by the expenditure of public money exceed the costs. The public interest is not well served when they do not. Section 214(e) requires that prior to designating multiple ETCs in the area served by a rural telephone company, the state or federal regulatory authority must determine that such designation is in the public interest. Clearly, a rational ETC designation process

should be built around a sound cost/benefit analysis, but that is not the case today. Not only should such a test be part of the initial designation process, but the annual review process also should examine whether build-out commitments have actually been met, and whether consumers see the benefits they were promised.

IV. POLICY CHANGES NECESSARY TO PRESERVE THE UNIVERSAL SERVICE FUND AND ENSURE THAT ALL AMERICANS STAY CONNECTED

In a speech in 2004 regarding reform of the universal service system, FCC Commissioner Jonathan Adelstein posed the right policy question:

> [T]here is widespread agreement that we need to reform the ETC designation process. Reading the Act, it's clear Congress intended that multiple carriers would have access to universal service. Otherwise, it wouldn't have given us the authority to make additional carriers eligible. But it's not clear that Congress fully contemplated the impact of this growing competition on the ability of the universal service fund to keep up with demand, and eventually to support advanced services. The amount of funding new entrants receive is growing quickly. It may come down to a choice Congress never envisioned – between financing competition, or financing network development that will give people in Rural America access to advanced services like broadband.[29]

The universal service fund is headed toward a financial crisis in which the demand for funds outstrips the ability to pay. To avert this, Congress should clearly articulate its goals for universal service and rural infrastructure development so that rural consumers can continue to enjoy comparable services at comparable rates to those available in urban areas. Universal service is a complex issue, and technology and markets are continually changing, so Congress should avoid prescribing exactly how universal service should be reformed, but it should clearly articulate the goals that should be achieved. These goals should include the development of rural telecommunications infrastructure capable of supporting widely available broadband services in areas where it otherwise would not be economically viable, and a sustainable funding mechanism to assure that carriers have sufficient resources to make that infrastructure investment. The following suggestions focus on how the current universal service rules and processes

[29] Remarks of Jonathan S. Adelstein before the NTCA Legislative and Policy Conference (March 22, 2004) (http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-245498A1.doc).

should be reformed to assure that universal service funding continues to be specific, sufficient and sustainable, and that affordable access to broadband service is provided to all Americans.

A. Fix the USF Collection Mechanism

For all of the reasons outlined above, the current USF collection mechanism, based on assessments only on interstate and international end-user revenues for telecommunications services, is not sustainable and must be quickly reformed. In its place, Congress should adopt the principle that any entity that benefits from the ubiquitous availability of affordable network connections should share in the funding of universal service.

Any workable mechanism must anticipate and accommodate changes in telecommunications technology. Some have questioned whether VoIP and other IP enabled services are telecommunications services or information services, and whether such services should contribute to the preservation and advancement of universal service.

Using the principles set forth above, VoIP and IP-enabled services benefit from the availability of ubiquitous and affordable network connections and therefore should help support network deployment, regardless of their ultimate regulatory classification. VoIP providers benefit in two ways. First, the network connections that universal service supports are the very same connections that consumers in many rural areas use to obtain their access to the Internet, and provide the ability to subscribe to VoIP service in the first place. Second, by having all consumers and businesses nationwide connected to the PSTN, customers of VoIP service providers have the opportunity to call anyone anywhere.

Another reason that VoIP services must contribute to the preservation and advancement of universal service is that if, as some have predicted, VoIP and IP-enabled services become the predominant method by which consumers communicate, then without their participation in universal service funding the entire system would collapse, and the ubiquitous infrastructure upon which they depend would no longer be possible. In essence, the calling scope of VoIP providers will decrease dramatically unless these providers help support affordable access to the broadband infrastructure.

B. Establish Uniform Criteria for Identifying Rural Areas That Can Support just one Carrier of Last Resort

As Chairman Martin has previously stated, "subsidizing multiple competitors to serve areas in which costs are prohibitively expensive for even one carrier … may make it difficult for any one carrier to achieve the economies of scale necessary to serve all of the customers in a rural area, leading to inefficient and/or stranded investment and a ballooning universal service fund." Clear guidelines should be developed that define areas where there would be a rebuttable presumption that providing high-cost support to multiple carriers would not be in the public interest.[30]

To accomplish this goal, it will be critical to assure that support is targeted only to the highest cost areas, and not wasted by supporting customers located in cities, towns or other densely populated areas. One useful way to think of a rural service area is to use the "doughnut analogy" and to think of the town, or other densely populated areas as the "hole," and the remainder of the service area as the "doughnut." Using this analogy,

[30] One such proposal has already been placed in the record in CC Docket 96-45 by former Joint Board member and West Virginia Consumer Advocate Billy Jack Gregg. Mr. Gregg's proposal bases this definition on the amount of high-cost support currently being received by the incumbent. Other criteria, such as population density or other factors that influence network cost, could also be used to specify areas where supporting multiple ETCs and Carriers of Last Resort would not be in the public interest.

universal service support exists to provide the ability and incentive for infrastructure investment in the doughnut but not in the hole. By targeting high-cost support in this manner, competition from multiple technology platforms can develop in areas where such competition would naturally occur, and scarce support dollars can be targeted to support infrastructure enhancements in areas where such investment would not otherwise be made.

C. Establish Separate Funding Mechanisms for Wireline and Wireless Carriers

Many of the current problems in ETC designation and universal service funding process can be traced to a misplaced belief that wireline and wireless services are direct competitors of each other. While there may be some small percentage of the population that has "cut the cord" and relies entirely on wireless service, and another segment that neither needs nor wants wireless service, for most consumers today wireline and wireless services are complimentary services. Both services are needed and valued, for differing reasons.

Other of today's problems stem from the current economically irrational system of giving a wireless carrier that has a totally different cost structure and cost drivers, support based upon the cost of the wireline incumbent. In addition to not making economic sense, it also totally fails to provide direction and incentive for what type of wireless infrastructure investment warrants public support, and where such infrastructure support may be in the public interest.

The current high-cost support program for wireline carriers has been immensely successful in the development of high-quality rural infrastructure, and in the delivery of reasonably priced advanced telecommunications services to rural consumers. The

program must be continued, and additional incentives should be created to accelerate the development of infrastructure capable of supporting broadband services in high-cost rural areas.

Consideration should be given to establishing a separate support program to provide specific, predictable and sufficient funding for wireless infrastructure in high-cost rural areas where such infrastructure would not otherwise be economically viable.[31] If it is determined that the public benefits of such a program would exceed the public costs, a wireless-specific support program could be designed to achieve defined wireless infrastructure and signal coverage objectives. If such a program is developed, funding should be provided to one wireless Carrier of Last Resort in defined rural service areas.[32] In selecting the single recipient of wireless funding, policy makers should avoid the temptation to simply award this designation to lowest bidder, but rather to the carrier that offers the best balance of improved wireless coverage and increased public cost. The recipient of any wireless high-cost support should be required to invest funds in wireless infrastructure to provide high-quality signal coverage throughout the ETC service area.[33]

[31]A proposal for a separate wireless fund in not new. On August 17, 2005, the Federal-State Joint Board on Universal Service issued a Public Notice in which it requested comment on four specific proposals by Joint Board Members and Staff for modifications to the current universal service process. One of these proposals, titled "Universal Service Endpoint Reform Plan" (USERP), was submitted by Joint Board Staff Members Peter Bluhm (VT), Jeff Pursley (NE) and Joel Shiffman (ME). The USERP specifically proposes that a metric for the approval of wireless ETC application be "to improve wireless signal coverage, particularly along roads." As will be more fully discussed in Section VI, the Joint Board has recently released two Public Notices indicating that they are considering significant reform in the universal service distribution process, including explicit funding of wireless carriers based on their own costs.

[32] If a separate wireless high-cost support program were to be developed, such service areas should not be defined in terms of existing ILEC service areas, such as study areas, but rather in terms more appropriate to rural carriers, such as RSAs. The defined service areas should be small enough that rural cellular carriers that focus on serving rural communities have a reasonable opportunity to be designated as the wireless COLR for their service areas.

[33] In the case of a wireless carrier, high-quality service should be defined as the ability of all consumers within the service area being able to enjoy acceptable signal coverage using a conventional handset at their

Funding for all ETCs, wireline and wireless, should be made based upon that carrier's reasonable costs for achieving defined policy goals.[34] As is the case for wireline providers today, support should only be provided after the investment in rural infrastructure has been made. The Joint Board should conduct a proceeding to develop appropriate costing methodologies for carriers using technologies for which the FCC's current rules may not be appropriate.[35] Support for incumbent rural wireline carries should continue to be provided according to their embedded cost. The Rural Task Force (RTF) determined that forward-looking cost models were not sufficiently accurate for the determination of sufficient support levels for rural telephone companies.[36] Nothing has occurred since this recommendation was made that would change the basis for the RTF's conclusions.

D. Reform Intercarrier Compensation in a Manner That Supports Universal Service Goals

The current system of intercarrier compensation, which charges different prices based on the type of the call (local, intrastate, interstate, Internet) and the carrier making the call (ILEC, CLEC, IXC, CMRS, etc.), is badly in need of reform. Some parties have called for replacing the current intercarrier compensation regime with a "bill and keep" system where carriers would not compensate each other for the origination and

place of residence, as well as when traveling along national, state or county highways within the service area.

[34] As will be more fully discussed in Section VI, on May 1 the Joint Board released a Public Notice in which it seeks comment on whether the Commission should replace the current identical support rule with a requirement that competitive ETCs demonstrate their own costs in order to receive support.

[35] Parts 32, 36 and 69 of the FCC rules define how costs are to be determined for wireline telephone companies, and likely are not relevant in all respects for carriers using wireless or other technologies. Appropriate rules should be developed to determine the appropriate levels of public support for such services.

[36] Federal-State Joint Board on Universal Service, Rural Task Force Recommendation to the Federal-State Joint Board on Universal Service, CC Docket 96-45 (September 29, 2000), at 18.

termination of traffic, and all carriers would recover the cost of their networks either from their end-user customers or from the universal service fund. A mandatory bill and keep system would add over $2 billion of additional funding requirements on the already overburdened universal service funding system, and make the reforms described in the previous sections even more difficult to accomplish. To ensure that universal service goals continue to be met, any intercarrier compensation reform should include the following principles:

- Rural carriers have a right to fair compensation for use of their networks by other carriers, including VoIP and other IP-enabled service providers; and
- Mandatory bill and keep in rural areas will not serve the public interest and would be counter to universal service goals.

On July 24, 2006, the National Association of Regulatory Utility Commissioners (NARUC) forwarded to the "FCC the Missoula Plan for Intercarrier Compensation Reform."[37] The Missoula Plan was developed by a diverse group of telecommunications service providers[38] under the auspices of the NARUC Task Force on Intercarrier Compensation, and offers a comprehensive proposal for intercarrier compensation reform that would greatly assist in the achievement of the universal service goals described in this white paper.

[37] Letter dated July 24, 2006 to FCC Chairman Kevin Martin from Tony Clark, Chair NARUC Committee on Telecommunications, Ray Baum, Chair NARUC Task Force on Intercarrier Compensation, and Larry Landis, Vice-Chair NARUC Task Force on Intercarrier Compensation, CC Docket 01-92.

[38] Original sponsors of the Missoula Plan included AT&T, BellSouth Corp., Cingular Wireless, Commonwealth Telephone Company, Consolidated Communications, Epic Touch, Global Crossing, Iowa Telecom, Level 3 Communications, Madison River Communications, and the 336 member companies of the Rural Alliance.

V. CERTAIN PROPOSALS FOR LEGISLATIVE AND POLICY REFORM WOULD ACTUALLY MAKE THE SITUATION WORSE FOR RURAL CONSUMERS

In recent years, a number of policy papers and legislative drafts have been circulated containing proposals for universal service reform. Many of these proposals would seriously harm rural consumers, and their ability to have access to advanced telecommunications services at rates that are reasonably comparable to those in urban areas. The purpose of universal service funding is to provide the ability and incentive for communications providers to invest in telecommunications infrastructure to deliver broadband and other advanced services to areas where, without such funding, such infrastructure investment would not be made. Using this metric, the following proposals would hinder the achievement of this goal.

A. Cap the Size of the Fund

One must always be careful to define the problem that one seeks to solve. If the problem with universal service is defined in terms of the growth in the fund, then capping the size of the fund might make sense. But the problem that universal service is intended to solve is the development of advanced telecommunications infrastructure in high-cost rural areas. Capping the fund would also ignore the primary cause of recent growth which is inefficient funding to multiple wireless providers, with little tangible evidence that this is resulting in increased wireless coverage in remote rural areas. The 1996 Act is very specific that universal service funding must be "sufficient,"[39] and that "universal service is an evolving level of telecommunications services."[40] Placing an arbitrary cap on the size of the fund will hinder policy makers in their achievement of these goals. It would

[39] Section 254(b)(5).
[40] Section 254(c)(1).

also make it difficult, if not impossible, to achieve the national goal of delivering broadband more ubiquitously to rural consumers. The correct way to solve current universal service problems is to fix the two primary sources of the problems, an inefficient and uneconomic USF distribution system, and an obsolete USF collection mechanism.

B. Convert the Fund to Block Grants to the States

Several proposals have been made to convert federal universal service funding to a system of "block grants" to the states.[41] Such a policy would be a bad idea for several reasons. First, the universal service fund described in the 1996 Act is a federal fund, designed to assure that consumers in rural consumers in all parts of the Nation have a comparable level of service. Second, having 50 separate governmental entities managing this program would dramatically increase the regulatory bureaucracy at a time that many are calling for less regulation, not more. Third, most states currently do not have the staff resources to manage a program of this scope and complexity, and funding dollars would need to be diverted to administration of multiple programs, rather than the intended purpose of rural infrastructure development. Fourth, competition among the states for a fixed amount of federal funding dollars will inevitably lead to a food fight among the states for universal service resources, and a politicization of the overall process. Finally, there would be no way to appropriately size the total size of the federal program to assure that funding resources are "sufficient" to achieve the universal service goals mandated by the 1996 Act area achieved. Policy resources would be better spent defining national

[41] See Public Notice FCC-05J-1, released August 17, 2005 in CC Docket 96-45, seeking comment on four proposals for universal service reform submitted by state members of the Joint Board and state staff members.

policy goals, and administering a system that encourages investment in rural telecommunications infrastructure in the most efficient manner possible.

C. Provide Funding to Individuals in the Form of Vouchers

No one would ever suggest that each rancher in Montana be given thousands of dollars with the hope that they would all pool their resources to build an interstate highway through the state. Telecommunications networks, wireline and wireless, are the information highways that tie our communities and our society together. Like concrete and asphalt highways, they require the planned investment of billions of dollars in long-lived, fixed infrastructure. The goal of universal service funding is to assure that telecommunications infrastructure is built in areas where it would not otherwise be economically viable. Telecommunications companies build networks, consumers don't. If universal service funding is provided directly to consumers it is highly unlikely that advanced networks will be built in high-cost rural areas, and highly likely that policy goals for rural broadband development will not be achieved.

D. Determine Funding Levels Through an Auction Process

An auction process that made a single universal service grant to the lowest bidder would ignore the critical role that the quality of network infrastructure plays in the delivery of advanced telecommunications services. An auction process would lead to a "race to the bottom" where the loser would be the consumers in rural America. Many of the problems with the current universal service system can be traced to a flawed distribution system that results in many carriers receiving high-cost support for serving predominantly low-cost areas. If this process were reformed as suggested in this paper, with high-cost funding targeted only to truly high-cost areas, and separate wireline and

wireless funds were established, then current incentives for abuse of the fund would have been largely eliminated. The public interest, and the goals of the 1996 Act, will be best served in an environment where policy makers evaluate the costs and benefits of rural infrastructure investment, and award universal service funding to a single wireline, and in areas where it is found to be in the public interest, a single wireless carrier that will commit to serve as Carrier of Last Resort in the most efficient manner possible.

E. Eliminate Funding in Study Areas With Multiple Service Providers

As discussed in this white paper, and more fully documented in Appendix A, the cost of providing telecommunication services varies widely depending on the distance from population clusters and the density of the serving area. Even in the most remote and rural areas, service in towns, villages, or other areas where customer density is high,[42] it can be relatively inexpensive to provide service. It is not surprising, therefore, that competition from multiple service providers, using multiple technology platforms, can often be found in such areas, even though the surrounding countryside may be very sparsely populated and high-cost. It is for the consumer at the outer edge of the service territory, where costs are high and competition will not go, that universal service exists. As discussed previously, it is altogether appropriate to target universal service funding in such a way that no funding is provided to localities where costs are relatively low, and competition will develop naturally. However to extend this concept to say that if multiple service providers exist somewhere in an ILEC *study area* then that entire study area should not qualify for high-cost support would be to doom rural consumers in the more remote portions of the study area to second class technology citizenship. As discussed

[42] In a wireless network, customer density is also high along major highways.

previously, universal service support should be targeted to areas where costs are high, and support should be provided to one provider that serve as Carriers of Last Resort.

VI. RECENT PUBLIC NOTICES ISSUED BY THE JOINT BOARD INDICATE THAT MAJOR CHANGES MAY SOON OCCUR IN FEDERAL UNIVERSAL SERVICE FUNDING POLICY

A. Joint Board's May1, 2007 Recommended Decision recommending an interim emergency cap on CETC funding and companion Public Notice seeking comment on various proposals for reform of the USF high-cost mechanism.

On May 1, 2007, the Federal-State Joint Board on Universal Service (Joint Board) on May 1, 2007 released a Public Notice seeking comment on various proposals to reform the high-cost universal service support mechanism.[43] At the same time that the Joint Board issued this Notice, it also released a Recommended Decision that sought to control the "explosive growth in high-cost universal service disbursements" by imposing "an interim, emergency cap on the amount of high-cost support that competitive eligible telecommunications carriers (ETCs) may receive for each state based on the average level of competitive ETC support distributed in that state in 2006."[44] The Recommended Decision also proposed to "seek comment on various proposals to reform the high-cost universal service support mechanisms."[45]

In justifying the need for immediate action, the Joint Board stated:

> High-cost support has been rapidly increasing in recent years and , without immediate action to restrain growth in competitive ETC funding, the federal universal service fund is in dire jeopardy of becoming unsustainable. ... We therefore recommend that the Commission immediately impose an interim cap on high-cost support provided to competitive ETCs until such measures can be adopted that will ensure that the fund will be sustainable for future years. ... At this time, we do not recommend additional caps on support provided to incumbent LECs, because the data show less growth pressure from incumbent LECs.

[43] Public Notice *Federal-State Joint Board on Universal Service Seeks Comment on Long Term, Comprehensive High-Cost Universal Service Reform,* ,WC Docket No. 05-337 and CC Docket No. 96-45, FCC 07J-2, released May 1, 2007 (Notice).

[44] Recommended Decision *In the Matter of High-Cost Universal Service Support, WC Docket No. 05-337 and Federal State Joint Board on Universal Service, CC Docket No. 96-45*, FCC 07J-1, released May 1, 2007 (Recommended Decision).

[45] *Id* at paragraph 1.

> Moreover, incumbent LEC high-cost support is already capped and incumbent interstate access support has a targeted limit.

In justifying its belief that the imposition of an interim cap on CETCs was consistent with the FCC's competitive neutrality principles, the Joint Board reasoned:

> Competitive ETCs, unlike incumbent LECs, have no equal access obligations. Competitive ETCs also are not subject to rate regulation. In addition, competitive ETCs may not have the same carrier of last resort obligations that incumbent LECs have. Furthermore, under the identical support rule, both incumbent rural LECs and competitive ETCs receive support based on the incumbent rural LECs' costs. Therefore, incumbent rural LECs' support is cost-based, while competitive ETCs' support is not. Due to this, as discussed below, we recommend that the Commission consider abandoning the identical support rule in any comprehensive and fundamental reform ultimately adopted.[46]

The Joint Board acknowledges that the interim cap on competitive ETC high-cost support represents only a temporary solution to problems with the high-cost support distribution mechanisms, and commits to making further recommendations regarding comprehensive high-cost universal service reform within six months of the Recommended Decision (i.e., by November 1, 2007).

In its companion Public Notice, the Joint Board seeks comment on several proposals that have been placed in the public record since the close of the last comment cycle, as well as other possible reforms. Specifically, the Joint Board seeks comment on:

1. Reverse Auctions;
2. GIS Technology and Network Cost Modeling;
3. Disaggregation of Support
4. Competitive ETC Support; and
5. Broadband.[47]

[46] Id at paragraph 6.

[47] Public Notice at paragraphs 4-8.

Consistent with the conclusions stated in its Recommended Decision, the Joint Board seeks comment on "whether the FCC should replace the current identical support rule with a requirement that competitive ETCs demonstrate their own costs in order to receive support."[48] The Joint Board also states that "In light of the uncontrolled growth in competitive ETC support in recent years, we also seek comment on how we should view the funding of multiple carriers in high-cost areas."[49] Regarding broadband service the Joint Board seeks comment on "whether the Joint Board and the Commission should consider adding broadband to the list of supported service, ... the impact of adding broadband support on the size of the fund, and whether broadband should be a separately identified category of support apart from other high-cost support."[50]

B. Joint Board's September 6, 2007 Public Notice providing a statement of principles that will guide its USF reform recommendations.

On September 6, 2007 the Joint Board released a one-page Public Notice FCC 07J-3 in which it stated the following:

> The Joint Board is taking a fresh look at high-cost universal service support. The Joint Board has tentatively agreed that:
>
> 1. Support mechanisms for the future will focus on:
>   a. Voice
>   b. Broadband
>   c. Mobility
>
> 2. In addition to the principles set forth in the statute, support mechanisms for the future will be guided by the following principles:
>   a. Cost control
>   b. Accountability
>   c. State participation
>   d. Infrastructure build out in unserved areas
>
> 3. The equal support rule will not be part of future support mechanisms.

[48] Id at paragraph 7.
[49] Id.
[50] Id at paragraph 8.

This statement provides encouragement that the Joint Board may indeed be ready to address some of the significant shortcomings of the current universal service distribution system. Throughout this white paper we have stressed the critical need for universal service funding to support the build out of telecommunications infrastructure into high-cost and unserved areas, and the Joint Board's thinking clearly seems to be moving in that direction. Also significant is that the Joint Board has clearly stated that "The equal support rule will not be part of future support mechanisms." In addition, the Joint Board has also stated that Broadband and Mobility will join Voice as the focus of universal service mechanisms in the future.

The May 1 Public Notice indicated that the Joint Board intended to issue its recommendations within six months, which would indicate a formal recommendation around November 1, 2007. By law, the FCC has one year from this date to act on the Joint Board's recommendation. Assuming that the FCC follows past practice, the recommendation will be placed out for public comment shortly after it is filed.

VII. Conclusion

While it is neither necessary nor appropriate for Congress to micro-manage the administration of the universal service funds, it is critical that the goals to be accomplished through federal universal service mechanisms be clearly and unambiguously stated and understood. The current developments in universal service fund growth and CETC designations render the existing system unsustainable, and if changes are not made soon, then the universal service system as we have known it will suffer irreparable damage. Consumers in the most rural and high-cost areas of the nation will face the very real possibility of having no telecommunications carrier capable of connecting them to the telephone and information networks. The goals of universal service have been, and must continue to be, that all consumers, particularly those in rural, insular and high-cost areas, have access to at least one Carrier of Last Resort capable of providing access to affordable basic and advanced telecommunications services. The policy recommendations contained in this paper will help to ensure that this vision remains viable, and that universal service funding will be specific, predictable, sufficient and sustainable. The recent statements of the Joint Board provide encouragement that there might soon be meaningful reform in the USF process that will ensure that the important universal service principles established by Congress will be maintained into the future.

Appendix A – The Higher Cost of Serving Rural Areas

Two factors play a primary role in making telephone service more costly to provide in rural areas – distance and density. The farther from the central office a customer is, the higher the cost of reaching the customer. Also, the more sparsely populated the area, the higher the costs to connect individual customers to the network. A third factor – the number of lines per switch – also plays a role, as the lower the number of lines served by the switch, the higher the per-line cost.

In January 2000, the Rural Task Force published the landmark *White Paper 2 – The Rural Difference*, which provides facts and data summarizing the cost differences between rural and non-rural telephone companies.[51] Among the differences cited in this study are:

- Rural carriers serve about eight percent of the nation's access lines covering 38 percent of the nation's land area.
- The average population density is only 13 persons per square mile for areas served by rural carriers compared with 105 persons per square mile in areas served by non-rural carriers.
- Rural carriers have lower business customer density than non-rural carriers.
- The average population density of areas served by rural carriers varies radically. Rural carriers in Alaska and Wyoming on average serve populations of 0.58 and 1.25 persons per square miles respectively, while rural carriers in some states serve populations of over 100 persons per square mile.
- Rural carriers have only 1,254 customers on average per switch, compared to over 7,000 customers per switch for non-rural carriers.
- Total plant investment per loop is over $5,000 on average for rural carriers compared to less than $3,000 for non-rural carriers.
- Average total plant investment per line for rural carriers increases as the line size of the study area decreases. Average total plant investment per line ranges from $3,000 for rural carriers with the largest study areas to over $10,000 for rural carriers with the smallest study areas.

[51] Section 3(37) of the Communications Act defines "rural telephone company." Generally, a study area with less than 100,000 lines in a state is considered to be rural. Non-rural study areas serve significantly more lines, and most RBOC study areas are classified as non-rural.

- The range of values for total plant investment per loop for rural carriers ($1,400 to $40,500) is far greater than the range for non-rural carriers ($1,570 to $4,350).

As the Rural Task Force noted, there is a wide diversity among rural carriers. This diversity is driven by demographics, terrain, distance, density and many other factors that influence the cost of delivering high-quality telecommunications services. The following data uses nationwide average cost results to illustrate the role that distance and density play in determining cost of providing basic telephone service.[52]

Chart A illustrates the impact that distance from the central office has on the monthly cost of providing basic telephone service (on the right-hand vertical axis), and the distribution of customer density for all U.S. households (on the left-hand vertical axis).

[52] This data includes loop, switching and transport functions, and was developed during the FCC's proxy model proceeding in the late 1990s. It comes from the BCPM 3.0 model with FCC Common Inputs. As the Rural Task Force identified in White Paper 4, proxy models are not sufficiently accurate at the individual rural wire center level to be reliable indicators of the costs of specific rural telephone companies. The date presented in Charts 1 and 2 reflects Nationwide averages of cost and is presented solely to illustrate the dramatic effect that distance and density may have on the average cost of providing basic telephone service.

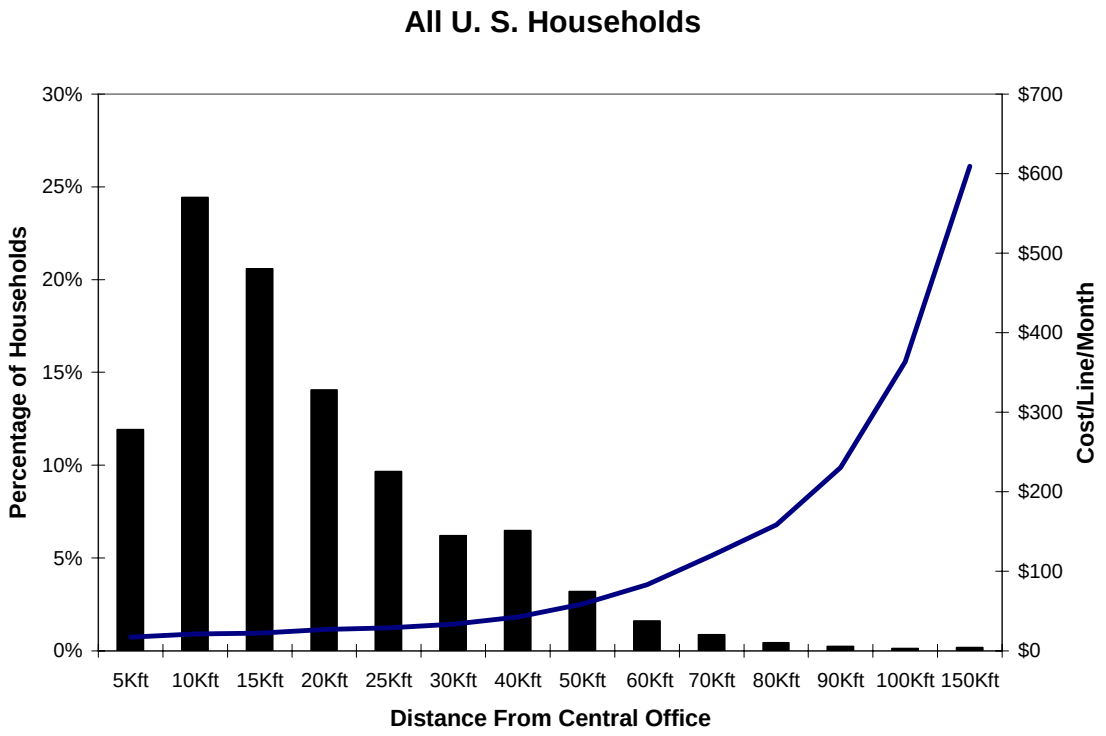


Chart A

Notice that nationwide well over half of all households are located within 15,000 feet of their serving central office, whereas only a small percentage are located at distances exceeding 50,000 feet. This chart also shows that costs are relatively low in close proximity to the central office, but grow geometrically as distances exceed 40,000 feet. This geometric expansion stems, in part, from the fact that the more distant customers generally are located in sparsely populated areas as well.

Chart B illustrates the impact that population density has on the average cost of providing basic telephone service.

Households per Square Mile	Nationwide Average Cost
0 to 5	$133.00
6 to 100	$48.44
101 to 200	$30.72
201 to 650	$26.87
651 to 850	$25.05
851 to 2550	$23.11
2551 to 5000	$21.83
5001 to 10,000	$20.25
> 10,001	$18.16

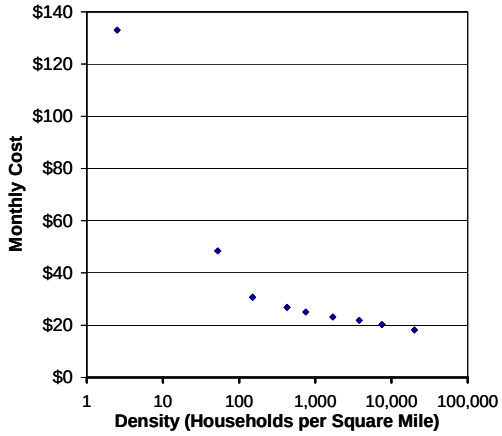


Chart B

Chart B shows that costs increase gradually with decreasing population density until around 100 households per square mile. Below this density level, costs increase geometrically as population density decreases. A good indicator of relative costs is the percentage of customers in the two lowest density bands – 0 to 5, and 5 to 100 households per square mile.

- Nationwide, 1.1% of residential customers are in service areas with less than 5 households per square mile, and 11.4% are in areas with less than 100 households per square mile.
- On average for rural companies 5.9% of residential subscribers are in service areas with less than 5 households per square mile and 38.1% are in service areas with less than 100 households per square mile.
- By contrast for non-rural companies only 0.5% of customers are located in areas with a density less than 5 households per square mile and only 8.0% are in areas with less than 100 households per square mile.
- The actual cost for each particular rural company is based on its particular mix of distance, density and other factors.

Appendix B – ILEC Study Areas with Multiple CETCs

This Table contains data taken from USAC Report HC18 for the second quarter of 2006 and shows, by state and total, the number of ILEC study areas with multiple CETCs. Data is provided both for ETCs that are approved as well as for approved and pending applications.

	Number of ILEC Study Areas													
	Approved and Pending							Approved						
Number of CETCs	1	2	3	4	5	6	7+	1	2	3	4	5	6	7+
AK	5	1	3	1				1	3	1				
AL	11	5	1	4				11	6	4				
AR	1	1	2					1	3					
AZ	6							4						
CO	11	3						11	3					
FL	3	1						3	1					
GA	13	11	1					16	1					
GU		1							1					
HI	1							1						
IA	10	50	42	27	14	7	4	10	50	42	26	13	7	4
ID	5	3	1					7	1					
IL	11	26	6					1						
IN	24	3						24	3					
KS	9	18	2	2				9	18	2	2			
KY	5	6		1	1			6	5	1	1			
LA	5	4	6					5	4	6				
ME		19						19						
MI	10	18	2	2				10	18	2	2			
MN	5	32	30	10	2	1	1	26	37	13	1	2		
MO	27	2	1	1				1	1					
MS	1	11	5					1	11	5				
MT	4							3						
NC	9	10	1											
ND	1	1	1	2	1	9	7	1	1	1	2	1	9	7
NE	21	4												
NH		7												
NM	10	2						10	2					
NV	2	1						2	1					
NY	22	11	1					30						
OK	20	12	1					17	8					
OR	5	6						5	6					
PA	20	1						16						
SC	3													
SD	13	7	4	2				17	2	2				
TN	5	1	2					5	2					
TX	19	14	2	1		1		21	3	1				
UT	1													
VA	6	11	2					10	3					
VT	5	4						9						
WA	2	9	7		1	1		2	9	7		1	1	
WI	4	23	24	10	13	7	6	3	23	24	10	13	7	6
WV	4		1		1			1	1		1			
WY	6	3						6	3					
Total	345	342	148	63	33	26	18	325	230	111	45	30	24	17
Percentage	35%	35%	15%	6%	3%	3%	2%	42%	29%	14%	6%	4%	3%	2%

Chart C