California State Auditor

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California Public Utilities Commission:

Its Decisions About Deregulating the State's Telecommunications Industry Will Not Affect Residents Immediately and the Long-Term Effects of Policy Changes Are Unknown

CALIFORNIA STATE AUDITOR
BUREAU OF STATE AUDITS

November 1999
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CALIFORNIA STATE AUDITOR

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November 16, 1999 99108

The Governor of California
President pro Tempore of the Senate
Speaker of the Assembly
State Capitol
Sacramento, California 95814

Dear Governor and Legislative Leaders:

As requested by the Joint Legislative Audit Committee, the Bureau of State Audits presents its audit report concerning the potential dismantling of the current system of geographic rate averaging in California. This report concludes that because several years will pass before the current system of rate averaging is reviewed or changed in California, there is no immediate impact on services or rates paid by rural and urban telephone customers.

However, in light of the Federal Telecommunications Act of 1996 (act) that attempted to level the telecommunications playing field by opening all aspects of the market to increased competition, the California Public Utilities Commission (commission) will need to revisit current regulatory policies guiding California's market. Specifically, the commission will need to review rate averaging and analyze how any policy changes would impact its universal service goals to provide affordable telephone service to at least 95 percent of all households in California. Before any policy is dismantled, the commission will need to conduct in-depth studies and hold several public proceedings to discuss concerns. The commission will begin its evaluation process, which may take between 18 months and 6 years to complete, in early 2000. Thus, the timing and magnitude of any policy changes are unknown.

Although the future course for rate averaging is still undecided, telephone customers currently receive the same telephone services for comparable rates regardless of whether they live in rural or urban areas. Further, the vast majority of rural customers now have access to the same advanced technologies, such as high-speed Internet connections, that are available to urban customers.

Respectfully submitted,

KURT R. SJOBERG
State Auditor

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Our review of the possible elimination of geographic telephone rate averaging revealed:

- ☑ ***Currently, customers receive the same telephone service at comparable rates regardless of whether they live in rural or urban areas.***
- ☑ ***The vast majority of rural customers have access to advanced technologies, such as high-speed Internet services.***
- ☑ ***While Federal Communications Commission rulings require de-averaging of wholesale services, it does not specifically require states to de-average retail customer rates.***
- ☑ ***It is likely the commission will address retail rate de-averaging; however, which customers will experience rate changes is pure speculation.***
- ☑ ***Any commission proceedings on the possible elimination of rate averaging may take from 18 months to six years.***

Telecommunications industry innovations are revolutionizing the ways we communicate, and new government regulations and policies will eventually alter how companies charge consumers for communication services. California's Public Utilities Commission (commission) already faces major decisions about policies that regulate the State's telephone companies. These policies currently allow both rural and urban telephone customers to receive similar services at comparable rates. However, these decisions and changes will occur over several years. Therefore, the State's telephone customers, regardless of where they live, will not soon experience any major alterations in their services or fees. Indeed, the timing and magnitude of any changes arising from the commission's decisions are currently unknown.

Not only will the commission need to analyze how any policy changes will affect telephone companies and customers, but it will also need to ensure that it makes economically sound choices that satisfy conflicting business philosophies and diverse legal requirements. Specifically, the federal Telecommunications Act of 1996 (Act), which requires states to open the telecommunications market to competition, is prompting the commission to reexamine California's long-standing policies of averaging telephone rates across rural and urban areas (geographic rate averaging). The Act also has the commission revisiting California's use of subsidies, which are funded through monthly surcharges on customers' bills, to ensure equitable rates for all Californians. Both policies have supported the State's mission to supply universal service—or affordable, accessible telephone connections—to at least 95 percent of all California households. In apparent contrast to these policies, however, is a premise underlying the Act which presupposes that, in order to remove barriers to competition and promote fair products, states should establish rate structures in which customers pay fees based on the actual costs of their telecommunications services.

Although the commission initially planned to reassess its current system of geographic rate averaging at the end of 1998, they have not yet begun this reevaluation. The commission is waiting for Federal Communications Commission guidance before it begins an official public proceeding to conduct in-depth studies and analyze rate averaging. In the meantime, the commission has been studying other areas concerning the removal of barriers to competition. The commission's decision-making process, its official proceeding on the possible elimination of rate averaging and related matters, will require from 18 months to six years. Telephone customers in California will therefore not immediately feel the results of any commission decisions. Nonetheless, if the commission concludes that rate averaging is not compatible with a competitive telecommunications market, some customers' telephone rates will probably increase, while other customers' rates will decrease. Other possible effects are speculation at this point.

Even though it has not yet determined the future course for rate averaging, the commission must continue to fulfill the federal Act's intent, which is to provide high-quality telephone services at low rates and to encourage the use of new telecommunications technologies. Under current policies, telephone customers receive the same basic telephone services for comparable rates regardless of whether they live in rural or urban areas. Only about 112,000 people in California, who constitute 3 percent of the rural population or less than 1 percent of the State's total population, live in areas where traditional telephone service is not offered. Moreover, some rural areas have newer, more state-of-the-art equipment than urban areas because rural areas are eligible for low-interest federal loans. Although the quality and type of telecommunications equipment can vary among areas in California, the vast majority of rural customers now have access to the same advanced technologies, such as high-speed Internet connections, that are available to urban customers.

Regardless of the technology, rates, and services now in place in California, the telecommunications industry and market will undergo critical changes during the next several years. These changes may have positive and negative, dramatic and insignificant effects on rural customers, urban customers, businesses, schools, and governmental entities. Given the challenges of easing competition into the telecommunications market and the difficulty of revamping complicated existing policies, the commission intends to begin the next phases of its evaluation process in early 2000. In arriving at its conclusions, the commission should seriously consider the possible impacts of its decisions on all players in the telecommunications industry.

AGENCY COMMENTS

The commission generally agreed with the information provided in our report. ■

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INTRODUCTION

BACKGROUND

Appointed by the governor and approved by the Senate, the five commissioners on the California Public Utilities Commission (commission) regulate investor-owned utilities such as those in the telecommunications industry. In fulfilling part of its regulatory role, the commission focuses on protecting consumers' interests, and on ensuring that telephone companies charge fair rates. To accomplish these goals, the commissioners decide on policies, procedures, and programs that guide telephone companies and affect telephone customers.

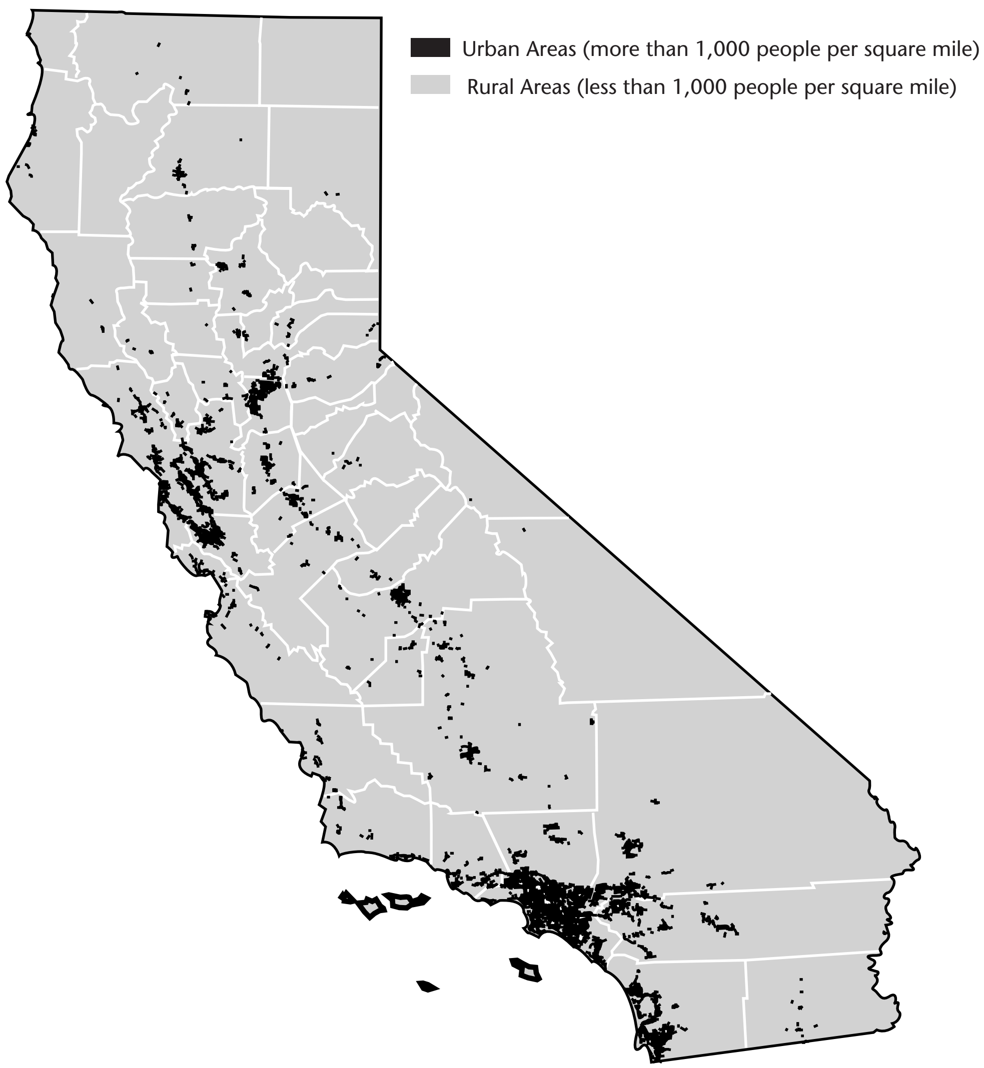
THE PRIMARY PLAYERS IN CALIFORNIA'S LOCAL TELEPHONE MARKET

With 1999 revenues estimated at more than $7.5 billion, 22 local telephone companies currently dominate the local market and offer basic telephone service to customers in California. The largest company, Pacific Bell, serves areas populated by approximately 25 million people through its network of approximately 18 million phone lines located throughout California. Roseville Telephone Company, one of two midsized companies in the State, uses approximately 129,000 telephone lines to offer service in areas with 173,000 people. At the far end of the spectrum, Pinnacles Telephone Company is the smallest company, and it uses a network of approximately 250 telephone lines to offer service to an area with only 316 people. For detailed information about the various telephone companies that offer local service in California, see the Appendix.

Through a system of 675 exchanges or territorial areas, the 22 telephone companies offer telecommunications service to nearly all of the approximately 33 million residents in California. More than 4 million, or 12 percent, of these customers live in rural areas. (Unless otherwise noted, this report defines "rural area" as a region with a population of fewer than 1,000 people per square mile. Examples of rural areas include Weaverville, San Andreas, Burney, and Yreka. In contrast, urban areas have higher population densities than rural areas and include such locations as San Francisco and Los Angeles.) Of the 22 telephone companies now supplying local service to Californians, 18 are small rural telephone companies that each use fewer than 50,000 telephone lines. Accordingly, these companies mostly serve the rural areas of California. Figure 1 shows the rural and urban areas in California.

FIGURE 1

California's Rural and Urban Areas According to 1999 Population Estimates*



Source: Vesta Resources, Incorporated, October 18, 1999.

* Because the Public Utilities Commission has not defined "rural" or "urban" we developed our own definition of these terms for this report.

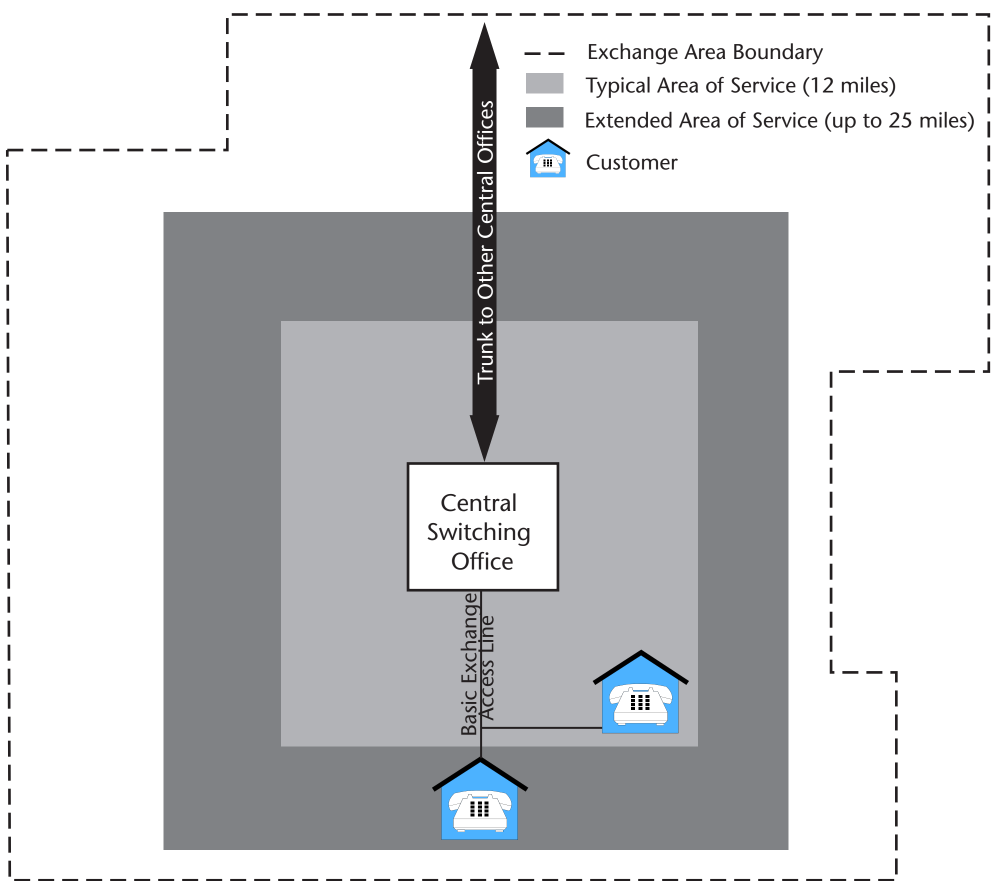
BASIC ELEMENTS OF LOCAL TELEPHONE NETWORKS

In 1994, California enacted legislation mandating that the commission implement universal telephone service in a competitive environment. In response, the commission adopted a universal service policy, which established a goal that at least 95 percent of households in California would have access to basic telephone services. Further, the policy defined the following elements of basic telephone service: the capability to place calls, the ability to receive calls, touch-tone service, single-party service, special rates for qualifying low-income individuals, access to operator services, access to long-distance services, and access to 911 emergency services.

Telephone companies provide basic telephone service beginning with equipment located at their central offices and ending with telephone lines at customers' residences or businesses. The industry refers to this circuit as the "local loop." As Figure 2 shows, "local exchange" is a geographical area where a local

FIGURE 2

Basic Network Components of a Local Telephone Network



telephone company is obligated to offer basic local telephone service to all rural and urban customers living within the area. No legal provisions require the telephone companies to provide service to people living outside one of these areas.

For each exchange, the commission has authority to set rates for basic telephone service that are just, reasonable, and comparable between rural customers and urban customers of the same telephone company. Although the rates charged to all residential customers of an individual exchange must be comparable, rates may vary between exchanges of the same company if the commission approves special extended areas of service. Further, rates may differ among telephone companies. As a result, neighbors who reside in different exchanges or are serviced by different companies could pay different rates for the same services.

Regardless of the basic flat rates charged, customers can make unlimited calls in their local calling areas without paying additional fees. Usually, a local calling area extends in all directions along a 12-mile radius from a rate center—typically the central office—chosen to maximize customers' calling areas. In past years, local telephone companies established extended areas of service that allowed customers to expand their local calling areas up to 25 miles from rate centers for minimal fees. The basic monthly rates for these customers, which include additional fees for extended areas of service, allow them to pay lower prices than the standard toll rates for calls to locations in the extended areas. The commission has discontinued the future application of extended areas of service, but has allowed the service to remain in areas where it was already in place.

WHOLESALE ELEMENTS OF LOCAL TELEPHONE NETWORKS

In addition to the 22 local, or incumbent, telephone companies, the commission allows other competitive companies to offer local telephone service to current customers of the two midsized (Roseville Telephone Company and Citizens Telecommunications of California) and two large (General Telephone of California, Inc. and Pacific Bell) telephone companies in California. However, in order to provide the local loop connection, these competitive companies often must obtain access to the incumbent telephone companies' network. For this access, the incumbents charge the other companies for "wholesale" access to their network services and equipment.

Although the competitive companies may not have a complete local telecommunications network, some have part of the equipment—such as switches—necessary to provide basic local service to customers. Thus, some competitive companies may need to acquire an entire local network, while others may just need specific elements in a network to supplement their own facilities. However, competitive companies must establish a physical point of presence, such as a building located near an incumbent telephone company's central office, to obtain access to the incumbent company's network.

RATE-AVERAGING POLICIES THAT HELP PROVIDE UNIVERSAL SERVICE

In the 1960s, California adopted a rate-averaging policy to help fulfill its mission to supply universal telephone service to residents. At the time, the commission thought citizens were best served by low monthly telephone rates for service within their communities. However, small telephone companies were less able than large companies to charge low monthly rates because they could not easily spread costs across a broad base of customers.

Description of Telephone Surcharges

- **Deaf and Disabled Telecommunications Program:** Provides relay services and communications devices to customers with certain disabilities.
- **Universal Lifeline Telephone Service Program:** Allows customers who meet certain income restrictions to receive discounted basic telephone services.
- **California High Cost Fund – A:** Enables smaller telephone companies to receive subsidies to ensure rates do not increase to levels so prohibitive that customers could not afford service.
- **California High Cost Fund – B:** Permits the larger telephone companies providing service in high-cost areas to receive subsidies that reduce any disparity between the rates charged by these companies and the costs of providing service.
- **California Teleconnect Fund:** Encourages telephone companies to provide discounted services to qualifying schools, libraries, government-owned hospitals, health clinics, and community-based organizations.

To allow all companies to charge low monthly rates to their customers, the commission created several subsidy programs that help offset the difference between the cost of providing services and the rates that the commission allows companies to charge their customers. This subsidy structure allows for geographic rate averaging, or taking the average of telephone rates across rural and urban geographical areas statewide within a company's serving area.

The telephone companies, to subsidize rate averaging and permit low monthly rates, assess all telephone customers a variety of monthly surcharges on their telephone bills. Some surcharges are specifically designed to offset the costs incurred by telephone companies to provide services in high-cost areas and simultaneously to keep rates low. Other monthly surcharges directly benefit customers who meet income requirements or who have certain disabilities. Additionally, some subsidies encourage telephone companies to provide certain discounted services to qualified schools, libraries, hospitals, and community-based organizations.

Federal Legislation That Requires California to Reconsider Its Telecommunication Policies

In 1996, Congress passed the federal Telecommunications Act (Act) into law and provided the first major overhaul of telecommunications legislation in more than 60 years. The central focus of the reform was to open local telecommunications markets to competition. Although states retain the obligation to preserve universal telephone service and ensure the quality of that service, the Act preempts any state laws that prevent competitive entry into the market. To allow new entrants into the telecommunications field, the Act requires state commissions to segregate and establish costs for the various elements of local telecommunications networks. After that, state commissions may decide to allow telephone companies to charge their customers rates based on the cost of providing telephone service according to the customers' specific needs and in the customers' particular geographical area or exchange. In our report, we refer to this process of establishing specific costs and charging for those costs as "geographic rate de-averaging."

SCOPE AND METHODOLOGY

The Joint Legislative Audit Committee requested the Bureau of State Audits to review the potential impacts of geographic rate de-averaging on rural communities in terms of possible telephone rate increases and the potential costs of upgrading telecommunications equipment. Additionally, we were asked to review and compare the current levels of telephone service offered in rural areas to those offered in urban areas.

Our review focused exclusively on telephone companies' residential customers rather than on business customers. Although the proposed changes may also affect business customers, the consequences of geographic rate de-averaging may have less impact on business customers than on residential customers because the former can pass along any increased costs to their own customers. Additionally, business telephone rates in

California tend to vary significantly because telephone companies typically base rates on actual costs rather than flat monthly rates designed to promote affordable universal access to residential customers.

To determine how best to distinguish rural customers from urban customers, we interviewed personnel from the commission, the Federal Communications Commission (FCC), other governmental agencies, various telephone companies, public interest and advocacy groups, and other associations. Additionally, we reviewed state and federal laws, analyzed documents prepared by the commission and FCC, and researched various Internet sites. From those efforts, we discovered that there is no standard definition for "rural customers" or "rural areas" in the telecommunications industry. Therefore, we developed our own definition of "rural" based on population density from federal census data. As used throughout our report, the term "rural area" means a region with an average population density of fewer than 1,000 people per square mile.

To determine the potential impact on rural customers of eliminating geographic rate averaging, we interviewed the personnel mentioned above, reviewed laws, analyzed commission and FCC documents, and examined any available reports or studies on this topic. Additionally, we obtained commission proceedings or hearings that related to geographic rate averaging. Finally, we documented the process that the commission will follow in considering the elimination of rate averaging.

To assess whether rural and urban telephone customers currently receive similar services at similar rates and whether rural customers currently have equipment and technology similar to those available to urban customers, we reviewed public contracts—known as tariffs—submitted by the telephone companies to the commission. In addition, we reviewed annual reports and monitoring reports submitted by the telephone companies to the commission. Also, we asked each local telephone company to give us information about the type and location of central office equipment within its exchanges. In making these requests, we also looked for information related to the types of advanced technology currently available to the companies' customers and asked the companies to detail the practices and methods used to introduce new equipment and technology to customers.

In our efforts to identify the services available to rural and urban customers, we estimated the number of California residents who do not have access to any telephone service. To accomplish this task, we hired a geographic information systems consulting firm, Vestra Resources, Inc. Our consultant used its geographic information systems technology, which accessed territory service maps from the telephone companies and federal census population data, to identify those areas that do not have telephone service. The consultant's analysis focused on those areas—both rural and urban—that telephone companies' exchanges do not cover. However, we did not audit this data, and our review of the unserved population in California has several limitations. Specifically, the 1999 population data was calculated with statistical projections based on 1990 actual census data. Also, because some census data overlapped telephone company territorial boundaries, which some maps may show somewhat imperfectly, our consultant had to use average population to split the data. Nevertheless, we believe that our consultant's analysis offers a useful estimate of California residents who currently live in areas where telephone companies do not have to offer service. ■

CHAPTER 1

Possible Changes in Rate Averaging Will Not Affect Telephone Customers Immediately, but Any Modifications Could Have Consequences

CHAPTER SUMMARY

Federal law and technological advances are prompting states to open all aspects of the telecommunications market to increased competition. The California Public Utilities Commission (commission) must therefore decide how to encourage competition among telephone companies while continuing to support the federal and state government's mission to supply universal telephone service at rates that are comparable and generally affordable. Specifically, the commission will need to revisit existing regulatory polices such as geographical rate averaging—where rates are averaged across rural and urban areas. However, the commission's formal decision-making process to revisit rate averaging, which has not yet begun, may require 18 months to six years to complete. Therefore, Californians living in either rural or urban areas will not soon experience the effects of commission decisions about telephone rates and services.

FEDERAL LEGISLATION MANDATES MARKET COMPETITION AND A RECONSIDERATION OF RATES FOR TELEPHONE SERVICES

Competitive markets generally encourage lower prices and more consumer choices than noncompetitive markets. To assist state utility commissions in fostering competition among telephone companies that provide local service, the Federal Communications Commission (FCC) released a 700-page ruling—known as The First Report and Order—in the summer of 1996. Specifically, the FCC requires states to unbundle and analyze certain elements of existing local telecommunications networks. The federal ruling encourages state commissions to base telephone rates on the estimated costs of providing services to specific geographic areas, or zones, served by a telephone company. Those establishing the rates should consider costs arising from both levels of network elements: the wholesale level (services, equipment, and technology offered by one telephone company to another) and the retail level (services supplied by telephone companies to their customers).

Further, the FCC ruled that state commissions must adopt a consistent method when establishing costs for various zones. To comply, state commissions must estimate costs using the best, most reliable methodology and information. One challenge, according to California's commission, is that using or applying different figures and assumptions in the same cost method and model can yield different results. However, once it identifies the costs, the commission must establish a pricing method that the incumbent companies will use to sell access to their network equipment to competitive companies. In California, existing telephone companies—known as incumbents—own the local telephone network that competitive companies must access to offer local service to customers. The process of using actual costs—rather than taking an average of costs across geographical areas—to establish the charges that competitive companies must pay incumbents for access to local telephone networks is known as "wholesale rate de-averaging."

FCC rulings require de-averaging of wholesale services, but currently it does not specifically require states to de-average retail customer rates.

Although the FCC rulings clearly require states to de-average rates for wholesale services geographically, it does not specifically require states to de-average retail customer rates. However, the commission anticipates that once the wholesale side has undergone rate de-averaging, telephone companies will eventually want to set different retail rates based on the actual cost of services the companies provide to customers. The commission believes that it will inevitably need to revisit its current regulatory policy of geographic averaging of retail rates in response to growth in competition. As this report's Introduction explains, California has used a long-standing policy of averaging telephone rates across rural and urban areas as part of its universal service program. To implement the new FCC rulings, the commission may need to determine retail costs related to the existing local network and develop a method to price services offered by local telephone companies to their customers.

THE ELIMINATION OF TELEPHONE RATE AVERAGING MAY EVENTUALLY IMPACT CUSTOMERS

If the commission decides to eliminate rate averaging, rural customers will not experience any impact in the near future. Any possible effects on rural or urban Californians are unknown at this time, and residents will not feel the results of any rate changes for several years. Some customers may expect higher telephone rates, while others may experience lower telephone rates. Specifically, the commission speculates that the rates for customers in rural areas (which the commission believes are generally high-cost areas) will increase, and rates for customers in urban areas (which are generally low-cost areas) will decrease. The commission bases its prediction on the belief that the three most significant drivers of costs for local telephone service appear to be the distance between a customer and a telephone switching office, the density of phone lines in an area, and geographical terrain. The farther a customer is from a switching office and the lower the density of phone lines in that area, the higher the cost of providing service to the customer. Further, if the geography in a customer's area has natural features such as a lake or rocky mountain, the cost of providing service will increase.

At this time, no one can identify which customers will experience rate changes.

Nonetheless, at this time, no one can identify which customers may experience rate increases and which may realize rate decreases. Any available information is mere speculation. Because the commission has not yet begun its examination of whether and how to change California's policies on rate averaging or universal service, there are no cost studies or analyses to determine the effect of de-averaging on residents' rates.

THE COMMISSION WILL NEED TO REVISIT AND RECONCILE ITS POLICIES ON GEOGRAPHIC RATE AVERAGING AND UNIVERSAL SERVICE

Because the federal government, in the Telecommunications Act of 1996 (Act), acted to allow greater competition in the telecommunications industry, the commission feels increased pressure to move retail telephone rates closer to the companies' actual costs of supplying services to residents. In considering these changes, the commission will need to find ways to meet the federal government's requirements while still fulfilling the federal and state government's mission to provide universal telephone service—which the commission's current policy on geographic rate averaging supports. Nevertheless, several years will pass before the commission considers eliminating geographic rate averaging in California even though the commission has been a long-time proponent of competition. Initially, the commission planned to consider the issue at the end of 1998, but it has taken no specific actions on rate de-averaging to date. The commission is waiting for additional guidance from the FCC before it opens a proceeding to discuss policy changes.

After the commission receives direction from the FCC—that is anticipated by the end of November 1999—state regulators will need to consider whether telephone customers in low-cost service areas should continue to pay rates set artificially above the actual costs of their services in order to subsidize the higher cost services of other customers. Maintaining this geographical averaging policy in a competitive market may also require the commission's constant reassessment of other existing policies, such as universal service and its related subsidies, and its reconsideration of competing public interests.

One issue state regulators will need to consider is whether customers in low-cost areas should continue to subsidize those in high-cost regions.

Even before the Act mandated competition, the commission had responded to market trends by starting a proceeding intended to help the commission create an economic and regulatory framework for competition. In doing so, the commission has heard comments regarding the need for competition in the local telephone market as well as questions about the appropriateness of continuing the current system of rate averaging. Because the costs of providing telephone service may differ substantially among zones with varying population densities or different terrain, some believe that varying rates among zones to reflect cost differences may be desirable in a competitive environment. Many who support an open telecommunications market believe that rate differences will help promote competition among companies that offer local telephone service. If the commission eliminates rate averaging, and if companies set retail rates close to costs for services in each zone, newer companies' attempts to compete with incumbent telephone companies will probably be more difficult in low-cost areas and easier in high-cost areas. On the other hand, those who oppose changing the current rate system claim that basing rates on actual costs will cause dramatic increases in telephone rates for some residents.

In analyzing whether to eliminate geographic rate averaging, the commission will need to assess whether changes could undermine the goals of its universal service policies. As early as 1993, the commission recognized the difficulty in reconciling a competitive environment with its existing subsidy system and universal service program. Both the federal government and California are committed to universal service, which assures the continued affordability and widespread availability of high-quality telecommunications service to all residents. Even though it ruled to increase competition in the telecommunications industry, the FCC recently reaffirmed the federal government's commitment to universal service. In late October 1999, the FCC boosted subsidies that help make telephone service affordable for people in areas that are rural or expensive to serve. The change was part of the FCC's efforts to revamp the telecommunications system in preparation for widespread competition within the system. Although California's commission acknowledges the inevitable transition to a fully competitive market, its management also remarked that nothing should compromise the federal and state government's goal of universal service.

FCC recently reaffirmed its commitment to universal service when it boosted subsidies to rural or expensive service areas.

THE COMMISSION MUST FOLLOW A PUBLIC PROCESS BEFORE IT DETERMINES THE POTENTIAL OUTCOMES OF DEREGULATING THE TELEPHONE RATE STRUCTURE

Although the future of California's telecommunications industry is uncertain, the fact remains that the FCC is prompting states to move away from geographic rate averaging while encouraging competition among telephone service providers. The Act required states to implement deregulation policies by January 1997; however, it did not specify formal deadlines for the removal of competition barriers by state commissions. For this reason, California's commission is waiting for additional guidance from the FCC—expected in November 1999—before the commission begins the official public process of projecting and analyzing the possible impacts of eliminating its rate-averaging policy. Because this process will be complex and time-consuming, telephone customers will not experience the effects of the commission's decisions anytime soon.

In anticipation of future FCC guidance, the commission plans to begin official public proceedings related to wholesale de-averaging in the first quarter of the year 2000. Although it has not begun the proceeding about rate de-averaging, the commission has been working on removing competition barriers. For instance, the commission is in the middle of a proceeding to identify the costs of the elements of local networks that incumbent telephone companies should offer for sale. This and other network processes have been under way since 1997, but the commission has not reached a final decision. Once it completes the process of identifying wholesale costs, the commission anticipates beginning another proceeding to establish wholesale prices that an incumbent telephone company can charge other companies for the use of its existing network.

As part of these proceedings, the commission expects to obtain cost studies, review the studies and other factors related to competition, hold a series of public hearings to elicit testimonial evidence, and, finally, issue a ruling. According to the commission, federal law does not prohibit the elimination of rate averaging as long as states follow standard procedures and show reasonable evidence to support any new rates that are based on cost. Most likely, the evidence will be testimony and analyses gathered from telephone companies, concerned citizens, and commission experts.

The commission could take from 18 months to six years to render its final decisions.

The length of a commission decision process can vary. According to current laws, the commission must complete an official proceeding within 18 months of the initial meeting held between the assigned judge and commissioner. To address FCC guidance for implementing the Act, the commission could hold one proceeding to analyze all the issues. In that case, its decision would be due within 18 months after the proceeding began. On the other hand, the commission can divide complex issues into several different proceedings. Thus, the commission could open four consecutive proceedings to separately analyze wholesale costs, wholesale prices, retail costs, and retail prices. The commission would have 18 months to complete each of the proceedings—or six years total—before it needs to render its final decisions.

CONCLUSION

The federal Act is a major catalyst behind the commission's efforts to increase competition among companies that supply local telephone service. Although the FCC has not yet provided written interpretive guidance that will help states continue to implement the Act's requirements, the commission will soon need to consider dismantling its current policy of geographic rate averaging. At this time, the potential effects of changes in this policy are unknown. However, California's telephone companies and customers will not immediately experience any changes in their rate structures or services as a result of moves toward a more competitive telecommunications market. By the time the commission considers the fate of geographic rate averaging in a competitive environment, many elements of the telecommunications market could drastically change. Advanced technologies that provide better and cheaper telephone access through satellites and cable television lines could minimize the impact of the commission's regulatory decisions. Moreover, if rates rise too dramatically, an increasing number of telephone customers might move toward these alternate technologies and possibly abandon traditional wire line telephone service altogether. ■

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CHAPTER 2

Under Current Policies, Both Rural and Urban Customers Pay Similar Rates for the Same Telephone Services

CHAPTER SUMMARY

Although it is uncertain how future changes and increased competition in the telecommunications industry will affect California, current California Public Utilities Commission (commission) policies allow both rural and urban customers within individual telephone exchanges to receive similar services at comparable rates. Only a limited number, approximately 112,000, of rural Californians living outside telephone exchanges do not have access to the basic and advanced telecommunications services that are generally available to California's other residents. In addition, to provide telecommunications services to their customers, telephone companies use equipment of comparable quality for exchanges located in both rural and urban areas. Overall, under current policies, most Californians have access to telephone services and advanced technologies for reasonable rates.

RURAL AND URBAN CUSTOMERS RECEIVE THE SAME BASIC TELEPHONE SERVICES BUT NOT NECESSARILY THE SAME CUSTOM CALLING FEATURES

As this report's Introduction explains, the commission requires all local telephone companies to supply basic services that include local calling, directory assistance, 911 emergency service, and access to long-distance carriers. Further, each of the 22 local telephone companies offers custom calling services, such as call waiting and call forwarding, for additional fees. However, not all custom features are available from all companies. For instance, Hornitos Telephone Company, which serves Mariposa County, has only four types of custom services available to the nearly 2,500 people living in its rural exchange, or territorial area. However, Pacific Bell, with approximately 2.8 million people living in its rural areas statewide, offers 19 types of optional services. Thus, Californians living in different areas do not have access to the same custom calling services. Table 1 shows the availability of some custom calling features.

TABLE 1

Availability of Various Custom Calling Features Offered by Local Telephone Companies in California

	Number of Companies Offering Feature		
Custom Feature	**Small Companies***	**Midsized Companies***	**Large Companies***
Call Waiting	18	2	2
Call Blocking	16	2	2
Voice Mail	12	2	2
Caller Identification Service	11	2	2

Source: Individual tariffs filed by each telephone company to the commission.

* These categories correspond to the small, midsized, and large telephone companies listed in the Appendix.

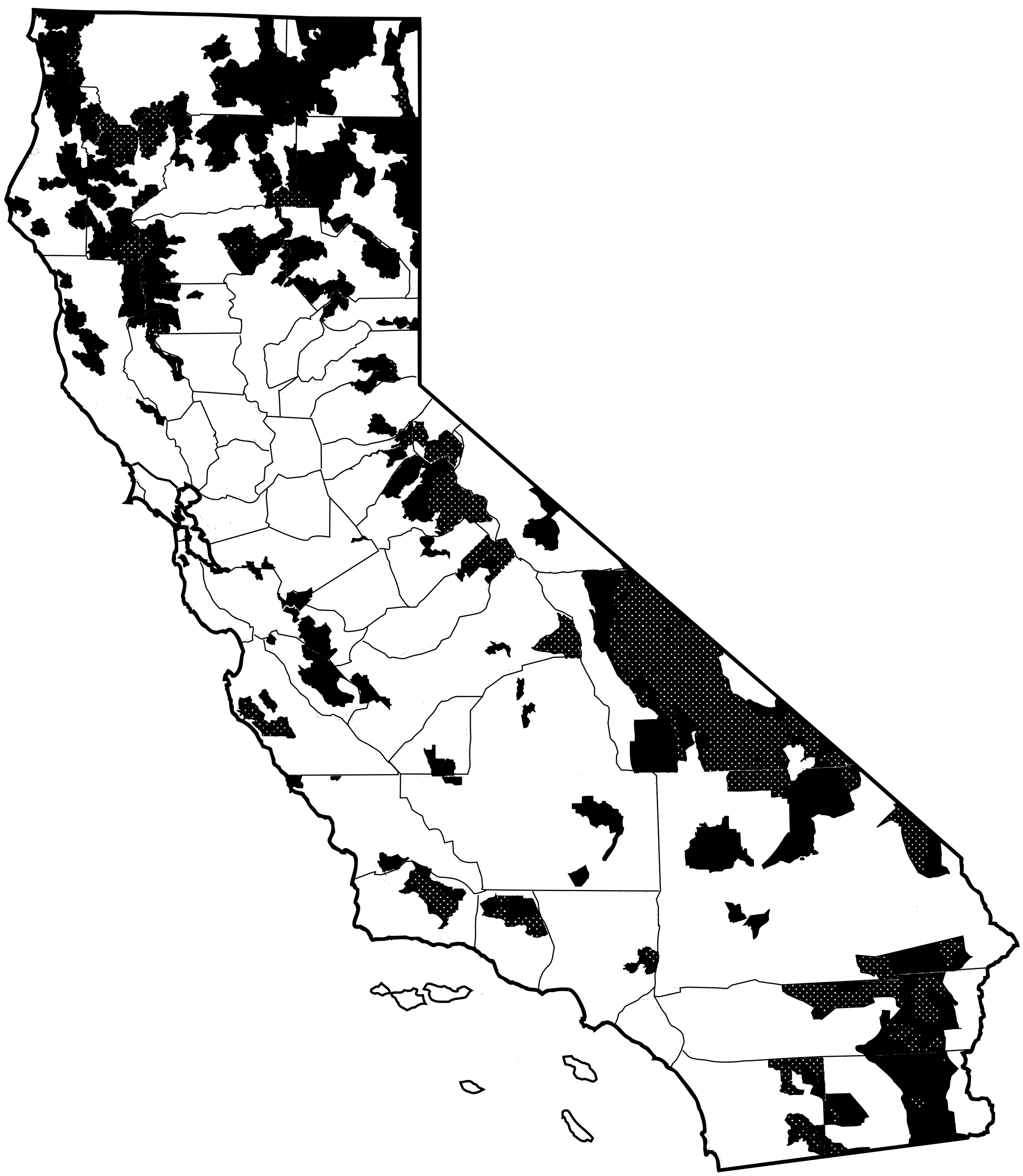
Further, even though the goal of California's universal service policy is the availability of basic telephone service to at least 95 percent of the State's households, no policy or law requires telephone companies to serve people living *outside* their telephone exchanges. As a result, approximately 112,000—or less than 1 percent—of Californians living outside exchanges may not have access to traditional wire line telephone service. These people have to rely on alternate technologies, such as cellular telephones or two-way radios, to place their local calls. As Figure 3 shows, the majority of these people live in rural, often remote, areas.

RATES FOR RURAL AND URBAN CUSTOMERS ARE COMPARABLE

Although rates may vary among companies that offer local telephone service, rates for service provided by the same company must be comparable for all customers. Telephone companies must also file proposed rates in the form of tariffs that the commission reviews to be sure that the rates adhere to

FIGURE 3

Areas in California Where Residents Do Not Have Access to Traditional Telephone Service



Rural-Unserved Areas

Rural-Unserved Areas that are designed as Parks and Wilderness

Source: Vestra Resources, Incorporated, October 18, 1999.

current laws and commission rulings. Additionally, the current system of rate averaging and subsidization, which allows California to achieve its goal of universal service by keeping telephone rates low, helps to ensure that the rates charged to customers in rural and high-cost areas are comparable to rates charged to urban customers served by the same telephone company.

Currently, monthly rates for basic telephone service range from $8.75 for customers of Century Telephone of Eastern Oregon, which serves Modoc County, to $18.90 for customers of Roseville Telephone Company serving portions of Placer and Sacramento counties. If a customer qualifies for one of California's subsidy programs designated for low-income individuals, the applicable rate is $5.34 per month unless the customer lives in an area approved for extended service area fees as defined in this report's Introduction. The Appendix shows the monthly rates charged by the 22 local telephone companies in California.

In addition to charging monthly telephone rates, telephone companies bill customers—except for qualified low-income customers—for various monthly fees and surcharges mandated by federal, state, and local laws. Fees are fixed monthly amounts, while the surcharges and taxes are percentages of the local telephone service rates. Table 2 lists the typical monthly fees and surcharges; however, taxes are not presented because they vary by local government jurisdiction.

TABLE 2

Types of Monthly Telephone Fees and Surcharges

Type of Fee/Surcharge	Amount/Percentage Charged (As of 1999)
Federal Communications Commission Regulatory Fee	$3.50
Deaf and Disabled Telecommunications Program and Telecommunication Device for the Deaf Placement Program Surcharge	0.192%
Universal Lifeline Telephone Service Surcharge*	0.00%
California High Cost Fund – A Surcharge*	0.00%
California High Cost Fund – B Surcharge	3.80%
California Teleconnect Fund Surcharge	0.05%

Source: The California Public Utilities Commission's Universal Service Handbook, December 17, 1998.

* Because these subsidy programs are currently overfunded, the commission did not approve a surcharge to customers for 1999. In 1998, the surcharge percentage for Universal Lifeline was 2.4 percent. In 1996, the most recent year with a surcharge assessed for the High Cost Fund A, the percentage was 0.27 percent.

For the most part, each telephone company charges the same basic rates to all its customers.

For the most part, each telephone company charges the same rates to its customers; however, rates may differ in a few situations. These differences typically occur for one of three reasons: the customer is located in a certain area, or "zone," within an exchange in which the commission has approved higher monthly rates; the customer has established an individualized contract with a telephone company; or the customer lives in an area where a company charges additional fees for extended areas of service. For instance, for a customer with an extended area of service, a slightly higher monthly charge offers a wider calling range at a lower rate than if the customer's telephone company charged at toll rates any calls to locations immediately beyond the individual's standard area of service. For example, although Pacific Bell typically bills its customers $10.69 per month for basic service, customers in its Big Sur exchange pay $17.72 per month for basic service in a larger local calling area.

TELEPHONE COMPANIES GENERALLY CHARGE RURAL AND URBAN CUSTOMERS SIMILAR FEES FOR LINE EXTENSIONS

Like the fees for telephone service supplied by a particular company, the charges for line extensions are usually the same for all customers of that company. Regardless of where they live, the vast majority of customers pay standard rates set by their companies for the line extensions that may be necessary to connect the customers to the local network.

When a resident requests service at a location outside the base rate area where no telephone network exists, the telephone company that serves that resident's exchange will typically extend to the future customer's location the existing telephone lines up to a specified amount of footage. The company then charges the customer for any additional extension of lines necessary to complete the connection. For instance, unless the additional line extends more than 300 feet over private property, a company usually supplies the first 700 to 1,000 feet of line extensions free of charge. After that point, the customer pays either a per-foot charge for all extensions beyond the free footage or a set amount for the next 100 feet of extension and an additional charge per foot for further lines needed. These additional 100-foot fees range from a minimum of $50 to a maximum of $175. Additionally, per-foot charges can range from 50 cents up to the actual costs for each foot of extra line.

Pacific Bell, which serves 67 percent of rural customers statewide, charges $1.04 for each additional foot needed in excess of their 750-foot allowance.

Although line extension charges are usually identical for rural and urban customers of the same company, the actual costs of furnishing traditional telephone service to rural customers may be higher than the service costs for urban customers, who frequently live near existing telephone lines.

Telephone Companies Use Comparable Equipment to Serve Rural and Urban Customers

Part of the intent behind the federal Telecommunications Act of 1996 (Act) was to secure higher-quality services for consumers; however, current California policies already seem to allow telephone companies to use equipment in rural areas that is comparable in type and quality to the equipment operating in urban areas. Needless to say, the type of equipment used by telephone companies plays an important role in determining the quality of service that customers receive.

Even though the telephone companies can employ various types of equipment, most use the latest digital switches. In their central offices, companies supplying local service can use analog or digital switches to route thousands of calls between customers. While analog switches can transmit calls between customers, the more modern digital switches provide faster, higher-quality transmissions.

Since rural companies can receive low-interest federal loans, some may have more state-of-the-art equipment than their urban counterparts.

Interestingly, some rural areas may have more state-of-the-art switching equipment than do some urban areas because the rural companies are eligible to receive low-interest federal loans for upgrading telephone equipment. For example, one telephone company with switching equipment in both rural and urban areas has replaced 97 percent of its analog switches with digital switches. The remaining analog switches serve customers in such urban areas as Los Angeles, San Francisco, and San Diego. Nevertheless, the company plans to replace its remaining analog switches with digital switches by the end of 2000.

From their central offices, telephone companies extend telephone lines made of copper wire, fiber optics, or a combination of both. Copper wire use to be the only means of transmitting telephone signals, but fiber optics is now the medium of choice because of its fast transmission speeds and ability to process a high number of calls simultaneously. Because local networks use millions of telephone lines across the State, we could not compare the types of lines that provide service to rural areas with the urban area lines. Furthermore, most companies typically use a mix of copper wire and fiber optic lines to serve residential customers.

Similar Types of Advanced Technologies Are Usually Available in Rural and Urban Areas

While most Californians have access to ISDN technology, only a handful have access to the most innovative ADSL technology.

The Act encourages states to deploy new technologies rapidly, and California's existing rate structure allows telephone customers access to these advanced technologies. Specifically, both rural and urban customers can access Internet services whether they receive basic telephone services over analog or digital lines. However, in today's information age, increasing numbers of people want more telephone services than these basic lines can provide; many telephone customers want high-speed, advanced communication technologies. The commission shares these desires and hopes that all Californians can enjoy the benefits of state-of-the-art telecommunications technology.

New, highly advanced technologies offer even faster access to Internet services than do standard telephone lines. Specifically, integrated services digital network (ISDN) technology offers higher transmission speeds than analog lines. Moreover, the innovative digital subscriber line (DSL) technology dramatically increases the digital capacity of ordinary telephone lines at transmission speeds even greater than ISDN. In California, most customers have access to ISDN lines, but only a handful have access to a version of DSL known as asymmetrical digital subscriber lines (ADSL). Currently, Pacific Bell serves the majority of customers in California and 67 percent of people living in rural areas. Because it offers both ISDN and ADSL technology to its rural and urban customers for the same rates, customers within Pacific Bell exchange areas may have access to the latest, most advanced telecommunications technology if facilities are available at their location.

Because the technology is new and relatively costly, customers who want ISDN or ADSL services must pay additional fees beyond the monthly telephone rates. Additional monthly fees tend to vary according to the customers' level of use and terms of their telephone company agreements. For example, Pacific Bell charges between $39 and $129 per month for its ADSL service depending on the option (transmission speed) chosen and the length and volume agreement of the service contract. However, the company charges all its customers the same fees regardless of their geographic location. Further, telephone companies often add nonrecurring charges for line extensions, connection fees, and charges for service related to the technology.

In many cases, new technology is introduced based on customer demand.

Although many customers have access to some of the latest technology, these advancements are not universally available. In many cases, companies base their decisions to introduce new technology on customer demand. The telephone companies may conduct reviews of market conditions in order to identify the areas that may be most receptive to pay for a certain service. Further, high-density areas, which are typically urban, are likely to receive the latest technology before low-density areas because companies can justify the cost of their investments. For instance, Ducor Telephone Company has the capability to offer advanced technology to its customers, but the cost is too prohibitive and the demand is not yet strong enough to make the technology an affordable offering. However, the companies that currently do not offer advanced technologies together serve about 45,000, or slightly more than 1 percent of all rural customers. From a market perspective, these companies serve less than half of 1 percent of all California customers.

CONCLUSION

California's current practice of geographic rate averaging allows customers in rural areas to access basic telephone services and advanced telecommunications technologies that are similar to those supplied to urban customers. Even though costs are generally higher for companies that provide these services and technologies to less-populated or rural areas, customers throughout California pay similar rates to receive these services. Moreover, even though a small number of residents may not have access to traditional telephone service, the commission and local telephone companies have achieved California's universal service mission of providing phone service to at least 95 percent of all households in the State. However, the uncertainty surrounding the move toward competition by all participants in the telecommunications market indicates that the rate structure and technology for telephone service—as well as many other aspects of the telecommunications industry—will certainly change in coming years. For this reason, the commission faces significant challenges to reduce any negative effects from changes while ensuring smooth delivery of new telecommunications services.

We conducted this review under the authority vested in the California State Auditor by Section 8543 et seq. of the California Government Code and according to generally accepted government auditing standards. We limited our review to those areas specified in the audit scope section of this report.

Respectfully submitted,

KURT R. SJOBERG
State Auditor

Date: November 16, 1999

Staff: Catherine M. Brady, CPA, Audit Principal
Nasir A. Ahmadi, CPA
Jeana Kenyon
Kathryn Lozano

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APPENDIX

Telephone Company Exchanges, Rates, and Service Area Populations

Following is detailed information, such as monthly rates and population, on the incumbent telephone companies providing local service in California. When a range in the monthly flat rates is presented, the variance is caused by additional fees charged by telephone companies to provide extended areas of service. This slight increase in the monthly rates allow customers to reach more people with their service for less than they would otherwise pay if those calls were local toll calls.

TABLE 3

Basic Exchanges, Rates, and Service Area Population of the Incumbent Telephone Companies in California

Telephone Company	Number of Exchanges	Monthly Flat Rates	Service Area Population Rural	Urban
Small Companies				
Calaveras Telephone Company	2	$10.00 to $10.75	4,497	0
Cal-Oregon Telephone Company	4	$14.85	2,808	0
Century-Tel of Eastern Oregon, Incorporated	1	$8.75	89	0
Citizens Telecommunications Company of the Golden State	11	$16.85	18,781	6,116
Citizens Telecommunications Company of Tuolumne	3	$16.85	9,143	684
Ducor Telephone Company	3	$16.85	3,114	2,031
Evans Telephone Company	5	$16.85 to $20.25	15,349	16,101
Foresthill Telephone Company	1	$7.65 to $18.65	3,465	0
GTE West Coast, Incorporated	4	$16.85	13,447	9,934
Happy Valley Telephone Company	4	$16.85 to $22.00	9,338	0
Hornitos Telephone Company	1	$11.25	2,475	0
Kerman Telephone Company	1	$19.40	10,412	3,717
Pinnacles Telephone Company	2	$12.20	316	0
Ponderosa Telephone Company	8	$16.85	10,496	0
Sierra Telephone Company, Incorporated	3	$16.85	29,181	0
Siskiyou Telephone Company	7	$18.50	8,386	601
Volcano Telephone Company	4	$16.85 to $17.80	12,752	0
Winterhaven Telephone Company	1	$17.50	3,786	0
Subtotal	**65**		**157,865**	**39,184**

Telephone Company	Number of Exchanges	Monthly Flat Rates	Service Area Population Rural	Urban
Midsized Companies				
Citizens Telecommunications Company of California	27	$17.85	78,868	95,354
Roseville Telephone Company	1	$18.90	12,892	159,616
Subtotal	**28**		**91,760**	**254,970**
Large Companies				
General Telephone Company of California	175	$16.85 to $17.25	996,029	6,482,970
Pacific Bell	407	$10.69 to $17.72	2,784,017	22,170,514
Subtotal	**582**		**3,780,046**	**28,653,484**
Totals	**675**		**4,029,671**	**28,947,638**

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Agency's comments provided as text only.

Wesley M. Franklin, Executive Director
Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102-3298

November 10, 1999

Mr. Kurt Sjoberg
State Auditor
555 Capitol Mall, Suite 300
Sacramento, CA 95814

Attn: Katherine Brady, Principal Auditor

Dear Mr. Sjoberg:

Thank you for the opportunity to respond to the report, " California Public Utilities Commission: Its Decisions About Deregulating the State's Telecommunications Industry Will Not Affect Residents Immediately, and the Long Term Effects of Policy Changes Are Unknown". We submit these informal comments on a number of issues raised in the draft and provide some additional focus on California Public Utilities Commission (Commission) proceedings that will implement competition in the telecommunications industry. We concur with the findings contained in the report and will continue to carefully consider rate and service impacts on California residents as we implement new state and federal policies in the next few years.

Introducing competition to California's telecommunications markets has been a policy endorsed by the Legislature and this Commission since the early 1990's. Through a series of decisions aimed at opening local competition the Commission has implemented policies that introduce competitive provider choices to customers and opportunity to telecommunications companies to deploy new technology at market based prices. At the same time, the Commission has significantly revised our universal service policies for a competitive telecommunications market to assure that basic telephone service is available to Californians at affordable rates. Most of California's competitive policies precede or are coincident with the Federal Telecommunications Act of 1996 (TA'96).

Since then, consistent with both state and federal policies, the Commission has opened the local telecommunications market to more than 100 competitive local exchange carriers, approved more than 50 carrier interconnection agreements and set cost standards for the network unbundling mentioned in your report. As you also note, unbundled network element pricing for Pacific Bell is before the Commission for a vote soon.

I want to note some important relationships between the Commission's ongoing proceedings and findings in your report. Although the Commission is required by law to implement wholesale rate deaveraging to comply with Federal Communications Commission policies upheld by US Supreme Court order, this Commission does not have definite plans at this time to consider retail rate deaveraging. The Commission anticipates that a policy order on the wholesale deaveraging issue by the end of 2000. The retail rate deaveraging issue may be considered by further commission initiation or by regulated utility request, possibly by late 2000.

As your report notes, common belief supports the notion that small widely dispersed populations are more expensive to serve than dense urban areas. I want to emphasize however that the Commission has not formally approved any cost studies, which reach this conclusion. I anticipate extensive review and comment before the Commission adopts policies, which would support deaveraged retail rates in California.

We agree with your report observation that considering other aspects of the deaveraging issue, such as retail rate changes that will affect most telecommunications subscribers, will take careful consideration over a longer time period. Guided by recent procedural reform legislation setting time frames for Commission process, the Commission believes that the retail rate deaveraging issue may be considered sooner than the six year extreme case noted in your report.

We also concur with your report's conclusion that customer and company subsidy mechanisms exist to provide affordable rates to all Californians, regardless of where they live. The commission will consider changes to our current universal service mechanisms in light of the competitive developments in the California market and policy changes such as the FCC order to deaverage wholesale rates on 2000. The Commission is also reviewing ratemaking policies for the small telecommunications companies during 2000. Rate stability and affordability will be consideration when the matter comes before the Commission for adoption. The Commission believes that careful consideration of these issues with opportunity for interested party comment can result in policies that are sensitive to subscriber cost and at the same time promote competition.

Thank you for this opportunity to respond in writing to your draft report. I look to working with you on issues of rate deaveraging impact in the future.

Yours truly,

(Signed by: Wesley M. Franklin)

WESLEY M. FRANKLIN
Executive Director

cc: Members of the Legislature
Office of the Lieutenant Governor
Attorney General
State Controller
Legislative Analyst
Assembly Office of Research
Senate Office of Research
Assembly Majority/Minority Consultants
Senate Majority/Minority Consultants
Capitol Press Corps