

## United States Telephone Association (USTA)

America is at a cross-roads in telecommunications: seeking to expand competitive advanced telecommunications and information choices for as many consumers as possible, while at the same time seeking to maintain a historic commitment and support to provide services to all consumers. This commitment to universal service consists of two key components: availability and affordability. USTA applauds the dedicated work and comprehensive proposals put forth by the Administration, Congress, the FCC, state regulators, and others. USTA agrees with many of these proposals that a comprehensive, national proceeding to address universal service is necessary in order to meet customer and universal service requirements as competition is introduced and the information super-highway is deployed.

Regulatory paradigms of the past were designed to promote universal telephone services to all citizens through a package of inter-dependent policy tools. These tools included holding rates for some services below market levels in many areas; the creation of explicit support mechanisms; internal support flows, and; carrier of last resort obligations within exclusive franchises. With these regulatory tools, which were part of a form of social contract between regulators and the telecommunications industry, America's local exchange carriers (LECs) have successfully achieved an average penetration level of over 94%, although penetration to certain segments of society must still be addressed.

The existing package of regulatory tools is no longer sustainable in today's rapidly evolving telecommunications markets. While existing tools may be adjusted or supplemented in some markets, a transition to new mechanisms and a new regulatory paradigm needs to be developed and tested in many markets. Current social contracts are no longer feasible, or, in many cases, desirable. Competitive barriers have fallen through numerous technological and regulatory changes. America is at the threshold of a new era.

It is essential for America to adopt a dynamic, forward-looking telecommunications policy. The Universal Service policy vision should promote the continued widespread availability of telecommunications services throughout the United States and universal accessibility to the advanced information superhighway. Wherever possible, this development should be determined by the forces of the competitive market, which will ensure that services are responsive to customers' needs, and that investment in America's telecommunications infrastructure will be made efficiently. Where the market cannot be relied upon, universal service policy should continue to ensure that the benefits of the telecommunications super-highway are available to all citizens.

### The Hallmarks of the USTA Universal Service Policy Are:

- **Reliance on Market Forces**, wherever feasible, to establish reasonable prices and guide the development of new services;
- **Availability** of universal services to all consumers;
- **Periodic Review** of services included as part of the Universal Service policy vision;
- **Deployment** of additional telecommunications and information services to schools, libraries, hospitals, and citizens with disabilities;
- **Affordability** of targeted services;
- **Incentives** for full participation by all providers in an increasingly competitive telecommunications market;
- **Funding** universal service obligations in a competitively neutral manner; and
- **Ubiquity** through market-driven infrastructure deployment and carrier of last resort obligations where required.

These key objectives will ensure that the policy vision of universal service - universal accessibility to the advanced information super-highway - will be met in the 21<sup>st</sup> century.

## Western Alliance

### **Telecommunications: A Rural Agenda**

The Western Alliance recommends that federal telecommunications legislation and any federal or state regulatory changes incorporate the following principles:

#### **Universal Service:**

A dynamic, evolving concept driven largely by technology with geographically averaged toll rates and compatible rural and metro local service and rates. Affordable universal service should be maintained where it presently exists, extended to where it does not exist, and be periodically reviewed for expanding the definition. What is basic and advanced service today will not be in the future. The marketplace in metro areas, not government, should in most cases drive the evolving definition.

Specifically, universal service should include at least voice grade access to the public switched network, broadband capabilities on demand, single party touch-tone service, a white page listing, and access to operator, directory, and emergency services.

Continued use of a regulated, evolved monopoly model in rural areas will continue to maximize the efficiencies where possible, thereby benefiting all users. Although it may appear “politically incorrect” to speak against the entry to competition in the telephone business at a time when many have accepted the idea, we believe competition in rural area markets may not serve the public interest.

#### **Universal Service Funding:**

The national commitment to universal service requires adequate support mechanisms implemented through nationwide cost allocation and cost recovery mechanisms. These mechanisms should apply only to the facilities-based universal service provider of last resort, service customers in low-density rural areas. The benefits of universal funding flow directly to the customers in the form of lower monthly rates. If national universal service policy requires upgrades to the public network or preferential rates for public facilities such as schools, libraries and the like, local exchange carriers must be able to recover the costs not recovered through affordable rates paid by such public entities from universal service support mechanisms.

All telecommunications providers should contribute to a universal support mechanism fund on an equitable, non-discriminatory basis. Consideration should be given to using revenue or minutes of use as the basis of payment.

Current Lifeline and Linkup support programs for low-income households should remain available and separate from high-cost assistance.

## **Western Alliance (Continued)**

### **Infrastructure:**

Any local exchange carrier must be required to allow a local exchange carrier serving as the carrier of last resort in any neighboring area lacking economies of scale or scope to share, on request, its public switched network infrastructure and services for the benefit of the customers of the carrier of last resort.

A rural telephone company must not be required to provide expanded interconnection, equal access or unbundled charges, unless the FCC shall have determined that application of any such requirement would be fair, not unduly burdensome and consistent with the public interest.

Local Exchange Carriers should not be left with stranded investments by newcomers that “cherry pick” their profitable customers, leaving them with unrecovered costs.

State regulators must retain adequate authority in rural areas to preserve and advance universal service when determining whether specific competitive entries are in the best interest of rural America.

### **Modified Final Judgment (MFJ):**

The MFJ restrictions on RBOC interexchange services must not be lifted unless adequate rural safeguards are adopted to protect rural LECs and their customers from both geographical toll - rate deaveraging by an interexchange provider and selective bypass. Nor should rural telephone companies become subject to obligations imposed upon RBOCs because of the MFJ.

### **Rural Definition:**

Rural telephone companies must be defined as local exchange carriers serving predominantly rural areas as the carrier of last resort. Rural telcos serve low density areas, and short-haul toll must be factored in when comparing local rate levels.

The Western Alliance’s primary focus for the FCC NOI filing was on behalf of the “small of the small”, wherein we identified companies with 20,000 or less access lines as needing support due to their exposure and vulnerability to significant change. Proposals to limit or exclude from funding exchange carriers based on size or form of regulation need careful study to better understand the consequences for rural customers.

### **In Summary:**

Local exchange carriers responsible for providing service to predominantly rural areas require an evolving definition of universal service – a process that monitors and ensure that rural markets can support competition, a continuation of the highly successful high-cost recovery mechanisms, local and long-distance rate comparability between rural and urban customers, and mandatory infrastructure sharing when requested by the carrier of last resort.

## **American Library Association (ALA)**

### **Equity on the Information Superhighway**

The American Library Association (ALA) endorses the national goal of connecting all schools, libraries and hospitals to the information superhighway by the year 2000.

Libraries are charged with ensuring public access to a diversity of information sources and viewpoints, regardless of a user's economic status or information-seeking skills. That public mission is essential to a democratic society and it cannot be filled solely by the commercial sector. At a time when only one of three American households owns a computer, our nation's public, school and college libraries are uniquely positioned to serve as the public's on-ramp to the information superhighway – a place where all people can tap into new technology with the expert assistance of a librarian.

### **What is needed to ensure full participation by libraries?**

- Online connections must be of the quality and speed to allow access to information in all formats (this means Internet in the short term and much higher speeds in the near future).
- These connections must enable libraries to create databases as well as library resources and services available to distant users and other libraries. There must also be support for libraries in converting their resources to digital formats.
- Telecommunications rates for libraries and educational institutions should be stable, predictable and affordable regardless of geographic location.
- There must be public policies that recognize the privacy of individuals and the importance of open access to information in an electronic environment.
- There must be support for purchase of equipment and training to ensure that all libraries have the technology and knowledgeable personnel to assist the public in using this new technology.

# **Arizona Consumers Council**

## **Principles to Ensure Basic Service and Protect Consumers in the Information Age**

### **Ensure Affordability of Basic Service**

- A. Preserving Universal Service for the Vast Majority
  1. Universal Service depends on a fundamental commitment to affordable pricing based on just and reasonable rates for all households.
  2. All users of the network should pay for all elements of the network that they use in proportion to the nature of the demands that they place on the network.
  3. The burden of joint and common costs placed on basic access should be minimized.
- B. Meeting the Needs of Underserved Groups
  4. Lifeline programs must be expanded and improved.
  5. We must have explicit commitments to make the information age accessible to all citizens, regardless of their functional abilities.
  6. We must assure that a reasonable level of technology is available across all geographic areas of the country as the information age evolves.

### **Expand the Definition of Basic Service**

- A. Modernizing Basic Service
  7. Basic telecommunications service must include access to available digital service with full interconnectivity to all networks at affordable rates, subject to the constraints of efficiency and affordability.
  8. At a minimum, expanding the concept of basic service must not raise the price of basic service; in fact, it must be reasonably likely that it will lower the price of basic service by lowering costs or increasing revenues.
- B. Public Goods on the Public Switched Network
  9. To be included in basic service new elements must be communications services which connect each to all and possess characteristics of telecommunications public goods.
  10. The needs and preferences of all users must be considered in open, public forums.

### **Promote Open Networks and Effective Competition**

- A. An Open Network
  11. Interconnect all networks ensuring open communications of each-to-each and any-to-all (the functional equivalent of common carriage).
- B. Promoting Competition
  12. Competition must exist before deregulation – it does not exist today.
  13. Competition must be promoted through the elimination of advantages enjoyed by continuing market power over the local network.
  14. Competition means multiple suppliers for significant numbers of subscribers with significant numbers of subscribers having taken alternative service.

## **Arizona Consumers Council (Continued)**

15. Entry into telecommunications network related lines of business (video, information services, manufacturing and long distance) by local telephone companies requires mitigation of market power and effective regulation of affiliates prior to entry.

### **Enhance Consumer Privacy**

#### **A. Proprietary Information**

16. Telephone subscribers must have the right to keep private their telephone numbers and usage patterns.
17. Local exchange carriers must not use proprietary customer information to market non-basic services. Affirmative authorization of the subscriber must be obtained for any use of such information.

### **Provide for Effective Regulation**

#### **A. Structure**

18. Strong structural safeguards including completely separate subsidiaries, strict rules governing affiliate transaction, and limits on ownership must be imposed for all major lines of business (information services, video, manufacturing, and long distance).
19. Adequate regulatory authority must be ensured at the state and federal levels including access to books and records, penalties for anti-consumer and anti-competitive behavior, and adequate funding for regulatory staff and consumer intervenors.

#### **B. The States**

20. States must be given flexibility in managing the transition to competition.

## **Arizona Department of Education (DOE)**

Equality of access to information within the educational community is critical to supporting Lisa Graham's vision of *Assess to Extraordinary Education*. Information provided to the public about how our schools spend taxpayer dollars, how our students are performing academically and how much debt has been incurred to pay for our schools ensure that all members of the community have the ability to participate in improving education for Arizona's students.

The most efficient and effective way to collect that information is via the Internet. The most efficient and effective way to provide that information is through the Internet. In addition, giving schools access to the Internet also creates a wonderful opportunity for enhancing classroom curriculum. The value of the Internet as a curriculum tool is just beginning to be understood.

Therefore, it is a critical goal at the Arizona Department of Education (ADE) to connect all schools, districts and the ADE to each other through the Internet.

We believe the best way to provide this connectivity is through partnerships with universities, community colleges, local consortiums, businesses, utilities, state agencies and local, statewide and national telecommunications providers. The procurement of equal access to reasonably priced, reliable service in rural areas will be crucial to the success of this effort. Issues such as fixed costs for basic bandwidth and equal access to support services must be considered. In addition, artificial boundaries must be removed so that transport of information moves in logical organizational patterns. For example, universities should be allowed to provide schools with access to their telecommunications devices.

The most difficult part of our effort to connect schools is to bring together all of the necessary entities to establish partnerships for connectivity. If we can create a model of cooperation that can be used throughout the state, this would greatly expedite the process.

## **Arizona Department of Library, Archives and Public Records (DLAPR)**

Recent developments in the world of telecommunications are bringing libraries into the forefront of the information age. The availability of electronic information is challenging libraries to expand their role in a more efficient and broad based manner to provide worldwide resources to all citizens. Libraries can only provide these resources if they have access to clean telephone lines and if the line rates are affordable.

It is essential that every community have basic telephone service that includes clean, reliable voice grade telephone lines. Service to all communities must include analog (dial tone) and digital (data) lines. Along with the availability of basic service, it is critical that libraries be given a preferential telephone line rate in order to ensure that libraries will continue to provide information to Arizona's citizens. Additionally, a network that would provide access to electronic resources through a local telephone call would help to ensure equal access to information.

Libraries are committed to serving all citizens, regardless of place of residence or economic status. Citizens with better access to information have opportunities to enhance their lives, contribute to the state's economic development, participate in community life, and provide better opportunities for their children to compete academically and in the workplace. Without free access to information many citizens will be left behind and Arizona will have a population of information "have-nots."

## **Arizona Library Association (AzLA)**

The Arizona Library Association is dedicated to universal citizen access to information. To insure that the people of Arizona have access to information and library services today and tomorrow, all libraries must participate fully in the information superhighway. State, local, and federal governments are cooperating and investing with the private sector to develop information databases and provide connectivity to the information superhighway. Citizens have paid via taxes for the creation of these databases, now there must be free universal access.

Libraries are the first and only place most Arizona citizens have access to electronic forms of information. Affordable or discounted rates for advanced telecommunications services to K-12 schools and public libraries is a crucial element in providing universal services to governmental information.

Universal access to information fosters economic development, the development of an educated workforce, and lifelong learning. In order for Arizona to retain its competitive edge with the other states, Arizona libraries must be able to offer electronic services and information to all citizens. Universal access to information can be provided economically to all citizens only when all libraries throughout the state are connected to the information superhighway.

## **Arizona State Public Information Network (ASPIN)**

### **The Need for Universal Service for Rural Internet Connectivity**

In the 1930s the Rural Electrification Act was passed to meet a huge and pressing challenge: How to plug rural communities into the growing national power grid? Over the next few decades, every rural resident in the United States got that plug, and through it came not just electric lighting but also a revolution in the way they live. We have instituted universal service requirements for a wide-range of services that have revolutionized our society from utilities to dial-tone service. Today we face a similar challenge in making sure that in today's "Information Age" that our communities are plugged into the growing global information grid, the Internet.

The growth of both the number of users and the applications of the Internet has astounded even those of us who have been its most optimistic proponents for many years. Within the last several years, it has grown from a resource used primarily by the research and education sector to a tool used everyday by the business and economic development. As our nation's economy adopts a more global posture and the need for information grows, Internet access becomes more essential for a healthy and equitable society.

The question becomes how do we as a state ensure that our underserved communities will not become the "information have-nots" of the Information Age and are thus isolated from the economic and social opportunities afforded by Internet access.

Rural Arizona does not have access to basic telecommunications services such as frame relay and ISDN. Without these services, large portions of rural Arizona will become insular and information have-nots. Rural Arizona has neither equal nor affordable access.

In order to ameliorate these universal service demands, we see three specific telecommunications needs that must be addressed:

- Equal and affordable access throughout Arizona to basic telecommunications technologies such as frame relay and ISDN.
- Access to new telecommunications technologies such as ATM as they become deployed in the urban areas.
- Empower rural community members through training and education on telecommunication services like the Internet.

Arizona's best way to ensure equal and affordable access in all universal services is to acknowledge new telecommunications as an essential service similar to electricity. We have focused on a few areas to ensure universal service through telecommunications availability, upgradability, and empowerment. Rural Arizona will not be an information have-not if all plugged into the growing global information grid.

## **Arizona Technology Access Program (AzTAP)**

A major area of concern to people with disabilities in Arizona is communications. As may be noted in the national discussion about the impact of Microsoft's Windows 95 release, the disability community is most concerned that new products and means of communications be usable and accessible for all. The graphics and ease of use with a mouse make Windows 95 a great thing for you and me, but they present major obstacles for people with physical disabilities such as low vision or bad arthritis. The release of this software has sparked a major discussion about the needs of individuals with disabilities, especially since many states have an interest in buying this product for their human service providing agencies.

Good client service provided by nonprofit human service organizations, or state agencies is dependent on telecommunications to an extent that was unknown just a few years ago. Statutory requirements for the convening of all sorts of multidisciplinary meetings to determine eligibility, to evaluate a client's physical condition, to see if a piece of assistive works and is appropriate, etc., all require meetings to develop service and procurements plans. This makes it imperative that a person with a disability have the means at-hand to communicate.

Section 508 of the Rehab Act of 1973 mandates that state and federal agencies acquire information technology that is fully-accessible. Arizona is in a unique position to be able to proactively respond to this need by means of a variety of steps that will ensure compliance with this piece of legislation. Other states have certified their compliance with legislative resolutions and/or executive orders. We can do that as well, or take a more holistic approach and tie whatever we do to a more inclusive, state procurement and re-use policy. In this way the process by which the state buys AT equipment and services will fully-reflect compliance with Section 508.

The use of AT devices that are purchased by the state will inevitably result in these devices being discarded by the original users for a variety of reasons. People leave the state, they die, they outgrow the device or service. Doesn't it make sense to ensure that all devices are recycled within a statewide system that ensures their refurbishment and re-issue? In the process of complying with Section 508, we could also incorporate the recycling and adaptive re-use of devices as a statewide directive for all state-funded service providing entities.

Another example of the importance of Universal Service and design, would be found in the emerging augmentative communications industry. The use of augmentative communication devices must be matched and configured to the specific telecommunications means available to both the individual and the state agency that may serve that individual. We suggest that every effort should be put forth to ensure that the telecommunications equipment that is procured by the state and state-sponsored activities, be as accessible as possible, and that existing equipment not be abandoned, but instead, re-used and adapted with an eye toward universal usability.

Lastly, the negative impact of not having accessible telecommunications technology is directly tied to the ability of individuals with disabilities to be employable and therefore productive, as taxpaying citizens. The high level of unemployment among people with disabilities (over 60%) means that a significant minority population is not able to contribute as much economically to society, as the rest of the population. This can and often does engender unfortunate attitudes about the "inability of the disabled" that are so corrosive of individual initiative and effective human service delivery.

This high level of unemployment is not indicative of a lack of desire, but heretofore, it has been a combination of lack of appropriate technology and misunderstandings as to the capability of persons with disabilities. Attempts to address this nationally have been made by Congress with the passage of the ADA, the IDEA Act, the Tech Act, the Rehab Act and the Telecommunications Act. In part, each responded to the need to reduce barriers to access and significant progress has been made thanks to the passage of these laws. The concept of universal service is one that, if implemented on a large scale, holds the promise of further reducing and eliminating barriers that prevent a lot of very talented people from fully participating in American society. We are the poorer for it.

# City of Phoenix

## **Information Superhighway Policy**

Phoenix believes that it is essential to promote a wide-range of advanced communications and computer technology to benefit the residents, businesses and institutions within the metropolitan area. Open access to such an “information superhighway” supports critical social, economic, and cultural goals of our community and promotes Phoenix’s reputation as a leader in innovative government nationally and internationally.

Phoenix is committed to developing a competitive and technologically current telecommunications environment that will foster and enhance the following:

- **Economic Viability**: The availability of technology is an important factor in the community’s ability to remain competitive and attract investment and new business.
- **Efficiency of City Government**: Telecommunications will provide faster and more cost effective delivery of services to the community.
- **Sense of Community**: The creation of an “Electronic Village” will allow citizens to electronically participate in government, business, and community activities.

Although it is the City’s desire that the private sector support many of these services, the City believes that it has the responsibility to promote:

- **Universal Access and Equity of Service**: It is essential that affordable access to advanced telecommunication services be available to all citizens as well as businesses, education, and government.
- **Privacy and Security of Information**: The capability must exist to protect the accuracy and security of government information, taxpayers’ investment in public records, and the privacy rights of citizens consistent with applicable laws.
- **Protection of Public Rights-Of-Way**: The use of public rights-of-way for telecommunication purposes by private companies should require a reasonable compensation for the use of this public asset.

## The Hopi Tribe

Thank you for the opportunity to participate in the **Universal Service** survey; our intent is to describe for you the telecommunications situation that exists here on the Hopi Reservation. While the Hopi situation, which to a large extent stems from geographic remoteness and isolation, may be unusual it is probably not unique in that there are many different kinds of barriers to Universal Service for remote rural Indian reservations in Arizona. This happens to be one of them.

As you may know, Hopi is completely surrounded by the Navajo Reservation. The Navajo Nation operates their own telecommunications utility, Navajo Communications; the Hopi Tribe has no such utility and is not connected to the Navajo utility. Hopi is thus an island without right-of-way to the outside world.

The local telecommunications service supplier on Hopi is Century / Universal Telephone Company of Marion, Louisiana. The long distance supplier for the Hopi Reservation is AT&T. US West owns cellular rights, but there are no receiver/transmitters on the Reservation. Our various telecommunications supplier's corporate remoteness accentuates the difficulties we face in achieving Universal Service.

The telecommunications equipment on the Hopi Reservation is an antiquated analog system which fails frequently. The system lacks data-quality integrity and will not sustain transmission rates higher than 14.4K baud. Century/Universal has been slow to offer to upgrade their equipment, but is considering such a move at present. Their slowness has been characterized as "under regulation" by the Hopi Tribe's MIS director. This assessment is because of the lack of any regulatory requirement for Century/Universal to maintain a reasonable equipment standard on the reservation.

One other "rural penalty" further limits the Hopi participation in the world of modern telecommunication networks. There is no "point-of-presence" (POP) located anywhere on the reservation that is accessible by the general public or the tribal government. Long distance charges would accrue to most of our people because they must use a distant POP provider. The closest POP that I am aware of is in Flagstaff.

**Ed Rosenberg, Ph.D. of the**  
**The National Regulatory Research Institute (NRRI)**

## **Universal Service<sup>1</sup>**

Universal service programs reduce the effects of geography, disability, and economic status on individuals' use of the telecommunications system.<sup>2</sup> Basic universal service includes affordable access to services required for individuals to be fully functioning, integrated members of society and the economy.<sup>3</sup>

Advances universal service goals include timely deployment of advanced telecommunications infrastructure – including provision for distance learning, telemedicine, ubiquitous connectivity to the information highway, efficient use of communications networks, and consumer choice through the introduction of competition.<sup>4</sup> The sub-goals are intermediate to promoting the welfare of the citizenry and encouraging economic growth and development.

## **Challenges**

### **Defining Universal Service**

Policy makers must define adequate universal service both now and in the future and make it accessible – which implies both availability and reasonable affordability. Moreover, a mechanism for modifying universal service must be in place, since the definition of universal service will evolve over time. However, policy makers might well be wary of adopting a technology-driven or supply-push approach to defining universal service. Instead, a market test may be appropriate in defining universal service. For example, federal legislation being debated in conference contemplates including in universal service any service that has been subscribed to by a majority of residential customers. Universal service also implies a minimum quality-of-service that will be delivered or available ubiquitously.

When deployment decisions are made on a “business case” basis, with potential profitability the sole criterion for making investments, rural and inner-city areas may be bypassed. Policy makers can develop plans that promote timely deployment. Such policies include incentives or inducements to make the necessary investment in designated areas.

### **Funding and Administering Universal Service Programs**

Current policy has overlapping parts, many not targeted. Furthermore, because individual customers may both receive and provide subsidies, it may be difficult to determine the distribution of net benefits among individuals.<sup>5</sup>

Options include direct subsidies, establishing a universal service fund, vouchers, and minimum subscribership goals. The current mix of programs into fewer simpler ones that are be compatible with competition, and all providers and users should be involved. Support should be limited to services, customers, and areas that merit it, and a means for adjusting to changing conditions such as new providers and/or new definitions of universal service should be devised.

## **Ed Rosenberg, Ph.D. of the NRRI (Continued)**

### **Direct Subsidies**

Direct subsidies from general taxes are probably the most efficient, but such subsidies are not likely to be politically palatable. Current budget conditions at the state and federal level make even limited incentives such as tax credits for investments in certain areas unlikely. Small-scale demonstration projects such as those funded through the NTIA continue to be useful.

### **Universal Service Funds**

Basic and advanced universal service can be supported through a tax or surcharge applied to all providers and covering all or almost all communications services.<sup>6</sup> The fund can support service to high-cost areas and for low-income consumers and can fund deployment of new technologies in designated areas.

### **Vouchers<sup>8</sup>**

End users could receive vouchers which could be used to purchase service from any willing provider. Vouchers make subsidies explicit, promote consumer choice, and might induce competitive entry into high-cost areas.<sup>9</sup> Vouchers can be targeted at customers, areas, and services that merit support. Only those providers willing and able to provide universal service could redeem vouchers. Providers with carrier-of-last-resort obligations might be allowed a higher voucher rate. If based on the difference between the incumbent's stated cost of service and an average or maximum affordable rate, vouchers could create pressure for greater efficiency.<sup>10</sup>

### **Minimum Subscriberhip Plan (MSP)<sup>11</sup>**

Local access providers are likely to have better information about the demand for access and the cost of providing access than do regulators. Policy makers could set attainable subscriberhip goals and allow providers to choose the method of achieving them.<sup>12</sup> If given pricing flexibility and positive incentives, providers are likely to choose least-cost methods. Moreover, the MSP may lead to prices that benefit marginal subscribers, who tend to have low incomes. In addition, MSP regulation can encourage high quality-of-service and is compatible with competition if all providers have goals.

### **Other Options**

Local measured service and limited-use basic service at discounted rates may be useful. Local measured service would reduce the subsidy from light users to heavy users and might allow basic access charges to be reduced. Mandatory local measured service may prove difficult to implement, however, as income high-use customers.

Prohibiting disconnection of basic local service for nonpayment of toll or enhanced service bills might be considered. A corollary would apply partial payments first to basic local access then to other charges. Free or low-cost toll blocking would help keep subscribers on the network, especially those who have trouble controlling toll charges. Another means of supporting universal service and/or carrier-of-last-resort responsibilities to collect termination charges from other local carriers.

## **Ed Rosenberg, Ph.D. of the NRRI (Continued)**

State universal service plans could target pockets of low penetration by considering the social and demographic factors that keep some groups from being subscribers. These groups may benefit from targeted plans such as outreach programs aimed at non-English speaking groups, voice mail for the homeless, etc.

### **Final Thoughts**

Competition and universal service may not be in conflict. An examination of the results of local access competition in the United Kingdom and in New Zealand supports this idea.<sup>13</sup> Local access competition may increase penetration by putting downward pressure on access charges or by changing the way companies allocate costs to access. As the network becomes used for a wider variety of services, more of the cost of local loop facilities may be recovered from new services. In addition, the costs of upgrading the network to deliver advanced services should be recovered from those services, not from basic access. Unless people subscribe to the network, they cannot but high-margin enhanced services.

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1. Based on Edwin A. Rosenberg, "Public Policy Objectives in Increasingly Competitive Markets: Concepts, Challenges, and Policy Options," presented at the Wisconsin Public Utility Institute's *Workshop on Public Policies Toward Local Telecommunications Services in Increasingly Competitive Markets* Madison Wisconsin, June 28-29, 1995. The views expressed herein are the author's and do not necessarily represent those of the NRRI, NARUC, or any member commissions of NARUC.
  2. See John D. Barrow, Phyllis Bernt, and Raymond W. Lawton, *Universal Service in the United States: Dimensions of the Debate*, (Columbus, Ohio: The National Regulatory Research Institute, June 1994).
  3. The list of services required may be open-ended. For example, it has been suggested that there should be universal e-mail and Internet access.
  4. The idea that competition is a goal of public policy is relatively recent, but, if interest at the state and federal level is any indication, promoting competition in telecommunications may be one of the more highly valued policy goals at present.
  5. See, for example, David L. Kaserman and John W. Mayo, "Cross-Subsidies in Telecommunications: Roadblocks on the Road to More Intelligent Telephone Pricing," *Yale Journal on Regulation* 11, no. 1 (1994): 119-147, and Ross C. Erickson, David L. Kaserman, and John W. Mayo, "Targeted and Untargeted Subsidy Schemes: Evidence from Post-Divestiture Efforts to Promote Universal Telephone Service," working paper, (The University of Tennessee: Knoxville, TN, 1995).
  6. Vermont has instituted a policy along these lines.
  7. Part of the moneys collected through the tax could be designated to provide incentive to deploy advanced infrastructure in rural or inner-city areas that would otherwise be last to receive it.
  8. A tax-based universal service fund and a voucher plan are not mutually exclusive, since a tax can be used to raise the revenues to fund the voucher plan.
  9. Further discussion of vouchers may be found in John Barrows, "Vouchers and Universal Service," *The NRRI Quarterly Bulletin* 16, no.3 (Fall 1995): 423-30, and Larry Blank, "Telephone Vouchers: Experiences in Other Markets," forthcoming in *The NRRI Quarterly Bulletin* 16, no. 4 (Winter 1995).
  10. Vouchers can be designed so that the out-of-pocket cost to consumers is no more than either a dollar amount based on national or state average rates or a percentage of median household income for the area.
  11. See Larry R. Blank, "The Minimum Subscribership Plan (MSP): Policy Reform for Local Telephony," presented at the *Telecommunications Policy Research Conference* Solomons, Maryland, September 30-October 2, 1995.
  12. MSP-type plans could also be used to induce deployment of advanced infrastructure.
  13. See David Gabel and William Pollard, *Privatization, Deregulation, and Competition: Learning From The Cases of Telecommunications in New Zealand and the United Kingdom*, (Columbus, Ohio: The National Regulatory Research Institute, January 1995).

## **Residential Utility Consumer Office (RUCO)**

The Residential Utility Consumer Office has participated extensively in the Telecommunications Workshops conducted by the Arizona Corporation Commission.

RUCO believes that competition in the telecommunications industry will provide residential consumers with more choices, better service and lower prices. However, the transition to a deregulated market can be dangerous and we at RUCO want to ensure that residential consumers have the protection of regulation until they have the choices of the free market.

We view the Universal Service Fund as a mechanism to ensure that the access that consumers in low-cost areas enjoy doesn't force high-cost consumers (in predominantly rural areas) to face dramatic rate increases. This blending of high-cost and low-cost areas is currently accomplished through state-wide averaging of residential rates paid to incumbent monopoly providers.

The mechanism of state-wide averaging breaks down in a competitive environment because competitors "skim" or "cherry pick" the consumers in the low-cost areas. This leaves the incumbent Local Exchange Carrier to serve the high-cost areas at a loss or forces the Corporation Commission to raise rates in high-cost areas.

RUCO's view (and the current proposal before the Arizona Corporation Commission) is that state-wide averaging can be replaced by a competitively neutral fund to which providers in low-cost areas contribute and from which providers in high-cost areas draw.

Although not a perfect solution, the current proposed Universal Service Fund will allow Arizonans state wide to experience the advantages of competition.

# **Rural Consumers Coalition for the Advancement of Telecommunications**

## **Statement of Principles Regarding the Future of Rural Telecommunications**

As Congress considers the most sweeping revisions of the nation's communications laws in sixty years, it is critical that the needs and interests of all rural and frontier consumers – business, education, farm, health, and residential – be identified and given equal consideration. The following are offered as unifying principles for rural organizations and advocates working together to advance the interests of rural consumers before Congress and the Administration as the telecommunications laws and rules are being re-written. They also serve as guidelines for assessing legislative proposals.

The telecommunications needs of rural consumers must be met and served equally with those of urban areas. It is unacceptable to adopt policies that would assign a lower priority or longer time frame to achieve access to advanced services at affordable rates in rural America.

Technological changes, as well as market and policy changes, make clear that competition in the telecommunications industry is inevitable. National policies encouraging greater competition must include a tangible commitment to policies and incentives that bring competition equally to rural areas in comparison with urban areas, or that provide adequate substitutes where it is not possible.

National policies encouraging competition must include eliminating legal and regulatory barriers to entry into long distance telephone, local telephone and cable television businesses by any entity willing to provide service to rural consumers. Otherwise, unequal competition will likely result in unreasonably high phone rates and reduced capital investments in rural telecommunications infrastructure. Similarly, in a competitive environment all telecommunications providers must be subject to the same regulatory treatment. All telecommunications service providers should contribute equitably to public purpose funds and programs related to that service including requirements for funding universal telephone service. In addition, telephone companies providing video services should, like the cable industry, be subject to the same local government franchise requirements and fees as cable operators.

Lowering long distance rates through such mechanisms as increased competition in long distance services and extended calling areas is particularly important, since rural consumers typically rely more heavily on long distance services.

Universal service programs and policies for local telephone service in high cost areas must be continued in order to ensure affordable rates and infrastructure investment until such time that effective competition can achieve a similar result. In the meantime, mechanisms to fund universal service must ensure that all providers of telecommunications services contribute as a precondition to their market entry.

A uniform definition of basic telephone service for all consumers in rural, frontier and urban areas should be created and allowed to evolve over time to take advantage of new technologies.

Infrastructure sharing between larger and smaller local telephone companies should be encouraged in order to allow rural customers access to advanced telecommunications services at rates comparable to other areas.

**(Organizations Signing-On to the Statement of Principles:** American College of Nurse Mid-Wives, American Telemedicine Association, National Association of Development Organizations, National Association of Towns and Townships, National Rural Health Association, National Rural Housing Coalition, United Homeowners Association)

## **Western Governor's Association (WGA)**

### **The West: Forging Opportunity Through Change**

#### **Key Elements of Governor Ben Nelson's WGA Theme**

#### **SmartStates - Promoting Efficient Market Development of Private & Public Information Technology Networks**

The steady march toward global electronic commerce, ushered in by modern information technology, presents a far-reaching opportunity for Western Governors to manage change for the benefit of government, business, and citizens. Information technology is the single most powerful agent of change in organizational life, and there are three key avenues through which the Governors can harness this change to promote market efficiency in the development of accessible, cost-effective networked services for the public and private sectors. First, by identifying opportunities for coordinating western state procurement, by entering into strategic partnerships with industry, and by reviewing state tax and regulatory policies, the Governors can help shape needed investment in network capacity, services, and program-specific applications.

Second, the Governors can identify opportunities for state agencies and education systems to share the development costs of new network applications and perhaps in the actual delivery of services, and, where applicable, ensure that they build on existing industry infrastructure and standards. Third, the Governors can ensure that state agencies and education systems, acting as network "anchor tenants", promote open systems and standards and protocols that avoid obsolescence and ensure network interconnectivity.

The *SmartStates* initiative will bring the Governors together with industry leaders to reach agreement on how cooperation and collaboration in each of these areas can best be achieved; for example, through a Task Force linking western state information technology directors with their industry counterparts to bring specific recommendations to the Governors.

The Western Governors, individually and through WGA, have already begun to use information technology to improve public services in their states. In partnership with the private sector, they are pursuing the development and deployment of advanced education systems, electronic benefits transfer systems, telemedicine networks and electronic health cards, intelligent transportation systems, and others. The Governors' leadership in applying these cutting edge technologies to public services promises both dramatic advancements in specific areas as well as a more strategic payoff in more efficiently performing markets. As a result, the SmartStates initiative should bring the benefits of electronic commerce to more areas of the region more quickly and at a lower cost.

# KANSAS

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## STATE DEMOGRAPHICS

**Population:** 2,531,000  
**Size:** 82,282  
**Proportion rural:** 30.9%  
**Population per sq. mile:** 30.9  
**Median household income:** \$30,447  
**Percent below poverty:** 11.0%  
**Percent on public assistance:** 4.6%

## TELEPHONE SERVICE DEMOGRAPHICS

**Number of lines:** 1,350,551  
**Number of LECs:** 45  
**BOC:** Southwestern Bell  
**Market share of BOC:** 83.3%  
**Penetration Rate:** 94.2%  
**LEC competition permitted:** no statutory barrier

## OPASTCO STUDY

**Subscribers per sq. mile:** 4.6  
**Difference in non-BOC loop costs:** 68.7%  
**Monthly revenues per customer:** \$13.55\*  
**Revenues if supports eliminated:** \$28.07\*  
**Percent who would disconnect:** 44.70%

## TELEPHONE SERVICE TECHNOLOGY

**Copper :** Yes      **Hybrid Fiber:** No  
**Fiber :** Yes      **Microwave:** No  
**Percent local loop digital:** 100.0%  
**Other Technology:**

## ADVANCED TELECOMMUNICATIONS

**Cable households:** 67.0%  
**Cable in schools:** 68.0%

## TELEPHONE SERVICE RATES

**BOC residential rate (s):** \$11.00  
**LEC residential rates:** \$3.50 to \$13.00

## UNIVERSAL TELEPHONE SERVICE PROGRAMS

**Status of State Universal Service Program:** No statute, regulations, or commission orders mandating Universal Service (US); an active docket is under consideration by the commission

**Targeted Groups:** None

**Definition of basic service:** None

**STATE UNIVERSAL SERVICE FUND:** No

**Fund Administrator:**

**Contributors:**

**Basis for contribution:**

**Types of subsidies:**

**Who draws from fund:**

**Is subsidy portable:**

**FEDERAL UNIVERSAL SERVICE FUNDS:** Lifeline: No Link Up: Yes High Cost: Yes

**PENDING ACTIONS:** The KCC has a universal service docket. They've talked about life-line and a one time forgiveness program, but nothing is set. The decision should be in place by March 1997. They expect they will have a USF. They will define basic service which is likely to include single party, touch tone, digital, access to 911, installation, 24 hour repair, dial tone, and directory listing. They are likely to target low income with the lifeline program. High cost/rural areas will be handled differently. They're trying to come up with a way to subsidize high cost areas. They will also have to be some rate balancing. They're pushing for a single package covering rates and US.

**COMMENTS:** They want telephone service to be just as affordable and accessible as it is today, nothing less than they have now. \* OPASTCO rates are based on 6 LECs in study.

## ADVANCED TELECOMMUNICATION SERVICES

**Programs to access video/cable services:** Cable is unregulated in the state. Cable companies might become competitor with LECs in the future. Satellite TV and dish seems the most likely solution for rural areas rather than cable. Video teleconferencing continues to be a major state project including teleconferencing for distance learning, telemedicine, and administrative teleconferences.

**Programs to access advanced information services:** A consumer advocacy group has asked the Commission to look at universal access to Internet. They are early in the investigation of the Internet and there is a cooperative venture between Kinnet and Computerland to provide Internet access.

**Programs for electronic access to public/government records:** They have internal sharing now between agencies, but are going to provide access to the public. The State of Kansas created Information Network of Kansas (INK) in 1990, funded by user fees, to provide electronic access to state, county, local and other governmental information for Kansas citizens. Some 400 information resources are available (including data from 55 state agencies), accessible through an 800 number or over the Internet for a \$50 annual subscription fee and \$.40 per minute. Annual revenues range from \$4 to \$5M, with most of the money going back to state agencies.

**Public/private partnerships:** Through "Tele-Kansas" SW Bell has upgraded party lines within its services territory. SW Bell is also providing "interactive video" for all schools in its territory. United Telephone developed a plan for modernization and upgrading to one party services to all offices with its services territory and is working ahead of schedule on the associated upgrades.

## 1995 NTIA/TIIAP GRANTS

**Hays Medical Center Office of Rural Health.** This project will link medical centers and hospitals with 100 home health patients. The program will interactively monitor a patient's general health, medication, diabetic condition, blood pressure, diet, hygiene and mental health status (Total \$608K Federal \$301K).

**Western Kansas Community Services Consortium.** This project will create 36 public access and community college sites throughout western Kansas. In addition to the huge variety of data available on the Internet, these sites will allow local educational networking for students, faculty, and staff at the seven colleges (Total \$535K Federal \$225K).

# KENTUCKY

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## STATE DEMOGRAPHICS

**Population:** 3,789,000  
**Size:** 40,411  
**Proportion rural:** 48.2%  
**Population per sq. mile:** 95.4  
**Median household income:** \$23,567  
**Percent below poverty:** 19.7%  
**Percent on public assistance:** 9.8%

## TELEPHONE SERVICE DEMOGRAPHICS

**Number of lines:** 1,736,972  
**Number of LECs:** 20  
**BOC:** Bell South  
**Market share of BOC:** 58.3%  
**Penetration Rate:** 89.9%  
**LEC competition permitted:** policy barrier

## OPASTCO STUDY

**Subscribers per sq. mile:** 15.7  
**Difference in non-BOC loop costs:** 11.8%  
**Monthly revenues per customer:**  
**Revenues if supports eliminated:**  
**Percent who would disconnect:**

## TELEPHONE SERVICE TECHNOLOGY

**Copper :** Yes      **Hybrid Fiber:** No  
**Fiber :** Yes      **Microwave:** No  
**Percent local loop digital:** 17.7%  
**Other Technology:**

## ADVANCED TELECOMMUNICATIONS

**Cable households:** 64.0%  
**Cable in schools:** 72.0%

## TELEPHONE SERVICE RATES

**BOC residential rate (s):** \$18.00  
**LEC residential rates:** \$5.00 to \$18.00

## UNIVERSAL TELEPHONE SERVICE PROGRAMS

**Status of State Universal Service Program:** No statute, regulations, or commission orders mandating Universal Service (US)

**Targeted Groups:** None

**Definition of basic service:** None

**STATE UNIVERSAL SERVICE FUND:** No

**Fund Administrator:**  
**Contributors:**  
**Basis for contribution:**  
**Types of subsidies:**  
**Who draws from fund:**  
**Is subsidy portable:**

**FEDERAL UNIVERSAL SERVICE FUNDS:** Lifeline: No Link Up: Yes High Cost: No

**PENDING ACTIONS:** The KPSC has a docket on local competition that includes US and a USF. They expect to be done in 1997. Part of the docket will defining basic service. The docket will determine whether support goes to the carrier or directly to the customer. Target groups most likely will be low income. They may make US a separate part of the docket. There are no rate cases pending. Bell South is under a rate cap plan, so rates will be frozen for 3 years.

**COMMENTS:** Kentucky's penetration rate is not as good as some states. In part this is due to the rural nature of the state. They will be exploring US in the current docket. The Commission ruled against Lifeline program because getting on the network was the problem not staying on it.

## ADVANCED TELECOMMUNICATION SERVICES

**Programs to access video/cable services:** No cable carriers have applied for certification at this point. The Kentucky TeleLinking Network (KTLN) provides state government with 22 interactive videoconferencing sites that will expand to 48 sites.

**Programs to access advanced information services:** The Kentucky Education Technology System (KETS) was mandated by the legislature to provide a data/video communications network, including Internet access to all school districts (176) and schools (1366). A consortium of firms was selected to provide Kentucky with an "Information Highway," the contract calling for fixed cost access to the "highway" with a network terminal at every public switched wire center.

**Programs for electronic access to public/government records:** The Department of Information Systems was established to assist agencies that want Internet nodes for agency specific information dissemination.

**Public/private partnerships:**

## 1995 NTIA/TIIAP GRANTS

**Appalachian College Association.** This grant will create a plan to bring information infrastructure to its 33 member colleges and universities, and create a comprehensive strategy for distance learning including the development of Rural Information Services Centers (RISC) (Total \$101K, Federal \$50K).

**Forward in the Fifth.** The Eastern Kentucky Access to Telecommunications (EKAT) project seeks to rebuild a traditionally underserved region through education, training, and provision of access to a computer network linking individuals, communities, and schools. EKAT will establish eight satellite downlink sites and offer inexpensive local connections to the Internet (Total \$346K, Federal \$225).

**Federation of Appalachian Housing Enterprises.** The FAHE will connect 21 rural community-based housing providers to HandsNet (the national housing and human services information network) and to the Internet (Total \$21K, Federal \$10K).

**Jefferson County Public Schools Educational Technology Department.** Project RUN (Rural Urban Network) will create a fiber optic, metropolitan wide area network that will provide all partners with access to information networks. This project will provide the first network access for the inner city residents of Louisville and the rural residents of Pike County (Total \$1,972K, Federal \$800K).

**Center for Kentucky Rural Economic Development** will develop an information network to support entrepreneurs, small and new businesses, and the expansion of the region's existing industries. The Center will house videoconferencing and distance learning facilities, connected to the Kentucky Information Highway through a high-speed telephone line (Total \$960K, Federal \$396K).

# LOUISIANA

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## STATE DEMOGRAPHICS

**Population:** 4,295,000  
**Size:** 49,650  
**Proportion rural:** 31.9%  
**Population per sq. mile:** 98.6  
**Median household income:** \$25,479  
**Percent below poverty:** 24.2%  
**Percent on public assistance:** 10.2%

## TELEPHONE SERVICE DEMOGRAPHICS

**Number of lines:** 2,051,434  
**Number of LECs:** 21  
**BOC:** Bell South  
**Market share of BOC:** 92.8%  
**Penetration Rate:** 91.5%  
**LEC competition permitted:** prohibited

## OPASTCO STUDY

**Subscribers per sq. mile:** 10.7  
**Difference in non-BOC loop costs:** 80.7%  
**Monthly revenues per customer:** \$21.95  
**Revenues if supports eliminated:** \$44.24  
**Percent who would disconnect:** 44.70%

## TELEPHONE SERVICE TECHNOLOGY

**Copper :** Yes      **Hybrid Fiber:** No  
**Fiber :** Yes      **Microwave:** No  
**Percent local loop digital:** 10.58%  
**Other Technology:**

## ADVANCED TELECOMMUNICATIONS

**Cable households:** 68.0%  
**Cable in schools:** 60.0%

## TELEPHONE SERVICE RATES

**BOC residential rate (s):** \$10.97- \$15.05  
**LEC residential rates:** \$9.00 to \$18.50

## UNIVERSAL TELEPHONE SERVICE PROGRAMS

**Status of State Universal Service Program:** Mandated Universal Service (US) actively involved in rule making process

**Targeted Groups:** None

**Definition of basic service:** Single party, touch tone, 911, directory/operator assistance, white page, long distance service, affordable line connection, telephone relay, and customer support

**STATE UNIVERSAL SERVICE FUND:** No

**Fund Administrator:**

**Contributors:**

**Basis for contribution:**

**Types of subsidies:**

**Who draws from fund:**

**Is subsidy portable:**

**FEDERAL UNIVERSAL SERVICE FUNDS:** Lifeline: Yes Link Up: No High Cost: Yes

**PENDING ACTIONS:** The PSC has proposed regulations for competition with a mandate for US. They are to be before the Commission by 1/9/96. There are no target groups, because they want to make telephone service affordable to all -- not limited to economically disadvantaged. Basic statement about mandate for US is included in regulations but specifics of USF are not detailed. All TSP (telecommunication service providers) must contribute to USF, but it is not yet been determined how fund will operate except that subsidies will go to carriers. Commission has a rate case with Bell South who has been on incentive regulation since 1990. Bell South has asked to be regulated under price regulation. Initially residential rates are likely to go up, due to be deaveraging - urban rates will go down and rural rates will go up. But, they will establish fund to address this. As competition enters the market rates should come down.

**COMMENTS:** The PSC is progressing toward implementation of a US program. They have started -- now they need to finish. The biggest hurdle was defining what US means, the biggest challenge is getting competitive rules approved. There is very low participation in the Federal Lifeline program because there are no state matching funds and participation is not mandated.

## **ADVANCED TELECOMMUNICATION SERVICES**

**Programs to access video/cable services:** Two cable providers are just beginning to apply for certification. The state is using videoconferencing activities in distance learning, telemedicine and judicial applications.

**Programs to access advanced information services:** Louisiana has a Goals 2000 Technology Plan currently funded at \$2M to develop a systemic statewide plan to increase the use of state-of-the-art technologies in classrooms and school libraries in order to enhance educational curricula.

**Programs for electronic access to public/government records:**

**Public/private partnerships:** Bell South has grants for hospitals and they provide reduced rates for schools, libraries, and medical schools. They also wave link-up costs for high speed lines to these organizations. Senate Bill 774 creates the Coordinating Council on Telemedicine & Distance Education in the Office of the Governor to promote and ensure communications between public agencies in the areas of telecommunications.

## **1995 NTIA/TIIAP GRANTS**

**University of New Orleans - Business/higher Education Council** will create a model for developing, funding, managing, and expanding a regional WWW community network site with public and private partners. Education is a key focus for the project, and will include technical training, multimedia training modules, and non-credit certification programs in information technology (Total \$781K, Federal \$369K).

# MAINE

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## STATE DEMOGRAPHICS

**Population:** 1,239,000  
**Size:** 33,741  
**Proportion rural:** 55.4%  
**Population per sq. mile:** 40.2  
**Median household income:** \$29,705  
**Percent below poverty:** 13.4%  
**Percent on public assistance:** 7.6%

## OPASTCO STUDY

**Subscribers per sq. mile:** 11  
**Difference in non-BOC loop costs:** 14.3%  
**Monthly revenues per customer:** \$11.09  
**Revenues if supports eliminated:** \$25.63  
**Percent who would disconnect:** 27.10%

## ADVANCED TELECOMMUNICATIONS

**Cable households:** 65.0%  
**Cable in schools:** 41.0%

## TELEPHONE SERVICE DEMOGRAPHICS

**Number of lines:** 685,438  
**Number of LECs:** 24  
**BOC:** NYNEX  
**Market share of BOC:** 83.8%  
**Penetration Rate:** 95.0%  
**LEC competition permitted:** no regulatory barrier

## TELEPHONE SERVICE TECHNOLOGY

**Copper :** Yes      **Hybrid Fiber:** No  
**Fiber :** Yes      **Microwave:** Yes  
**Percent local loop digital:** 14.2%  
**Other Technology:** BETRS

## TELEPHONE SERVICE RATES

**BOC residential rate (s):** \$10.50 - \$12.50  
**LEC residential rates:** \$4.75 to \$14.50

## UNIVERSAL TELEPHONE SERVICE PROGRAMS

**Status of State Universal Service Program:** Mandated Universal Service (US) in initial stage of rule making process

**Targeted Groups:** None

**Definition of basic service:** None

**STATE UNIVERSAL SERVICE FUND:** No

**Fund Administrator:**

**Contributor:**

**Basis for contribution:**

**Types of subsidies:**

**Who draws from fund:**

**Is subsidy portable:**

**FEDERAL UNIVERSAL SERVICE FUNDS:** Lifeline: Yes Link Up: Yes High Cost: Yes