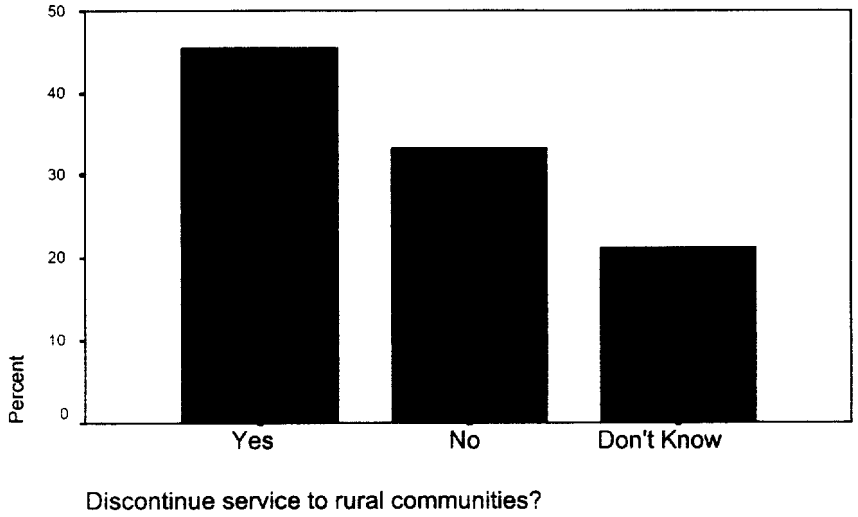
In some sense complete loss of service to a community is the ultimate risk. ISPs were asked if the ISPs "might be unable to continue to offer service" if their CLEC would charge them the termination costs. 45.5% of the ISPs (57.6% of those answering yes or no) indicated that they were likely to discontinue service to some rural communities. The margin of error for this response is plus or minus 12% (plus or minus 13% for the 57.6% of those answering yes or no). In comparison, 33.3% of the ISPs indicated that they would not discontinue service to rural communities and 21.2% did not know what their course of action would be in such an eventuality.

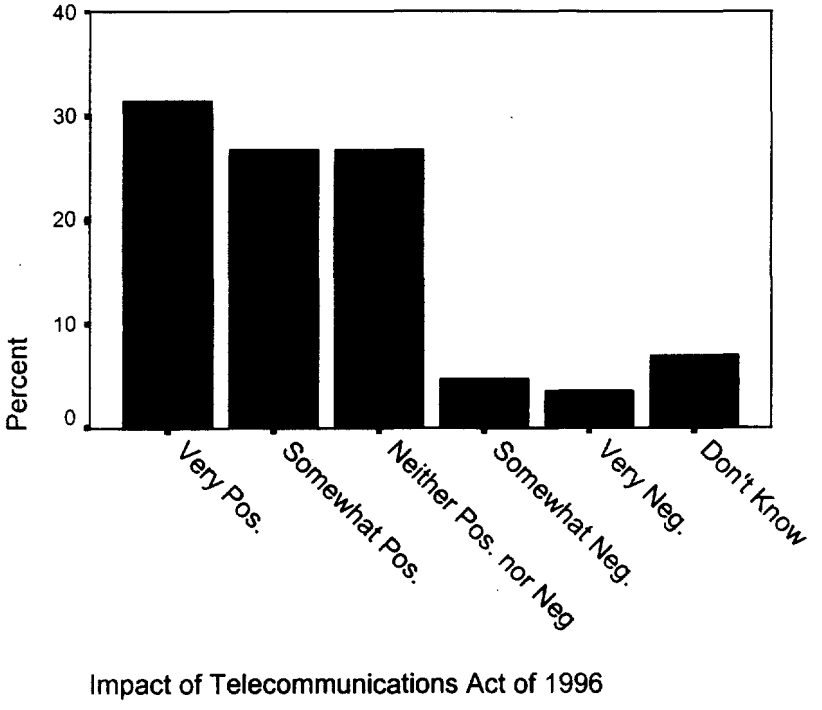
If we ignore the "did not knows," we can be 95% certain that at least 44% (57.6% - 13.4%) of the ISPs served by CLECs think there is risk of discontinuation of service to their rural communities from the ending of reciprocal compensation. Even if we combine all the "did not knows" with the negative responses, we still have 45.5% plus or minus 12%, or a minimum of 33.5% that expect to pass the costs on to consumers. In other words, our lowest estimate is that we can be 95% certain that over one-third of the ISPs served by CLECs think they may drop service to rural communities.

Exhibit 10: Are there any rural communities you think you might be unable to continue to offer service to if your CLEC requires you to pay the cost to terminate calls to your modems?



The final categorical question asked of the ISPs, regardless of whether they served rural areas, concerned their evaluation of the impact of the Telecommunications Act of 1996 on telephone competition. Most (58.1 %) think that the 1996 Act had at least a "somewhat positive" impact. A further 26.1% have a neutral attitude, while a few (8.2 %) consider the Act to have had a negative impact. In other words, more than seven times as many ISPs had a positive view of the Act than a negative view.

Exhibit 11: How would you rate the Impact of the Telecommunications Act of 1996 on local phone competition?

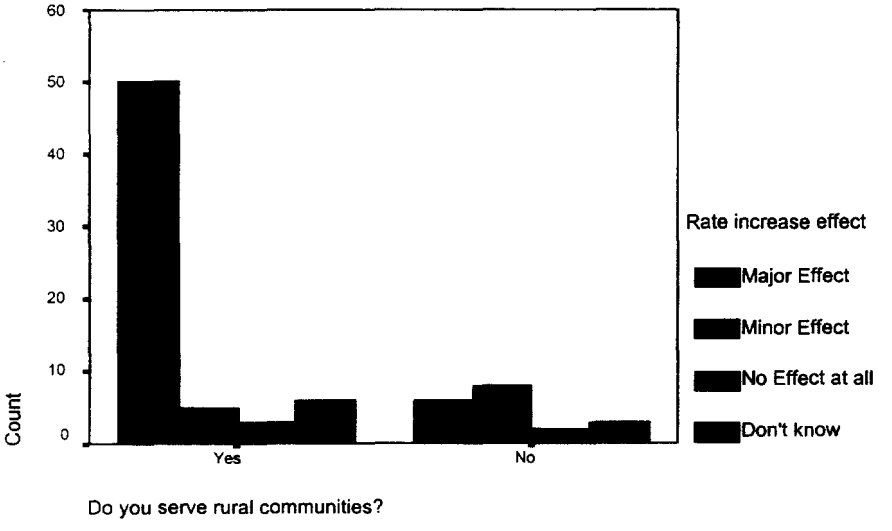


Multivariate Analysis

The survey design allows us to look at subsets of responses and to relate the responses to one question to those of another. This section presents these more complex results.

We start by relating how the ISPs that serve rural communities and the perceived effect of a rate increase. 78% of the ISPs that serve rural communities anticipate a major effect of a rate increase, 7.8% anticipate a minor effect, while 4.7% anticipate no effect at all. In contrast, 31.6% of the ISPs that do not serve rural communities anticipate a major effect while 42.1% anticipate a minor effect and 10% do not anticipate any effect at all. Thus a larger proportion of ISPs serving rural communities anticipate major effects of rate increase. This highlights the differential impact of the end of reciprocal compensation for rural communities.

Exhibit 12: Do ISPs that serve rural communities anticipate more effects of rate increase than ISPs that do not serve rural communities?

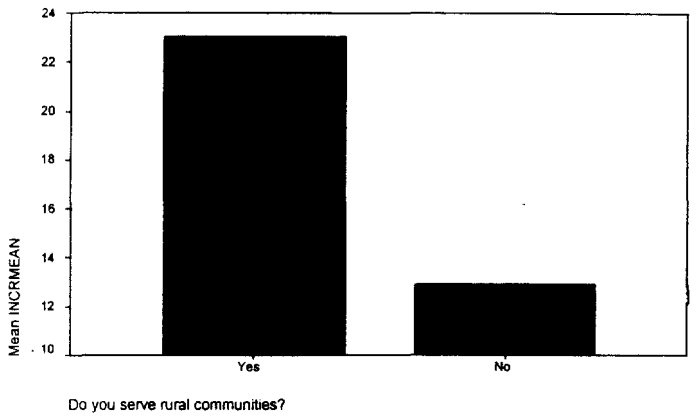


We then examined whether the expected increase in ISP subscription rates was different for those ISPs service rural communities. In order to compute mean rate increase percentages, we recoded the responses to the estimated percentage of rate increase by ISPs according to the table below. We used the mid point of each of the range of rate increase.

Less than 10% = 5%
11 % to 20% = 15%
21 % to 30% = 25%
31 % to 40% = 35%
41 % to 50 % = 45%
More than 50% = 55%

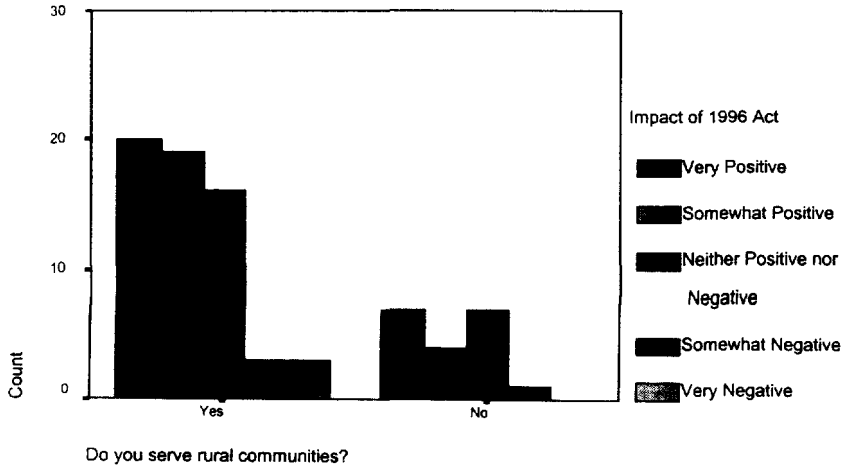
We then used these recoded percentages to compute mean percentage increases for ISPs that serve rural and ISPs that do not serve rural areas. This clearly shows that ISPs serving rural areas are anticipating much higher rate increases than ISPs not serving rural areas. This was verified with an Independent Samples t test ($t = 3.65$, $p = .001$).

Exhibit 13: Are ISPs serving rural areas anticipating larger rate increases than ISPs not serving rural areas



Our last analysis in this set compares ISPs' views of the Telecommunications Act of 1996 with rural coverage. Of the ISPs that serve rural communities, 30.3% believe that the 1996 Act had a very positive impact, 28.8% see a somewhat positive impact, 24.3% see a neither positive nor negative impact and very few (9%) see a negative impact. Of the ISPs that do not serve rural communities 35% see a very positive impact, 20% see a somewhat positive impact, 35% see a neither positive nor negative impact. Thus ISPs serving rural communities seem to have similar perceptions about the impact of the 1996 Act as do those ISPs not serving rural communities.

Exhibit 14: Perceived Impact of Telecommunications Act of 1996 on ISPs that serve rural communities as compared to ISPs that do not serve rural communities.



Open-ended questions

This section presents a summary of the responses to the open-ended questions in the survey. These questions asked the ISPs to identify the communities likely to be affected by the elimination of reciprocal compensation or to face discontinuation of service, and to discuss the impact of local telephone competition on the ISP business.

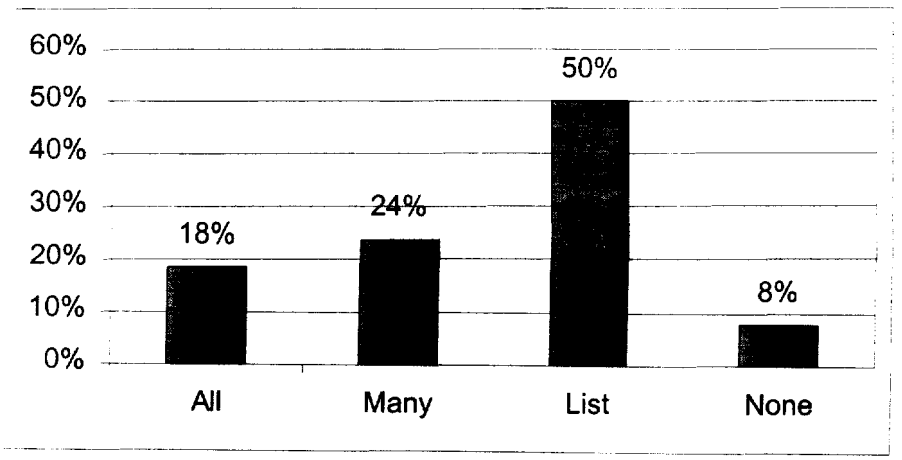
Communities likely to be affected

One set of questions asked the ISPs whether the communities they serve were at risk of paying higher prices than urban communities, being unable to afford internet access costs, paying local toll charges to dial-in to the nearest big city, or having less choice for ISP service. (See Exhibit 7 through Exhibit 9 above.) The follow-up question then asked the respondents which of the rural communities that they served would be exposed to these risks. Useful answers (after dropping answers such as "decline to state") were obtained from 38 of the ISPs. We read each answer and put them into one of four categories:

- The "All" category includes the 7 responses (18% of those responding) with the word "all" in the answer.
- The "Many" category includes the 9 responses (24%) with "many," "most," or "majority" in the answer.
- The "List" category includes the 19 responses (50%) with one or more communities or regions given explicitly.
- The "None" category includes the 3 responses (8%) that stated no rural communities served would be affected or made a similar statement.

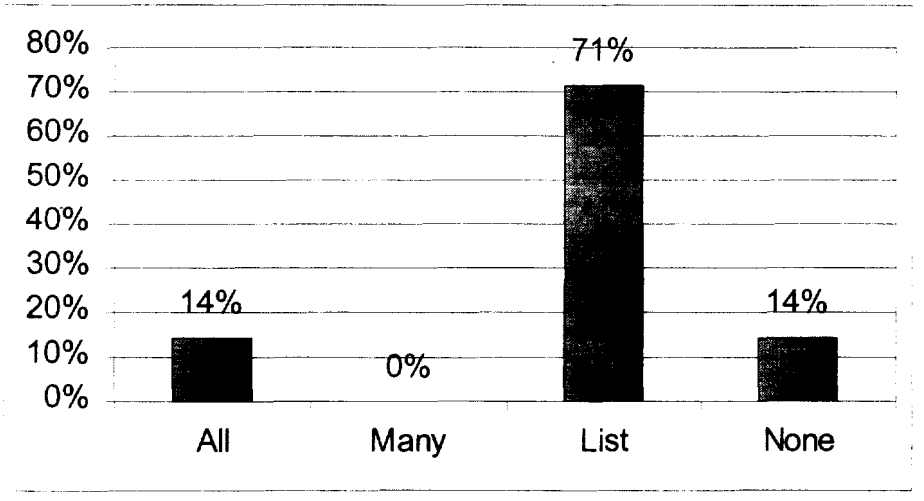
This breakdown of responses is shown in Exhibit 15. There are approximately 75 communities and regions specified by name in the responses. They are listed in Appendix A.

Exhibit 15: Which of the rural communities you serve do you think would be exposed to these risks?



We also asked the respondents if they thought they might be unable to continue to offer service to any rural communities if the CLECs would require the ISPs to pay the cost to terminate calls bound their modems. Of the 30 ISPs who responded positively, 28 provided useful follow-up responses when asked which areas would have service discontinued. We again classified these responses into the four categories used above. The breakdown is that 4 ISPs (14% of those responding) stated they might stop serving all rural areas, 20 (71%) listed one or more specific areas, and 4 (14%) stated none of their areas would face discontinuation of service. None of the responses fit into our "many" category. The breakdown is shown in Exhibit 16. We have listed the approximately 45 communities and regions specified by name in Appendix B.

Exhibit 16: Which rural areas and rural towns would you stop serving?



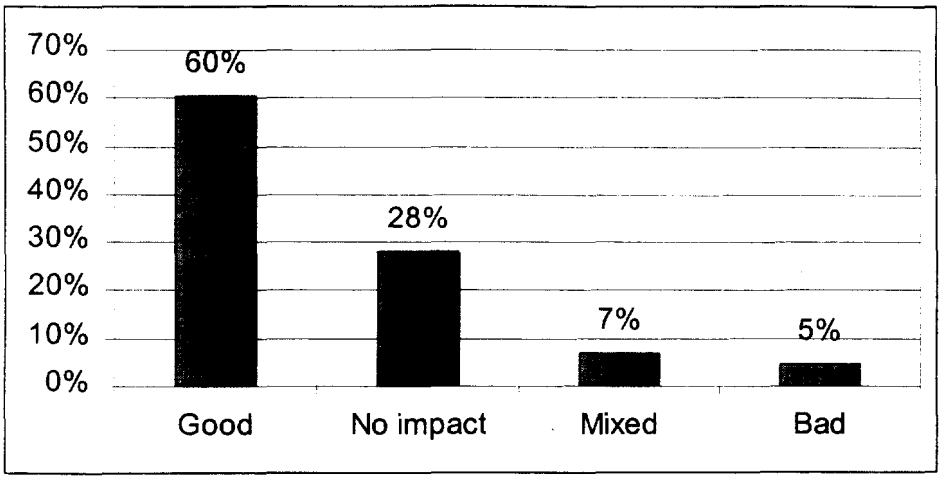
Effects of local telephone competition

The ISPs were asked to assess the impact of the Telecommunications Reform Act of 1996 on local telephone competition, which provided a structured set of responses. (See Exhibit 11.) They were also given the opportunity to describe the impacts of local competition in an open-ended question. We analyzed the 43 responses to the open-ended question and put them into four categories:

- Local telephone competition was good for the ISPs – 26 responses (60% of those responding).
- Local telephone competition had no impact – 12 responses (28%).
- Local telephone competition had mixed impact – 3 responses (7%).
- Local telephone competition had a bad impact – 2 responses (5%).

This breakdown is shown in Exhibit 17 and should be compared to Exhibit 11. It should be pointed out that some ISPs feel that there isn't any effective competition in California.

Exhibit 17: Impact of local telephone competition in California on your business



DISCUSSION AND CONCLUSIONS

There are several conclusions that one can draw from the survey responses. We believe that the two most interesting are:

(1) Over 45% of the ISPs that serve rural communities stated that they might need to discontinue service to rural communities. (Exhibit 10; this is 57.6% of those answering yes or no to this question.)

(2) The ISPs both expected that rural communities might face other service problems (increased costs, less choice, etc.) and could distinguish among these. (Exhibit 7 through Exhibit 9)

There were several other important findings:

- Over 76% of the ISPs stated that they would pass on to consumers the increased costs that would result from the end of reciprocal compensation. (Exhibit 3; this represents 86% of those responding yes or no to this question.)

- The most common estimate of increased rates was between 21 and 30 percent, and 15.5% of the ISPs estimated the rate increase would be greater than 30 %. (**Exhibit 4**)

- More than seven times as many ISPs thought the effects of the 1996 Telecommunications Act were positive than thought it was negative. (Exhibit 11)

- ISPs that serve rural communities are anticipating a significantly higher increase in their rates to consumers if reciprocal compensation is ended than are the ISPs that did not provide rural service. (Exhibit 13)

We believe that the survey results accurately reflect the views of California's ISPs. They understand the issues related to the possible end of reciprocal compensation and are able to foresee the negative effects on both their business and on the communities they serve. These negative effects will be especially strong in the rural areas of the state; competition among ISPs will decline and the cost of Internet access can be expected to increase. Some communities face the complete loss of local access to the Internet.

APPENDICES

Appendix A: At Risk Rural Communities

ISPs report that the following rural areas are at risk of
Paying higher prices, being unable to afford Internet access, paying local toll charges, having less choice of ISPs

County	All rural areas served	Most/majority	Central Valley	Northern CA	Riverside	San Joaquin
Cities (area code)	9	3	1	3	Hemet (909) Idyllwild (909) Nuevo (909) Blythe (760) Palm Desert (760) Riverside (909) Joshua Tree Area (760) Temecula-2 (909) Sage (909) Auguanga (909) Anza (909) Whole County-6 (909)	Lodi-3 (209) Whole county-2
County	Inyo	San Diego	Imperial	Yuba	Glenn	Tahema
Cities (area code)	Bishop-2 (760, 707) Whole county (760, 707)	Ramona (760) Fallbrook (760) Alpine (760) Borrego Springs (760) Whole County (619, 760)	Whole county (760)	Camptonville (530)	Willows (530) Anderson (530)	Whole county (530)
County	San Bernardino	Marin	Merced	Madera	Napa	Humboldt
Cities (area code)	Whole county-5 (909, 760)	Whole county (415)	Merced (209)	Madera (559, 209) Chowchilla (559)	Whole county (707)	Whole county-3 (707)
County	Mono	Placer	Siskiyou	Lassen	Humboldt	Ventura
Cities (area code)	Mono Lake (760) Whole county (760)	Tahoe (530) Truckee (530, 916) Lincoln (916)	Weed (530)	Susanville (530)	Fortuna (707) Whole county (707)	Ventura (805) Thousand Oaks (805) Camarillo (805) Whole county-2 (805)

County	Mendocino	Kern	Catalina Island	Monterey	San Luis Obispo	Solano
Cities (area code)	Whole county (707)	Bakersfield (661, 805) Wasco (661) Whole county-2 (661, 805)	Whole island (310)	Parkfield (831) Whole county (831, 408)	Whole county (805)	Dixon (707)
County	Colusa	Sonoma	El Dorado	Tuolumne	Sacramento	Los Angeles
Cities (area code)	Colusa (530) Williams (530) Maxwell (530) Arbuckle (530) College City (530) Grimes (530)	Whole county-3 (707)	Whole county (530)	Yosemite Valley (209)	Galt (209) Elk Grove (916)	Calabasas (818)
County	Santa Barbara	Fresno	Contra Costa	Modoc	Shasta	Yolo
Cities (area code)	Santa Barbara (805) Montecito (805)	Whole county (559, 209)	Oakley (925) Brentwood (925) Antioch (925) Some of Concord (925)	Alturas (530)	Redding (530, 916)	Winters (530)

Appendix B: Endangered Rural Communities:

ISPs report they will discontinue service to the following areas if reciprocal compensation is repealed

County	All	Riverside	Colusa	Ventura (805)	Los Angeles
Cities (area code)	5	Idyllwild (909) Banning (909) Beaumont (909) Hemet (909) Sun City (909) Lake Elsinore (909) Canyon Lake (909) San Jacinto (909) Murietta (909) Temecula (909) Palm Desert (760) Whole county - 6	Arbuckle (530) College City (530)	Whole county - 2	Lancaster (661, 805)
County	San Berdardino	Kern	Amador	Humboldt	San Diego
Cities (area code)	Victorville (760) Crestline (909) Big Bear (909) Joshua Tree (760) Baker (760) Redlands (909) Whole county - 3	Mojave (661, 805) Bakersfield (661, 805) - 2 Whole County - 2	Jackson (209)	Petrolia (707) Bridgeville (707) Whitehorn (707) Shelter Cove (707) Weott (707) Rio Dell (707) Fortuna (707) Eureka (707) Arcata (707) Whole county	Borrego Springs (760) Fallbrook (760) Ramona (760) Alpine (760) Whole County - 1
County	Imperial	Mendocino	Sonoma County	San Louis Obispo	San Joaquin
Cities (area code)	Imperial (760)	Whole County	Whole County	Whole County	Whole County