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Nancy H. Sims
Director – Regulatory Relations

September 24, 1998

Mrs. Blanca S. Bayo
Director, Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399

980000A

Subject: Comments Regarding Study 2 (Fair and Reasonable Rates)
Reference Docket No. 980733-TL

Dear Mrs. Bayo:

As required by the Florida Legislature, the Florida Public Service Commission (FPSC) is to report on four aspects of residential basic local telecommunications service with respect to "the fair and reasonable Florida residential basic local telecommunications service rate." The areas to be considered include: 1) affordability, 2) value of service, 3) comparable residential basic local telecommunications rates in other states, and 4) the cost of providing residential basic local telecommunications service in Florida.

In preparation for the FPSC workshops, attached are comments prepared by Daonne Caldwell, Dr. William Taylor, and Dr. Robert Harris to discuss each of these areas. I would note that the testimony of Dr. Randall Billingsley and Mr. David Cunningham, pertaining to cost of capital and depreciation, respectively, is also attached. Due to the voluminous nature of the attachments to Mr. Cunningham's and Mr. Billingsley's testimony, they have not been attached. Both gentlemen submitted testimony on their topics as part of the Universal Service Docket 980696-TP, thus, the attachments are on file with the FPSC in this Docket. In addition, on behalf of BellSouth, GTE and Sprint, Don Perry has prepared comments regarding the value of service and affordability. Mr. Perry's comments will be transmitted separately by GTE.

Since each of these subjects are interrelated, each participant is not dedicated to one subject. However, each topic is addressed. Ms. Caldwell's comments are being filed in this proceeding on behalf of BellSouth. Ms. Caldwell will address the methodology and process used by BellSouth to develop the costs included in BellSouth's contribution analyses. Since costs are an integral part of the contribution analyses, Ms. Caldwell will also comment on the process used to calculate the contribution for each of the services contained in the FPSC Staff's data request. BellSouth's results for these categories of services are attached to Ms. Caldwell's comments.

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Caldwell
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Attachments
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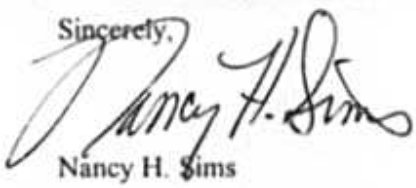
Dr. William Taylor's comments are filed on behalf of BellSouth and Sprint. Dr. Taylor will respond to the value of service issue. In addition, Dr. Taylor will explain the relationship between cost and price and outline the appropriate costs to be used for pricing decisions. Comments filed by Dr. Robert Harris on behalf of BellSouth, GTE, and Sprint will com, ement Dr. Taylor's presentation with actual results from a BellSouth marketing perspective in addressing the affordability and value of service issues. Dr. Harris will also compare BellSouth's residential rates with those of other states, both within the BellSouth region and on a national basis.

If you have any questions or need any additional information, please call me.

Sincerely,



Nancy H. Sims

cc: W. D'Haeseleer
All parties of record
R. G. Beatty
William J. Ellenberg II

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REPORT ON RESIDENTIAL TELEPHONE SERVICE IN FLORIDA: PUBLIC POLICY, PRICING, AND AFFORDABILITY

Docket ~~980733-TL~~ 980000A

Dr. Robert G. Harris, LECG

September 24, 1998

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EXECUTIVE SUMMARY

In 1996, Congress passed the Telecommunications Act and fundamentally changed the landscape of the market for telecommunications services. This Act left no doubt that federal telecommunications policy recognizes and encourages competition in all services, and there is every indication that local competitors believe this Act to be sweeping away the last obstacles to competitive entry across the range of local services. Within this rapidly changing environment, local exchange carriers in Florida face the responsibility of providing basic residential service over a high-fixed cost network at prices well below the cost, value and affordability of this service. To maintain a strong local telecommunications infrastructure in Florida it is necessary to move the prices of local telecommunication services in Florida closer to their costs. Existing prices will undermine the continued development of the local telecommunications competition and infrastructure in Florida. My examination reveals that a movement to more efficient pricing can be accomplished with little or no negative impact on telephone subscribership, especially with the Lifeline programs that are in place to assist low-income households. Holding prices at today's levels, however, will imperil the value, affordability and quality of basic local service in Florida for years to come.

My consideration of affordability includes an examination of changes in the value of basic residential service, the price of this service relative to median household income, prices of other goods and services, and the impact of prices on future service quality and affordability. This examination demonstrates the great intrinsic value of basic local service, as well as the high fixed-costs associated with the provision of telephone service. These issues are central to discussion of affordability. Even though the value of residential basic local service has increased dramatically over the past 15 years, the real price charged for this service has decreased dramatically. Relative to income, consumers spend approximately half of what they did 15 years ago on basic local service. Telecommunications customers in Florida today can do much more

with basic local service at a lower price. My examination indicates that an affordable price for basic residential service in Florida that considers the increased value of today's service is greater than $20 per month. I conclude that the current price of basic local service has been unreasonably pinned dow relative to value, affordability, and cost, and the general principles of economic efficiency.

I. INTRODUCTION AND OVERVIEW

A. *INTRODUCTION*

To complement recent regulatory, competitive and technological changes in telecommunications, it is necessary to move toward local service prices that better reflect value, affordability and cost. Existing prices run counter to the development of healthy competition and will undermine the continued development of the local telecommunications infrastructure in Florida.

B. *OVERVIEW OF THE REPORT*

In Section II, I review recent changes in regulation and competition in telecommunications at the Federal level and in Florida. In Section III, I discuss the policy goals related to pricing telecommunications services affordably and enumerate some of the benefits that are expected from moving the prices of basic residential service toward a level that recognizes greater value and moving the prices of non-basic and toll services[1] toward their respective costs. Section IV discusses affordability in terms of the increased value of local telephone service. *Increases in the value of the local telephone network have fundamentally changed the value of telecommunications across a broad spectrum of customers.* Telecommunications customers in Florida today can do much more at a lower price than ever before. Section V provides several comparisons to establish a reasonable range for an affordable price of basic residential service in

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[1] Non-basic and toll services refer primarily to long distance toll and access services (toll), and non-basic services such as call waiting and business access lines also sited in the testimony of Ben Poag to be presented as direct testimony in "Fair and Reasonable Residential Basic Local Telecommunications Rates" Docket 980733-TL

Florida. My consideration of affordability includes an examination of changes in the value of basic residential service, the price of this service relative to median household income, prices of other goods and services, and the impact of prices on future service quality and affordability. My conclusion is that the lower end of a range of affordability for basic residential service is substantially .. gher than today's price of this service in Florida.

II. REGULATORY AND COMPETITIVE ENVIRONMENT

Public policies affect competitive conditions in Florida. Only a few years ago, many policy makers took a very cautious stance on competition; now, many aggressively pursue policies that promote competition in telecommunications. The federal Telecommunications Act is possibly the most dramatic example of this shift. This Act leaves no doubt that federal telecommunications policy recognizes and encourages competition in all services, and there is every indication that local competitors believe this Act to be sweeping away the last obstacles to competitive entry across the range of local services.

At the same time, though, elements of traditional price regulation are working at cross-purposes to these pro-competitive policies and are distorting the competitive process. This biases customers' choices and creates incentives for uneconomic entry into various telecommunications markets, thereby promoting inefficient competition. For example, setting prices for non-basic and toll services higher relative to both cost and basic residential service prices promotes targeted entry aimed at non-basic and toll services. Revamping prices to promote efficient and beneficial competition will require the Florida Public Service Commission to recommend steps to move from prices replete with subsidies to prices that are properly aligned with costs, market conditions, benchmarks of affordability and the value of basic residential service. A mixture of pro-competitive policies and subsidy laden prices is a recipe for uneconomic and harmful entry

by competitors, who are able to siphon off subsidies and arbitrage prices to their own advantage and to the long-term disadvantage of Florida consumers.

Emerging competition has great implications for pricing. Given the prospects — indeed, the inevitability — of escalating competition in telecommunications services, the Florida Public Service Commission should be recommending forward-looking policies. It is not necessary to regulate for the distant future; the Florida Public Service Commission need only realize that its report to the Legislature now will greatly affect the course of competition for years to come. Rapid increases in competition are driving the need to adopt regulatory policies and restructure prices of telecommunications services to provide for a smoother transition to a fully competitive telecommunications environment. Permanent harm to competition, efficiency and investment in the telecommunications infrastructure will result unless changes are made to the local service pricing structure that better reflect costs and market conditions now.

Indeed, prices that are as incongruous with costs as they are currently, distort incentives to invest. Furthermore, new, unregulated entrants have better capacity to be profitable by pursuing high revenue customers (such as business and users of long distance) and profitable add-on services, while incumbent local exchange carriers (ILECs) continue to serve lower revenue customers, including the majority of residential customers. Cross-subsidization cannot continue to cover the substantially higher costs of residential service. Competition requires rebalancing prices to reduce the incidence of cream-skimming by entrants: targeting those customers who spend above-average amounts on non-basic and toll services, which are priced well above costs, while leaving the obligation to serve those customers who buy few or no such services to the ILECs. I will discuss the effect that a move toward economically based efficient pricing will have on competition later in my testimony.

III. PRICES AND PUBLIC POLICY GOALS

A. *PUBLIC POLICY GOALS OF TELECOMMUNICATIONS PRICING*

There are usually specific economic policy objectives present when pricing telecommunications services. In fact, there are four major policy objectives that relate to regulatory pricing decisions: technical efficiency, allocative efficiency, dynamic efficiency and distributional equity. The three efficiency objectives are often mutually compatible (i.e., a pricing structure that promotes allocative efficiency will also usually promote technical and dynamic efficiency). There is sometimes a conflict, however, between the efficiency objectives and equity objectives in pricing policy. Although there is strong public sentiment that prices reflecting economic costs be "equitable," there is also a recognition that departures from that principle are warranted in some cases. In those cases there may be a tradeoff between efficiency and equity. The role of the regulatory agency is to assess the information and arguments presented by contending parties, evaluate the tradeoffs among competing objectives, and reach a balance among those objectives.

Technical Efficiency

Technical efficiency is significant for the pricing of telecommunications services because it refers to making the best use of inputs in the production of outputs. The objective of technical efficiency is the production of any given level of output with the minimal use of inputs, in order to preserve scarce resources. For example, technical efficiency is maximized within firms when companies and their employees minimize costs while maintaining or improving quality. When prices are based on economic cost and reflect market demand, consumers will turn to the seller with the lowest price – hence the producer with the lowest cost.[2] Technical efficiency is

[2] Assuming the same quality of service, of course.

diminished, however, when a less efficient provider of service displaces a more efficient provider. Policies that induce uneconomic entry into local telecommunications services reduce technical efficiency because the most efficient supplier does not provide services. This means that customers who purchase from either supplier pay prices exceeding the efficient cost of service. Customers that remain with the incumbent are worse off because they lose the contribution those customers served by an alternative supplier could have made to the common costs of the incumbent. Competition greatly exacerbates the potential harm from reducing technical efficiency due to uneconomic pricing. If, for example, the ILECs price non-basic and toll services well above competitive levels, customers may choose a competing carrier even though its costs are higher than the ILECs' costs. Such pricing policies generate technical inefficiencies, because the service is then not being provided by the least-cost producer.

Allocative Efficiency

Allocative efficiency is also an objective that is relevant to the pricing of telecommunications services because it refers to the best use of outputs. Allocative efficiency means that outputs are sold at prices that reflect the true economic costs of producing the output, including a share of the common costs of a multi-product firm. If price is greater than true economic costs, consumers will purchase less than is socially optimal; if price is less than cost, consumers will purchase more. In either case, there is a loss of "social welfare" due to the misallocation of resources. Hence, policies that prevent prices from reflecting economic costs and demand conditions are directly contrary to allocative efficiency.

With emerging competition, consumers can turn to alternative sellers (often unregulated), making the quantity purchased much more sensitive to prices. Consequently, the more competition in the market, the greater the social costs of inefficient prices. If the prices of

competitive services are not economically rational, competitors will target their efforts at customers of services priced above competitive levels, while neglecting customers or services that are priced below competitive levels. For example, policies that require the ILECs to average prices across customers when their competitors can selectively target low cost customers are directly contrary to allocative efficiency.

ynamic Efficiency

Perhaps most importantly, dynamic efficiency relates to the rate of technological change, including the rate of innovation and the rate of adoption of innovations. One of the chief benefits of a free-market economy is that competition stimulates the development, introduction and adoption of new technologies. While technical efficiency is a static concept (i.e., it assumes that technology is fixed), dynamic efficiency is a measure of technological progress. Pricing can influence the rate of technological progress. If prices are set too low, competitors may not adopt better, lower cost technology for providing the service in question. Additionally, if prices are set too high, competitors may have an incentive to adopt less efficient technology, even though the cost of providing service is higher than the existing technology. For example, low priced basic residential service may preclude investment in fixed wireless loop technology. Florida has been fortunate in that the ILECs have continued to invest in new technologies, such as ADSL, even though they may never realize any profits on their investment if prices continue to be far below cost.

Another example may be found in investment in the Internet. ILECs have few incentives to invest in technologies or innovations that would fuel dynamic efficiency in this sector of the telecommunications market because they are not able to realize a return on their investment in the portion of the network used by Internet users. Specifically, innovation in new technologies

such as the Internet has become critically important as we move forward in the information age. For example, until now, the vast majority of Internet users have had a fairly "slow" connection, frequently as slow as 14.4 to 28.8 kbps/sec. Only recently has the average Internet experience occurred at a speed of approximately 50 kbps/sec.[3] Because of these slow connections, Internet sites (or content providers) have had a "speed limit" on their content, relying mainly on text and still photos, opposed to video/audio and other multimedia formats. As new telecommunication technologies (such as cable modems, ADSL, ISDN, etc.) become more common, content providers will increase their "speed limit" to accommodate those high-speed users (possibly up to 1 million kbps/sec), and those users on a slow network will be left behind.[4] This makes it imperative that the ILECs who serve those without ready access to the most up-to-date technologies have the incentive, and indeed are able, to invest in new technologies so that their customer base is not left behind. This also implies that the only competition that would come about would be through resale.

Furthermore, the ability and incentive to invest in innovative telecommunications technologies are important for the offering of governmental services. The government of the State of Florida is a front-runner in using the Internet to provide public services. The *Government Services Direct* website offers an electronic version of the Drivers Handbook, state and federal tax forms, and numerous other services.[5] Additionally, the Florida Public Service Commission has a website

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[3] The speed of the average Internet experience is on the order of 50 Kbps. (http://www.zdnet.com/pcmag/insites/dvorak/jd970811.htm)

[4] Cable Datacom News publisher Kinetic Strategies, Inc. estimates the number of cable modem subscribers in North America passed the 250,000 mark July 1, 1998. The same report also estimated that cable modems are commercially available to more than 12 million homes, the equivalent of approximately 11 percent of all cable homes passed in North America. It is expected that the cable modem subscriber count will surpass the 400,000 mark by the end of 1998 and top 1 million by the end of 1999. Source: "Cable Modem Market Stats and Projections" Cable Datacom News, published by Kinetic Strategies Inc. (http://cabledatacomnews.com/cmic16.htm)

[5] These services are available at the Government Services Direct Website: (http://www.state.fl.us/fgsd_html/access.html)

that, among other services, allows citizens to receive audio of Commission proceedings on a real-time or archived basis. Through investment and innovation, along with increased usage by Florida citizens, the government of the State of Florida could reduce the cost of providing services to the people of Florida, and pass these savings on to taxpayers. This positive externality is a product of dynamic efficiency in the telecommunications and Internet sector that could greatly benefit the State of Florida. Although it is difficult to predict how the technology available in the Internet and cable industries will integrate into the lives and businesses of Florida citizens, it is clear that the appropriate signals and incentives for investment are necessary to maintain the development of a strong telecommunications infrastructure in Florida.

Distributional Equity

The objectives of distributional equity have had a large impact on the pricing of telecommunications services. Historically, there have been two equity objectives in telephone regulation. The first equity objective was that investors should be fairly compensated for the use and risk of their capital. While fair treatment of investors is based on a constitutional principle (the Fifth Amendment protection of property from taking without just compensation), it is also good public policy – in essence a social contract between the shareholders of a telephone utility and the state. In return for a promise to serve all customers in a given geographic area even if it was not profitable (a "universal service" obligation), the shareholders would receive a commitment that the state will provide them the opportunity to recover their invested capital and an opportunity to recover the value of that capital. Local monopoly franchises were offered the opportunity to recover the value of their investments and this provided a powerful economic incentive that generated sufficient private capital investment to build the most extensive telephone network in the world.

The second equity objective, also inherent in the "universal service" concept, was that the price of telephone service would take into account customers' ability to pay. In rate of return regulation, policymakers achieve the second equity objective through the price structure, by setting the price of residential services at a level that nearly everyone can afford, even if that price does not pay for the economic cost of providing residential service. There is nothing exceptional about subsidizing the price of goods or services to make them more affordable.[6] Typically, though, government achieves social equity by public funding, with food stamps, public education or public health care. In the telephone industry, government achieved social equity — universal service —largely through internal cross-subsidies.

In the long run, it will be necessary to set prices so that residential customers cover more of the costs they incur, if not in fact making a contribution to common costs. If distributional equity requires subsidies to low income households and/or customers in high cost areas, those subsidies should be narrowly targeted on the basis of need and the source of the subsidies should be competitively neutral. Private investment in the telecommunications infrastructure will be made on the basis of private "risk-reward" calculations, just as investment decisions are made in unregulated industries.

B. Better Alignment of Prices and Costs Will Advance Long-Term Public Policy Goals

As demonstrated by cost witnesses in the Universal Service docket and the cost information presented in the workshops, the current cost of residential basic service is significantly above the

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[6] On a national level, there has been some public funding of the public telephone network (e.g., loans at subsidized interest rates to rural telephone cooperatives), but that accounted for only a small share of the total cost of constructing and operating the telephone network.

price of this service, and the costs of many usage, non-basic and toll services are well below their prices. Raising the price of residential service to better reflect the cost of providing local access lines, dialtone, and local usage will promote dynamic efficiency and long-term public policy goals. Raising these prices will reduce the subsidy necessary to support basic residential service and enable the ILECs to lower prices for other services.

Moving prices toward costs will promote technical, allocative and dynamic efficiency, while also furthering the objectives of distributional equity. More rational prices will promote more efficient competition and stimulate efficient investments in the local telecommunications infrastructure. Technical efficiency will be enhanced by significantly reducing the incentive for entry by less efficient providers of non-basic and toll services and increasing the incentives for efficient entrants and incumbents to make facilities investments to serve residential customers. Allocative efficiency will also be advanced. Raising the prices of basic residential service closer to cost will lower the subsidy burden on non-basic and toll services, allow for the reduction in prices for these services, stimulate demand, and allocate a more efficient amount of resources to these services. Dynamic efficiency will be enhanced when entrants face a more cost-based price for basic residential and non-basic and toll services. Firms are more likely to develop efficient strategies and technologies to serve residential customers when prices are more in line with costs. Conversely, firms providing non-basic and toll services will have the proper incentives to meet expanding demand with efficient strategies rather than strategies to cream-skim sources of subsidies.

There are negative implications of not moving toward cost-based prices. With today's price structures, entrants will target customers and services that are supplying subsidies (i.e. profitable higher-priced services), leaving the remainder of the customers with the ILECs, who will gradually lose the ability and incentive to invest in basic local service.

Even citizens who testified in a recent public hearing on the topic of the affordability recognized the danger of maintaining the current pricing structure. Business owner Charles Seitz stated, "A $10 line for a residential home service– things have changed. You can't expect this to continue forever ... From that basic necessity of life, I would submit to you that the $10 home rate is really unreasonable today. I mean, they are getting more ... through that telephone line than what they are ever getting.'"[Sic]

Many years down the line, the end result is likely to reflect cost-based prices for all major services. Today, however, the overall health of the telecommunications infrastructure is at issue. Indeed, the health of the telecommunications infrastructure in Florida and throughout the nation for many years to come will depend on the abilities and incentives for ILECs and ALECs to make the high fixed-cost investments that are required to provide basic local service. If these investments are not made during the transition to competition, firms will be supplying competitive services across an inferior network, and Florida customers will be denied the quality and range of services that they would otherwise enjoy.

For an interim period of several years, incumbents will provide the key ingredients of the "network of networks," including a means of interconnection and inter-operability across the rapidly growing number of competing and cooperating communications networks. It is crucial to the state's interests that incumbents are allowed to compete evenly with entrants. ILECs must face positive investment opportunities in the local network and to compete in the fastest growing, most profitable market segments. With the subsidy burden required by below cost residential

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[7] Testimony of Charles Seitz. "Fair and Reasonable Residential Basic Local Telecommunications Rates" Special Project No. 980000A-SP, Public Hearing Proceedings, Fort Lauderdale, Florida, September 3, 1998 p. 70, 72.

service, ILECs are handicapped in competing in the fastest growing, optional and usage-based market segments. Without relief from this handicap they will be less able to provide affordable, high-value basic residential service.

From a state specific perspective, Florida is in competition with many other states for attracting business development. Progressive policies that promote investment in advanced telecommunications technologies are an important instrument in maintaining the State's strong competitive position and will attract businesses to locate in Florida. For a state or region, competitiveness means creating and sustaining an environment for business growth and economic prosperity that offers long-term, good-paying job opportunities for citizens. Michael Porter said, "a nation's firms must relentlessly improve productivity in existing industries by raising product quality, adding desirable features, improving product technology, or boosting product quality."[8] For this reason, a communications infrastructure that is continually improving and expanding is critical to business development.

Many city planners are convinced that their city's economic future rests on the information and communications technologies that big business can deliver. Indeed, a study by London-based international commercial real estate consultants Healey & Baker shows that quality of telecommunications is the third most important factor for companies considering where to locate a business, behind ease of access to markets and transport links.[9] As many as 30-40 cities worldwide are seeking to be listed as "advanced wired city" projects, and become members of

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8 Porter, Michael E. The Competitive Advantage of Nations New York: The Free Press, 1990, p. 6.

9 Molony, David "Cities worldwide believe that improvements in telecommunication systems will make them more attractive for business" CommunicationsWeek International Oct 6, 1997 p. 22.

the worldwide association called Advanced Network Cities and Regions Association (ANCARA), based in Eindhoven, the Netherlands.[10]

Increasingly, rural economic development strategies include plans for sophisticated telecommunications infrastructures. In some cases, these small towns are even surpassing their urban counterparts in infrastructure development. Abingdon, Va., and Sergeant Bluff, Iowa, and even communities in the remote reaches of Alaska are just a few examples.[11] In these areas and across the nation, advanced telecom services are changing the way these once-isolated populations live and work. Despite the fact that many consider rural communities to have a high quality of life, this does not necessarily translate into a booming economy. Until the increased importance of telecommunications emerged in the business world, many rural areas were not considered reasonable locations for corporate headquarters. It seems clear that an advanced telecommunications network is an important criterion for businesses of today that are considering relocating or expanding. As the state's infrastructure becomes even more advanced, businesses will be enticed to move to Florida, growing the economy, creating jobs and expanding opportunities for all citizens.

There can be little doubt that a continuation of the current below-cost price structure for local telecommunications services in Florida will impede the development of the local telecommunications infrastructure in the future. The price for basic residential service has not been adjusted for increased value since the divestiture. Moving toward cost based prices that reflect the increased value of today's network will, however, require increasing the prices for basic residential service, which not surprisingly raises concerns over the affordability of this service.

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[10] Ibid., p.22.

[11] Hanley, Michael "Small towns, big plans" Telephony June 2, 1997.

IV. UNDERSTANDING AFFORDABILITY GIVEN INCREASES IN VALUE

As mentioned above, moving prices toward costs will promote the public policy objectives of ..chnological, allocative and dynamic efficiency while simultaneously advancing distributional equity. These public policy objectives establish that affordability cannot be analyzed simply in terms of income, but instead must be considered in the context of the increased value of today's telephone service. It is recognized that the capability of today's network, beyond simply making or receiving a call, generates large consumer surplus, value and social benefits. I believe that it is this increased value, that is, the increased capabilities and use of today's telephone network, which should addressed first in the discussion of affordability.

Affordability is related in many ways to the dramatic increases in value and use of basic residential local service. Although nominal prices have increased only slightly during the past two decades, telecommunications customers in Florida actually receive greater value from basic local service with many more capabilities than ever before. The local telephone network is a citizen's gateway to the Internet, FAX and data transmission, toll-free numbers, and long distance toll services. The value and versatility of basic residential service is f. r greate than it was 15 years ago and that value continues to increase, while real prices paid for the same service have decreased steadily over the same period.

Although the goal of public policy is not to price goods at the level that consumers are willing to pay, the importance of a service directly relates to the value consumers place on that service and the affordability of the service. Based on a Wyoming Public Service Commission survey, consumers place local telephone service among the items they value most, excluding food and lodging. Although four of the five items compared in this question were ranked closely,

household transportation and local telephone service were clearly the top choices.[12] This suggests that consumers recognize the tremendous value included in their residential telephone service.

The results of the Wyoming PSC's survey indicated that 36 percent of respondents would be willing to pay an amount greater than $40 for basic local service, making it the most common response. The second and third most common responses to questions about the highest rates the customer would be willing to pay prior to considering disconnection were $40 and $30 per month, which are both higher than most current monthly basic charges. Also, as indicated by the amount that subscribers pay now and the amount that would cause them to disconnect their service, telephone rates apparently have a "cushion" of more than $10 in states like Florida.[13] It appears, therefore, that there is leeway in determining monthly residential telephone prices that will be affordable while also maintaining high subscribership levels.

A prominent example of the increasing value provided by basic local service is the rapidly expanding use of the local network to gain Internet access. A recent survey found that the number of Internet users over the age of 16 in the US and Canada reached 79 million in 1998, up from 58 million just 9 months earlier.[14] A large and growing number of local service customers are using the local network many more hours a month to access the Internet. Additionally, at the time of the survey, 20 million people were buying products and services via the Web, twice the amount of 9 months earlier. These customers, however, continue to pay the local network provider the same low prices for their basic local service.

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12 "Telephone Affordability Study" Selected Wyoming Residents, Summer 1997, Wyoming Public Service Commission, (http://psc.state.wy.us/telco/afford/afford_1.html)

13 Ibid.

14 CommerceNet/Nielsen Media Research Study, 1998 (http://commerce.net/news/press/030398_1.html)

Clearly, the Internet adds value to the telephone network in Florida. Of the top twelve states in the U.S. (based on the number of Internet users in each state) Florida was the fastest growing in 1997. Between January and September of 1997, Florida's Internet population is estimated to have grown by 72% - from 1.7 million to nearly 3 million users, or approximately five times the national average.[15] This suggests that Floridians are using their local telephone networks to reach Internet resources otherwise unavailable to them.

On a larger scale, access to the Internet eliminates many of the boundaries that existed between information and a wide cross-section of the public, including students and senior citizens, rural and urban residents. Many Internet users access the World Wide Web to examine voting information. Others use the Internet and electronic mail for contacting relatives or transmitting homework, telecommuting to work, and conferring with colleagues across the globe. Through on-line communities, people hold forums on political issues, as well as share information about the marketplace. Markets for automobiles and stocks are becoming more efficient as information asymmetries are reduced through on-line trade. Anyone with an Internet connection can check the dealer invoice for a new car, thus having better information when going to a car dealership. The Internet, and the local telephone network it uses, creates new opportunities and freedoms for those who have traditionally had few, such as people with disabilities, difficulty travelling, or trouble communicating. As local connection points, software shortcuts and local content propagate the Internet's appeal to more diverse areas of interest, the user base will continue to expand. Through Internet use, barriers to information, resources, and understanding are reduced and even eliminated for ordinary citizens.

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[15] CommerceNet/Nielsen Media Research Study, 1998 (http://commerce.net/news/press/030398_1.html)

The increased value of the telephone network is expanding across a broad group of customers. It is important that increased infrastructure value created by use of the Internet spreads throughout society because this "network of networks' is essential for Florida's growing information economy. The electronic network allows Floridians to access the world's resources. It allows Floridians to access information from their state government, tropical weather updates, and job information.[16] It transforms work and business, education and research, and healthcare, among others. The value of the local telephone network is even higher because without it, even common communication tools such as fax, long distance, 800-shopping, etc. would not be possible.

The increased value of today's telephone network may be seen in the increased use of fax machines, which are reliant on the local telephone system for operation. The number of daily outgoing fax pages is estimated to be 190 pages per machine. Similarly, average annual telephone expenditures for businesses have been estimated at $37 million where 41 percent of telephone expenditures are fax-related. Furthermore, 74 percent of those fax related telephone expenditures are long distance expenditures.[17]

In addition to the growth of fax use, the increase of toll-free numbers indicates that consumers and companies are using this means of communication more frequently. In 1996, toll-free service using the 888 prefix began. The new 888 numbers added approximately 7.2 million new toll-free numbers to the millions of 800 numbers already in use. The FCC

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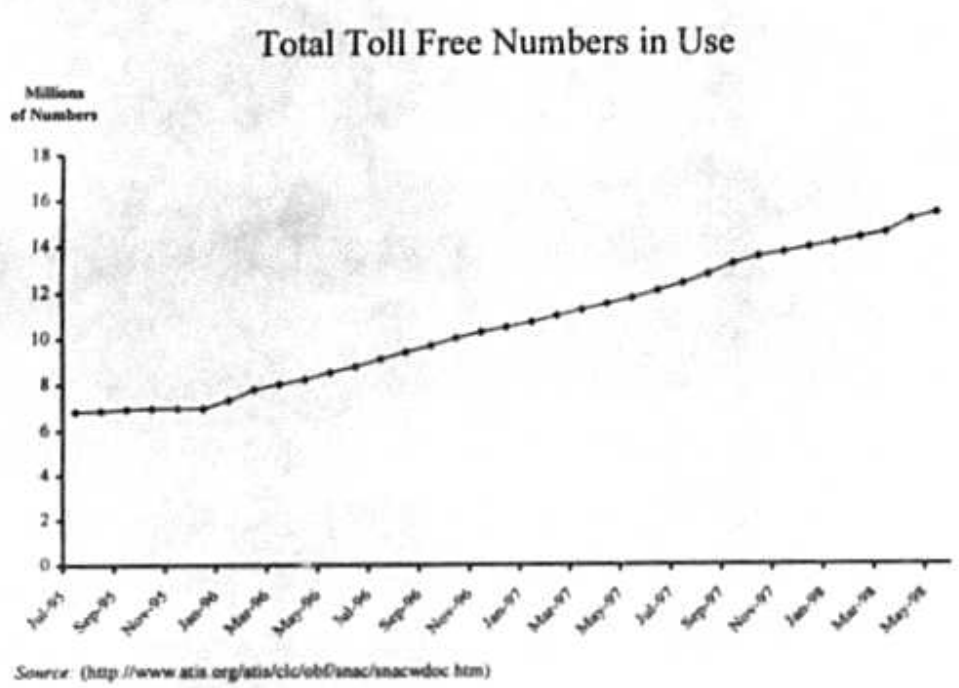
16 For example, the Storm98 site has provided Florida residents with updates on general marine conditions, possible evacuations, and detailed information on the path of hurricane Georges. See (http://www.storm98.com/)

17 From "Pitney Bowes Facsimile Statistics", Pitney Bowes, 1998.

subsequently introduced the 877 prefix.[18] Figure 1 below shows the total number of toll-free numbers in use.

Figure 1



Source: (http://www.atis.org/atis/clc/obf/snac/snacwdoc.htm)

Toll-free numbers are continuing on such a rapid growth rate that the relatively new 888 prefix faces depletion. The original 800 numbers were depleted in 1996 after nearly 20 years. Given the popularity of the free-of-charge service offered over the local telephone lines, it took only two years to deplete almost all the 888 numbers. As of Nov. 1, there were 7.7 million or 99.97% of the total available 800 numbers in use, as well as 5.87 million or 73.52% of the total 888 numbers in use.[19] The growth in the number and use of toll-free numbers indicates that

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[18] See the FCC Toll-free Home Page (http://www.fcc.gov/ccb/888/) for further information.

[19] Britt, Phil "Toll-free help is on the way, But 888 numbers must last a little longer" Telephony Marketing & Services November 17, 1997.

consumers highly value toll free services. However, what many do not realize is that this service would not be available to consumers without the local telephone network.

Moreover, today's telephone network has increased in value in terms of long distance calling. The vast majority of the 130 billion interstate switched access minutes (those minutes transmitted by long distance carriers that use the wireline distribution networks of local telephone companies) used by Americans during the first quarter of 1998 would not be possible.[20] Without the local telephone network, consumers would not be able to access these valuable tools.

The value of the information infrastructure also benefits those who work from remote locations. Many workers now use the Internet to telework, or commute using telecommunications. This has transformed how we think of the workplace and given added freedom to individuals' schedules. The advanced telecommunications infrastructure and the Internet adds great value to those businesses that operate in rural locations or without traditional offices. "Virtual businesses," or businesses which only operate online, along with those businesses which offer products or services electronically, in turn add value to customers through a greater variety of goods and services offered and increased convenience.

The value of telephone networks and the Internet is extending to schools, and libraries, in addition to individual citizens. For example, under the federal schools and libraries program adopted in Florida, public and non-profit elementary and secondary schools and public libraries may receive discounts of between 20 and 90 percent of all telecommuni-cations service, Internet access, and internal connections/wiring.[21] Using satellite and Internet links, Florida's Supreme

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20 Table 10.1 in "Trends in Telephone Service" Industry Analysis Division, Common Carrier Bureau, Federal, Communications Commission, July 1998.

21 The Florida PSC adopted the federal discounts for intrastate services in May 1997. Order No. PSC-97-0557-FOF-TP as sited in the Florida Public Service Commission 1997 Annual Report.

Court offers teachers a program to use actual Florida cases in classroom studies. Complete curricula for each case are available on the Internet and by mail, and students can watch actual cases argued live via satellite and Internet video.[22] The purpose of promoting access in schools and libraries is to expand the access to information resources necessary for education and success in the information age.

Individual citizens have also benefited from expansion of the value of the telecommunications network and the Internet. Senior citizens are a cohort with fast-growing interest in the Internet. They have time to surf the Web and have an interest in being more connected. Specifically, a recent CommerceNet/Nielsen study found that one-third of all US citizens use Internet. That report indicates that African Americans, Native Americans, and elderly women are also among the fastest growing Internet user cohorts.[23] This indicates that Floridians are benefiting from the expanded value of their telephone network. With the increased value of the telecommunications network in mind, our understanding of affordability must also be broadened.

V. THE AFFORDABILITY OF RESIDENTIAL SERVICE

Possibly the most deep-rooted, long-standing public policy goal related to telecommunications is the goal of universal service. Today and for decades past, this goal has provided the motivation to maintain the price of basic local service in a range that is affordable for the vast majority of households. The FPSC voiced its concern for lower income households when it stated that the "issue of affordability largely relates to at what reduced price should such individuals [the

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22 For more information, see the Florida Supreme Court's High-Tech Law Education Program home page (http://www.flcourts.org/courts/supct/jti.html) or (http://www.firn.edu/supct/jti.html)

23 CommerceNet/Nielsen Media Research Study, 1998 (http://commerce.net/news/press/030398_1.html)

working poor] be able to receive service, so as to maximize their subscribership and afford them enhanced employment and informational opportunities."[24]

Although there are reasons why 100 percent universal service may never occur, for several decades in Florida, policies designed to bring the vast majority of households onto the network have produced high levels of local telephone penetration. My review of the data shows that in the early 1980s, almost 90 percent of all households in Florida had a telephone available. Since then, residential service prices have fallen steadily and that number has increased to 94 percent.[25] It appears that some of this increase in the 1990s has come from higher penetration among lower income households, due to the development of the Lifeline and Linkup programs.[26] It is my understanding that these policies were not available in the early 1980s. Historically high penetration levels in Florida indicate that prices have been at affordable levels even for lower income households for many years. Past prices, therefore, provide guidelines for the discussion of what is an affordable price for basic local service today. If prices were affordable then and penetration remained high, a range of affordability that includes that penetration level should be considered today.

Affordability of residential telephone service is a relative measure, and the issue of affordability has several components. A thorough analysis of the affordability of service includes the

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24 Comments of the Florida Public Service Commission issued to the FCC in the "Matter of the Federal-State Joint Board on Universal Service," April 11 1996, page 2, Item II,(http://info-ren.pitt.edu/universal-service/comments/html/70.html)

25 Belinfante, Alexander "Telephone Subscribership in the United States (Data Through March 1998)" Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, Released: July 1998. Table 3 "Percentage of Households With a Telephone by State", pages 13 and 18, avail.

26 The primary mechanism for the distribution of federal support in aid of local telephone service is the federal Universal Service Fund. LinkUp and Lifeline are programs that assist people in connecting to the local telephone network with reduction in the charges for installation of local service and discounts on monthly basic telephone service charges.

consideration of the changing value and scope of basic local service, the price of basic residential service relative to household income, the value of other consumer purchases, and the dynamic relationship between cost and price. First, it is instructive to assess the affordability of basic residential service relative to the median household income in Florida. Relative to this benchmark, current prices for this service are fractions of what was deemed affordable in the past. Relative to the increasing prices of other household purchases and household incomes, basic residential service is significantly more affordable today than it was 15 years ago when it was already deemed affordable.

A. AFFORDABILITY RELATIVE TO INCOME

An affordable price for basic residential service is perhaps most clearly gauged relative to household income and the prices of other goods and services purchased by typical households. Over the past 15 years, a comparison of the price of basic residential service with changes in income and the overall price level in the economy reveals that the price of basic service is significantly more affordable today than it was 15 years ago. In this section I discuss the price of basic residential service relative to household incomes. In the following section I examine the price of this service relative to changes in the overall price level in the economy.

Household Incomes and Affordability

All else equal, if the price of a service decreases relative to household income, the price of the service becomes more affordable. Incomes determine the overall amount that households have to spend on a wide variety of purchases. When a purchase price decreases and household income stays the same, household members can buy an item and have more money left for consumption of other goods and services. The price is, therefore, more affordable. The same is true when

income increases and the price of a specific purchase remains the same. Household members can make the same purchase and have more money left for other purchases. In the case of the price of basic residential service, prices have remained fairly constant while incomes have increased. As a result, the purchase of basic residential telephone service has become much more affordable today than it was in the past in Florida. Since prices designed to promote universal service among households have achieved high levels of penetration for many years, it is instructive to examine the relationship between the price of basic residential service and household income since the early 1980s.

As shown in Figure 2, the relationship between the price of basic residential service and median household income has changed significantly since 1983. In 1983, the price of basic residential service was 0.96 percent of median household income in Florida. For every dollar of household income in Florida, slightly less than one cent was spent on local telephone service. Considering the high level of telephone penetration in 1983, even without Lifeline service, it is reasonable to conclude that the price for basic residential service was affordable in 1983. Today's prices of basic residential service are well below the price indicated by the benchmark of 0.96 percent of median household income. For every dollar of median income today, consumers spend slightly more than one-half of one cent on basic residential service.[27]

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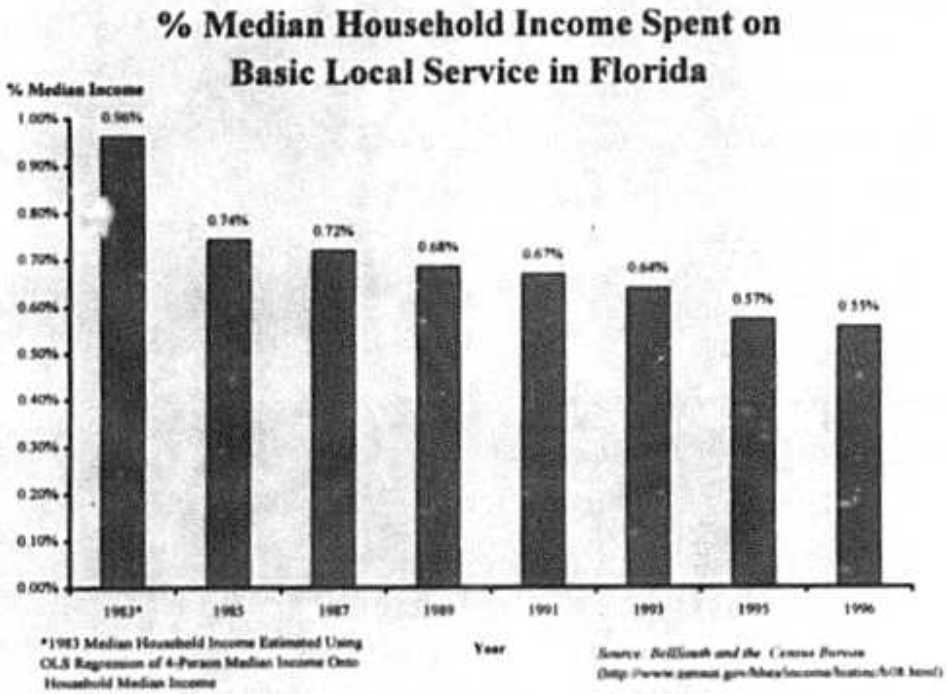
[27] The price used to calculate the percent of median household income spent on basic local service in 1983 is $13.95, 1985 price used is $13.20; 1987 price used is $14.65; 1989 price used is $14.85; 1991 price used is $15.15; 1993 price used is $15.15; 1995 price used is $14.15; 1996 price used is $14.15, all prices reflect SLC; Median income figures are taken from Historical Income Tables- Households, Table H-8. Median Money Income of Household, by State: 1984 to 1996 (http://www.census.gov/hhes/income/histinc/)

Figure 2



The prices of basic residential telephone service in Florida are similar today to what they were 15 years ago. However, over this same 15-year period, the median income in Florida increased by over 75 percent.[28] As a result, the price of basic residential service as a percent of median household income in 1996 was significantly lower than it was in 1983. Relative to median household income, the price of basic residential service is, therefore, considerably more affordable today than it was fifteen years ago. Indeed, this analysis strongly suggests that increases in today's prices would create prices that would still be affordable.

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[28] Median Income in 1983 was $17,410; in 1996 it was $30,641. That is a 76% increase. (Historical Income Tables- Households, Table H-8. Median Money Income of Household, by State: 1984 to 1996 (http://www.census.gov/hhes/income/histinc/h08.html))

The median income for the State of Florida in 1983 was $17,410, and the price of basic local service was $13.95. In 1996, the median income for the State of Florida was $30,641 (expressed in nominal terms). Maintaining the same relationship with median household income in 1996 as existed in 1983, yields an affordable monthly price for basic residential service in 1996 of approximately $24.55 per month. With moderate increases in household income over the past two years, this benchmark would produce a price today further in excess of $20 per month. The affordability in terms of past prices is discussed further in Figure 3 below. This would appear to set a lower bound for what price is affordable relative to median household income. Assuming the case of an affordability benchmark of 1.0 percent of median household income would produce an affordable price in 1996 of $25.53 per month.[29]

Price of Local Service is Not the Sole Determinant of Telephone Penetration

Setting prices for basic local service that are affordable for most households is important and especially meaningful for lower income households. However, the price of basic local service is not the sole determinant of why some lower income households do not have telephone service. Some heads of households simply do not want a telephone. Despite heightened levels of affordability today, one citizen testifying in a public service hearing in Quincy, Florida said that telephone service might be necessary for security reasons, but that some individuals simply do not want telephone service.

"As far as just the prestige matter of having a telephone ... I don't know that that would be worth all of that much because I do know some people that just don't have a phone, they don't want a

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[29] Table H-8. "Median Money Income of Households, by State: 1984 to 1996" (http://www.census.gov/ftp/pub/hhes/income/histinc/h08.html).

phone, you couldn't give them a phone, period."[30] Also, the common sense conclusion that some residential customers disconnect service in response to higher long distance prices is supported by statistical analysis.[31] In its comments to the FCC cited above, the FPSC indicates that the working poor and customers with lower incomes are of particular concern because they are typically disconnected due to inability to pay the long distance portion of the bill. Indeed, other studies show that the majority of customers without telephone service were at one time subscribers.[32] For these customers, disconnection studies find that the primary reason for involuntary disconnection of telephone service is the inability to pay long distance charges. This is an example of a significant cause of non-subscribership that is not properly addressed by subsidized basic residential telephone service.

End-user perceptions about the up-front costs and qualifications for phone service are another reason for not subscribing to phone service. A California study "finds considerable lack of awareness and misunderstanding of the actual installation costs and deposit requirements."[33] Other non-subscribers have the mistaken perception that obtaining telephone service requires such things as American citizenship, possession of a green card, or a driver's license. For these

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30 Testimony of Ed Paschall. "Fair and Reasonable Residential Basic Local Telecommunications Rates" Special Project No. 980000A-SP, Public Hearing Proceedings, Quincy, Florida, September 1, 1998 p. 54.

31 A study concludes that the demand for access is an inverse function of long-distance rates. *See* Jerry Hausman, Timothy Tardiff, and Alexander Belinfante, "The Effects of the Breakup of AT&T on Telephone Penetration in the United States," American Economic Review, vol. 83 (May 1993), pp. 178-84.

32 See Field Research Corp., "Affordability of Telephone Service" (1993) (survey funded by GTE and Pacific Bell, available from Pacific Telesis, Federal Regulatory Relations, 1275 Pennsylvania Ave., Suite 400, Washington, DC 20004). Milton Mueller & Jorge Reina Schement, Rutgers Univ. Project on Info. Policy, "Universal Service from the Bottom Up: A Profile of Telecommunications Access in Camden, New Jersey" (1995) (available from Rutgers University School of Communication, Information and Library Studies, New Brunswick, New Jersey 08903). Chesapeake & Potomac Tel. Co., "Submission of Telephone Penetration Studies in Formal Case No. 850" (D.C. Pub. Serv. Comm'n, Oct. 1, 1993). John B. Horrigan & Lodis Rhodes, "The Evolution of Universal Service in Texas" (Sept. 1995) (available from the LBJ School of Public Affairs, University of Texas at Austin, Austin, TX 78713-8925).

33 Press Release: "Key Messages from Affordability Study conducted by Field Research on behalf of Pacific Bell and GTE-C," February 1, 1994.

households, education of the requirements to receive service – not below-cost residential service for all customers – is the more efficient solution.

B. *Affordability Relative to Other Prices*

Comparisons with the past price of this service, the overall price level in the economy, the price of other communications services, and prices for basic local service in other states in the region, reveal that the current price for basic service in Florida is well below the affordable price.

Relative to Past Prices of Basic Residential Service

As noted above, the prices charged for basic residential service in Florida are approximately the same as they were 15 years ago. Due to15 years of inflation, the real prices of this service have dropped to fractions of their earlier levels. As shown in Figure 3, the price of basic local service for BellSouth customers in Florida in 1983 was $13.95. Even though the overall price level in the economy has increased by approximately 60 percent since 1983, the price of basic residential service today is $14.15.

Figure 3

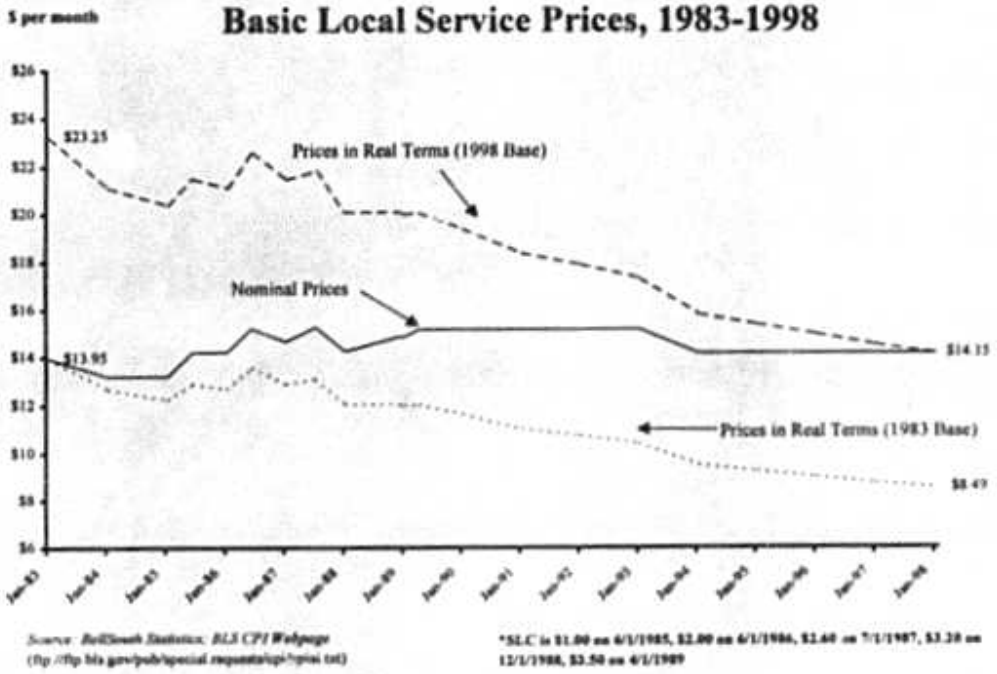

Figure 3 also shows that, relative to the prices that consumers pay for other purchases, the price of basic telephone service has dropped by approximately 40 percent. There are two ways to consider this fact:

- In 1983 dollars, today's price of basic service is $8.49 per month, compared to $13.95 in 1983.
- In 1998 dollars, the 1983 price of basic service is $23.25, compared with today's price of $14.15.

The result is that basic residential service is much more affordable today than it was in 1983. Relative to the spending power of a dollar, the price of basic residential service in 1983 equals a price of approximately $23 today.

Relative to the Price of Basic Service in Other States

Basic residential prices in Florida are also low compared with prices in other states in the region. Figure 4 shows that the price charged for the highest rate group of BellSouth's basic local service is $20.95 in Georgia, $21.05 in Kentucky, $16.14 in Louisiana, $22.51 in Mississippi, $17.39 in North Carolina, $19.90 in South Carolina, $17.15 in Tennessee, and $19.80 in Alabama.[34] All of these prices are higher than prices in Florida: $14.15 for BellSouth, $15.31 for GTE, and $14.73 for Sprint. My research indicates that, on average, the price charged for the highest rate group in Florida is approximately $5.00 below the prices in these other states.[35]

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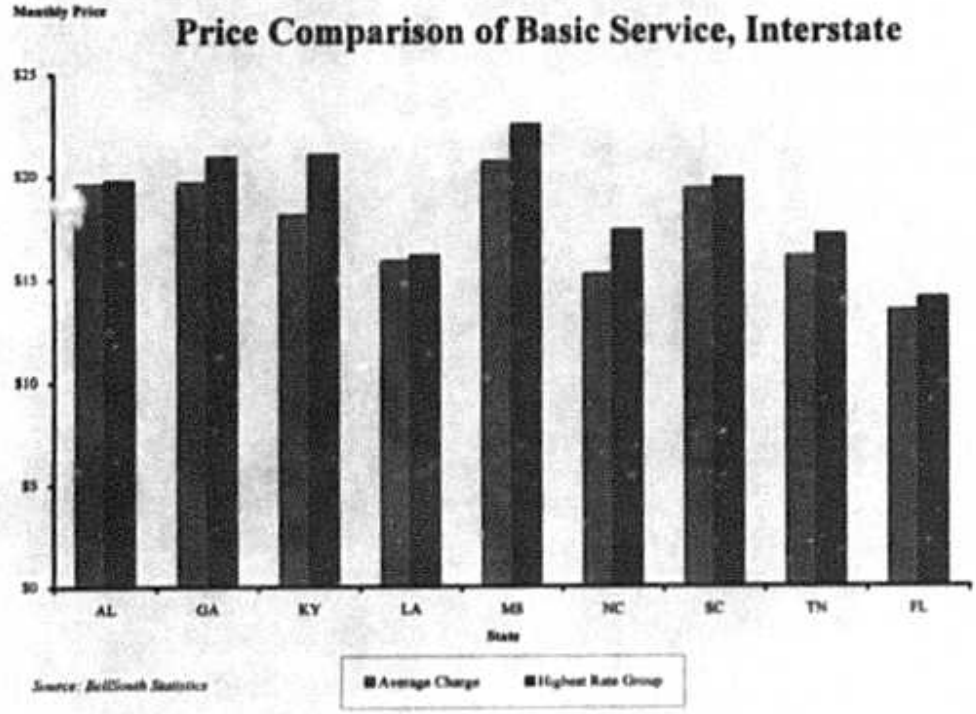
[34] Statistics provided by BellSouth. All figures include the subscriber line charge (SLC). Georgia and North Carolina rates also include the Extended Area Service (EAS) additives.

[35] The average for the highest rate group statistic is $19.36 for these southern states, while BellSouth only charges $14.15 in Florida, creating a difference of $5.21.

Figure 4



A review of the penetration levels in these states indicates that the prices cited above are in an affordable range. Table 1 shows the subscribership levels in these same states.

Table 1

Telephone Subscribership Levels, % Available, 1983-1998

State	1983	1998
Florida	89.9	94.0
Georgia	92.1	90.5
Kentucky	90.9	96.0
Tennessee	92.6	95.4
Louisiana	93.3	94.2
Mississippi	89.1	92.0
South Carolina	84.9	93.7
Alabama	90.2	94.4

Source: (http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/subs0398.pdf)

As the table above indicates, subscribership in Florida was 94 percent in 1998. Penetration in Georgia was 90.5 percent, 96 percent in Kentucky, 95.4 percent in Tennessee, 94.2 percent in Louisiana, 92 percent in Mississippi, 93.7 percent in South Carolina, and 94.4 percent in Alabama in 1998.[36] These subscribership figures must be carefully considered, however, due to the fact that the majority of disconnections are related to the inability to pay the toll portion of a bill. Despite this fact, the highest price paid by customers for local exchange service in a high-penetration area may be another good indicator of what customers can afford to pay. As testimony from Ben Poag suggests, the highest price paid in Jackson, Mississippi is $22.51 (for 244,000 access lines, including the SLC) and the highest price paid in Winter Park, Florida is $14.83 (for 533,000 access lines, including the SLC) where penetration is comparably high. Mr. Poag's analysis also indicates that the people of Mississippi are paying significantly more for less extensive access than those in Florida.[37] All of this indicates that Florida's prices are well below what is affordable compared to the value of the service and the prices in other cities.

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[36] Belinfante, Alexander "Telephone Subscribership in the United States (Data Through March 1998)" Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, Released: July 1998. Table 3—Percentage of Households With a Telephone by State, pages 14 and 18, avail.

[37] From the testimony of Ben Poag to be presented as direct testimony in "Fair and Reasonable Residential Basic Local Telecommunications Rates" Docket 980733-TL

In terms of value per dollar, it appears that the price of basic residential service is also well below the value per dollar of cable TV. The Wyoming affordability survey supports the common sense conclusion that phone service is at least as valuable to consumers as cable TV (CATV) and yet it is sold at fraction of the price. My research indicates that the weighted average price paid by over 1.5 million cable television customers in Florida for basic cable service in 1998 is $19.29 per month.[38] The national average price for basic cable service is over $24.[39] Both of these prices are well above the average price charged for basic residential service in Florida.

From a different perspective, in a recent Public Service Hearing, Gary Arenson colorfully described the relative affordability of his residential telephone service in specific terms.

> "...My basic home rate is about less than $11 a month, which is about 36 cents a day... Now let me show you what that equates to. These items all came from my home, and I took the donuts from my son, and so I have to return them... There is a dozen donuts here for $2.99. That's about 25 cents each. That's one-and-a-half donuts for my daily monthly phone rate. I have a loaf of bread that costs $2.49. There's about 20 slices of bread here that equals about 12 cents a slice. So that's about three slices equals my daily home phone. Also, the newspaper, which is the local Sun Sentinel, it costs 35 cents a day, which it is about equal to my daily home phone use, my basic rate."[40]

The fact that today's service provides greater value at a lower real price compared to other states, other cities and to cable TV indicates that residential telephone service would be affordable at

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38 Calculated as a weighted average from the NHI Peoplemeter Survey. A reception-only (no added programming) definition was used for CATV basic local service.

39 Source: Cable and Pay TV-- Summary: 1970-1996 No. 901. (http://www.census.gov/prod/3/97pubs/97statab/communic.pdf)

40 Testimony of. Gary Arenson. "Fair and Reasonable Residential Basic Local Telecommunications Rates" Special Project No. 980000A-SP, Public Hearing Proceedings, Fort Lauderdale, Florida, September 3, 1998 p. 58-59.

higher prices. Given these facts, it is important to consider the affordability in the long run and the role of cost.

C. *Affordability Relative to Cost and Long Run Affordability*

Today, prices for many intraLATA services, which are far out of line with the costs of providing these services, provide financial support for basic residential service. As shown in Table 2, there is a wide range of estimates of the cost of providing basic local service in Florida.[41] These estimates and the models and inputs that produce them are the subject of debate in the ongoing universal service proceeding in Florida.

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[41] Data derived from the contribution analysis in the Florida Universal Service and Cost proceedings.

Table 2

Summary of Basic Local Service Costs
From HAI model and BCPM in Florida

	HAI[1]	Uncapped BCPM[2]		Capped BCPM[2]	
Company	Monthly Basic Local Service	Investment Per Line	Monthly Basic Local Service	Investment Per Line	Monthly Basic Local Service
BellSouth	$15.11	$1,309	$31.63	$1,285	$31.26
GTE	$15.07	$1,165	$32.08	$1,148	$31.81
United[3]	$17.86	$1,375	$33.14	$1,298	$31.78
Centel	$26.23	N/A	N/A	N/A	N/A

Notes:
(1) Direct Testimony of Richard Guepe, p.12.
(2) BellSouth BCPM output from exhibit to Caldwell Testimony, P 6.
GTE BCPM output from exhibit 1 of David Tucek.
Sprint BCPM output from exhibit 3 of Kent Dickerson, p. 2.
(3) Sprint only reported their statewide number for the combined company.

In Florida, and throughout much of the nation, the BCPM and the HAI model are used by the local exchange carriers and IXCs respectively to estimate the cost of providing local services. With the national default inputs used in their model by the IXCs, HAI generally produces lower cost estimates than the BCPM. I am familiar enough with the ongoing debate over cost models to understand that even where the HAI model has been adopted, it has been adopted with modifications to key model inputs, and these input modifications significantly increase costs estimated by the model. With this in mind, it appears beyond question that the current average prices of basic residential service are well below the cost of providing this service.

I am also aware that the educated debate on cost issue and cost models has moved past giving serious consideration to the incorrect process of allocating the cost of the loop to services other than basic local service. Dr. Taylor explains in his comments in this proceeding that it is not appropriate to allocate the cost of the loop to non-basic and toll services that do not directly

cause that cost.[42] I have worked extensively in this area, and I concur with Dr. Taylor on this issue. Allocating the high fixed-cost of providing basic residential service to non-basic and toll services that do not cause this cost will understate the costs caused by providing basic local service. This will preclude the proper consideration of price changes that are necessary to promote infrastructure investment and lead to the development of efficient, long-term competition in the state of Florida.

With policies in place that are opening the local network to competitors, pricing residential local service with total disregard for its related costs will also preclude the local facilities providers from having the opportunity to earn fair returns on their investments. At some point, the financial community would penalize the local exchange carriers for continued investment in Florida's local network. Cost of capital would rise, and the local exchange carriers would face a downward financial spiral. This could cause significant damage to the value and affordability of telecommunications services in Florida for years to come. As Scott Cleland of Legg Mason stated, "shareholders' interest and ratepayer interests are inextricably linked. In the long-term, they can't be separated. What's good for one is ultimately going to be good for the other, and what's bad for one long-term is going to be bad for the other."[43]

Providing high value, basic local service requires large fixed cost investments every year. Competitors make investments that they believe will maximize their value. They will not make large fixed cost investments to provide a service that will not provide a reasonable profit. They will enter where prices are well above costs and siphon off the subsidies that are used today to

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[42] See the contribution analysis in the testimony of Dr. William Taylor, National Economic Research Associates in the Universal Service proceedings.

[43] Testimony of Scott Cleland before the Telecommunications Policy Committee of the Illinois Commerce Commission, July 1998.

support below cost basic residential service. Without subsidies the funds needed to support basic residential service would not exist. To maintain investment in the network, services prices will need to stand without subsidies. To maintain long run affordable, high value telecommunications services offered across local networks, prices today must begin the transition toward costs.

For example, America Online (AOL), the network with the most online customers, reports that its average customer's online usage is 46 minutes per day.[44] With rapidly growing penetration, Internet traffic today is already a substantial portion of all local traffic. At today's prices for basic local service, there is little incentive for the substantial fixed-cost investments required to keep up with this exploding use of the network. Although raising residential prices to be more closely aligned with cost is only a partial solution to this challenge, it is a strong step in the correct direction. Raising residential prices closer to costs will improve dynamic efficiencies and provide the ILECs with incentives to invest in advanced telecommunications infrastructure.

D. Summary of Affordability Benchmarks

Affordability is a relative measure, and a range for an affordable price is best found relative to a number of measures. In this section, I examined the price of basic residential telecommunications relative to income, the prices of other household purchases, and relative to the increasing value that households receive from this service. I also stress the necessity of bringing prices more in line with costs to promote long run affordable, high value local service.

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[44] AOL's 12 million customers used the service an average of 46 minutes a day, up from 41 minutes last quarter. (http://cnnfn.com/digitaljam/9805/06/aol/index.htm)

Table 3

A Summary of Affordability

Category	Range
Relative to Income	$20-$25
Relative to Price	$20-$23
Relative to Costs	$20-$31
Relative to Va'	>> $20

The table above summarizes my findings in previous sections. Table 3 shows a lower bound for an affordable price relative to income is approximately $20 per month. Relative to the prices in other states, and relative to the price of this service in Florida in years passed, the range of affordability is from approximately $20 to $23 per month. For a consideration of long-term affordability of high value local service, I reviewed the cost of providing basic local service. Reasonable cost estimates range between $20 and $31 per month. I believe that reasonable cost estimates begin at $20, instead of the $15 range suggested by the HAI model in Table 2 because even though the HAI model is usually adopted with modifications to key inputs to adjust estimated costs to more realistic levels, the estimate presented in testimony was not modified. Given affordability relative to income, price, and costs, I believe that affordability relative to value is clearly greater than $20.

VI. CONCLUSION

To accomplish long-term public policy objectives related to efficient investments in the local network it is necessary for prices of local services to move toward the costs of providing these services. In this process there are valid concerns related to the long-standing goal of universal telecommunications service, which is today more important than ever. My examination reveals that a movement to more efficient pricing can be accomplished with little or no negative impact on telephone subscribership, especially with the Lifeline programs that are in place to assist low-income households. Across measures of affordability, there is strong evidence that the affordable

price for basic residential service is well above today's price levels. When viewed in the context of the dynamic efficiency of the rapidly changing telecommunications infrastructure, increased prices easily pass affordability benchmarks.