ATTACHMENT C

Staff Report to the California Legislature

Affordability of Basic Telephone Service

Pursuant to Senate Bill 780 (Chapter 342, Statutes 2008; amending Public Utilities Code § 739.3 and adding § 275.6), introduced by Senator Wiggins and coauthored by Senators Cox and Kehoe

Respectfully Submitted
September 30th, 2010

Memorandum

The report was prepared by staff of the Communications Division (CD): Senior Regulatory Analysts Felix Robles and Simin Litkouhi, under the supervision of Sazedur Rahman, Program and Project Supervisor; Robert Wullenjohn Program Manager; and CD Director Jack Leutza. Regulatory Analysts Jonathan Boisseau, Kevin Feizi, and Richard Maniscalco also contributed to the project. The report presents our analysis of the findings from the basic telephone affordability surveys required by Senate Bill 780 and ordered by Commission Decision (D.) 08-09-042. We have posted the full three volume report at the Commission's website: www.cpuc.ca.gov/PUC/telco.

TABLE OF CONTENTS

I. Introduction 1
II. Survey Findings and Analysis 1
A. General Findings 1
B. Affordability 2
C. Income 6
D. Features and Services 8
E. LifeLine 9
F. California High Cost Fund-B 11
G. Wireless 13
H. Price Sensitivity and Risk 15
I. Noncustomers 19
III. Methodology 19
IV. Conclusions 21

I. Introduction

In 2008, the state Legislature (in SB 780) directed the California Public Utilities Commission (Commission) to complete by July 1, 2010 a telephone service affordability survey of customers and noncustomers who reside in areas funded by the California High Cost Fund-B (CHCF-B). Additionally, the Commission then issued ordered in D.08-09-042 a statewide affordability survey to be completed by June 30, 2010, to gather information on which to base its future telephone regulation policies. This report combines analysis of the CHCF-B and statewide surveys.

The Commission's Communications Division (CD) staff managed a contract with San Francisco State University's Public Research Institute (PRI) to conduct the surveys, and, in collaboration with PRI, designed the surveys administered by PRI's staff of professional interviewers, with the resulting data used in this report.

The detailed survey findings are assembled into three reports: Volume 1, *"Statewide Telephone Survey of California Households"*; Volume 2, *"Telephone Survey of Landline Customers in California High Cost Fund-B (CHCF-B) Areas"*; and Volume 3, *"Mail Survey of Households without Landline Service"*. Addendums and technical appendices include the respective survey questionnaires and customer response frequency tables. Due to the size of these volumes, we have not attached them to this report. They are posted on the Commission's web page at: http://www.cpuc.ca.gov/PUC/Telco/generalInfo/CPUC+Reports+and+Presentations.htm.

II. Survey Findings and Analysis

A. General Findings

In this report we conclude that the average California household telephone bill as reported in the 2010 affordability surveys, adjusted for inflation, has not changed significantly from the prior 2004 survey. We also find that the LifeLine program has helped customers by reducing their average voice communications expenditures relative to non-subscribers of similar income status. Given that both the CHCF-B and the statewide Lifeline program contribute to landline subscribership, both programs continue to demonstrate merit as currently constituted, but perhaps diminishing in relevance given the increase in service alternatives.

The Commission's universal service guiding principles recognize the necessity of affordable service rates to achieve the telephone subscription goal of 95%.[1] The last

[1] Decision 96-10-066 established a universal service goal of 95% statewide phone subscribership.

reported California subscribership rate is over 96%.[2] Never-the-less, rate affordability remains a concern, especially given current economic conditions or relatively high unemployment. The statewide and CHCF-B surveys report the level of tolerance for rate increases and in particular the CHCF-B survey reveals the percentage of households at risk of losing phone service should rates increase above their affordability threshold. The Commission can use this study to help assess the most vulnerable populations at risk and in conjunction with the Commission's Annual Subscribership Report to the Legislature identify demographic groups and areas of the state where the 95% subscribership goal has not been met. Further, the three reports (statewide and CHCF-B customer and non-customer) indicate a growing acceptance and use of wireless, VoIP and broadband services as a complement and/or substitute for traditional landline telephone service. We conclude that both the CHCF-B and the statewide LifeLine programs contribute to phone subscribership by maintaining affordable service, and some form of these programs should continue, though any programmatic policy changes should recognize the availability and relevance of alternative services.

On January 1, 2011, the rate cap will be lifted for the largest California basic service providers. It can be expected that if service providers continue a practice of providing statewide rates that the removal of the price cap would likely result in only small to moderate rate increases. However, should carriers implement basic rate de-averaging within their respective service territories to reflect costs specific to different geographical service areas, significant rate increases could have an effect on customers deciding to discontinue landline service, and potentially affect the rate of phone subscribership.

B. Affordability

In the 2010 statewide affordability survey, 71% of the respondents found their monthly landline bill affordable. The survey asked "Is your monthly bill affordable or not affordable?" The 2004 survey asked respondents: "Generally speaking, is telephone service very easy for you to afford, somewhat easy, somewhat difficult or very difficult for you to afford?"[3] Eighty one percent of the 2004 respondents indicated that their bills were either very easy or somewhat easy to afford. Due to these differently worded affordability questions for the respective surveys, caution should be used comparing the two.[4]

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[2] As of July 2009, 96.6 percent of all households in California had some form of telephone service – circuit switched landline, wireless or Voice over Internet Protocol. *See* CPUC Residential Telephone Subscribership Report to the Legislature, 2009, P.1.

[3] Field Research Corporation Affordability of Telephone Service 2004 Customer Survey Questionnaire, Technical Appendix C, Q.9 and Volume 1, Table 5.1A.

[4] Future surveys should reconsider use of the prior question of affordability. Though, difficult to afford is technically still affordable, providing a range of options may provide a more accurate response than a Yes or No question.

In Table 1, statewide survey responses indicated a weighted mathematical mean (or average) monthly phone bill of $68.53 and a weighted median bill of $50.00 for all carriers *for landline services*.[5]

Table 1
Comparing 2010 Affordability Survey Data to 2004 Field Research Survey, Total Monthly Phone Bill

	Verizon	AT&T	Weighted Average, Verizon and AT&T	Weighted Average, All Carriers, 2010
2004 Mean	$78.00	$66.00	$69.00	
2004 Mean, Adjusted for inflation; CPI index	89.70	75.90	79.35	
2010 Mean	**$75.46**	**$59.11**	**$62.38**	**$68.53**
Mean % Change from 2004	**-16%**	**-22%**	**-21%**	
2004 Median	$50.00	$44.00	$46.00	
2004 Median, Adjusted for inflation; CPI index	$57.50	$50.60	$52.90	
2010 Median	**$58.02**	**$47.00**	**$49.20**	**$50.00**
Median % Change from 2004	**1%**	**-7%**	**-7%**	

The majority of respondents were AT&T California (AT&T) and Verizon California Inc. (Verizon) landline customers, and their weighted mean and median monthly phone bills were $62.38 and $49.20 respectively. AT&T customer data resulted in a higher $59.11 mean and $47.00 median, while Verizon customer data resulted in a $75.46 mean and $58.02 median. (Vol. 1, 2.8).

Staff compared these results against a 2004 affordability survey conducted by Field Research Corporation (Field).[6] Field collected its data from SBC Communications, Inc. (SBC is now AT&T) and Verizon customers, the sum of which reported monthly bills that equaled a weighted mean and median of $69 and $46, respectively.

In comparing data while adjusting for inflation,[7] AT&T and Verizon's weighted average mean and median landline phone bills decreased by approximately 21% and 7 % during the six-year span between 2004 and 2010. AT&T's mean and median phone bills

[5] Median costs—the monthly cost of the middle household within a range of households ranked from lowest to highest costs—tend to be lower than mean (the mathematical average) costs. This is because these landline phone bills comprise a skewed distribution, with a small group of customers reporting higher monthly bills, pulling the mean above the median. The median is therefore a better guide to observing monthly bill amounts of the average household.
[6] Field Research Corporation "Affordability of Telephone Service" Survey, March 2004; (table 2.3a)
[7] Comparisons are based on Consumer Price Index data, issued by the U.S. Department of Labor, Bureau of Labor Statistics; updated August 13, 2010. ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt

decreased by 22% and 7% respectively; Verizon's mean and median phone bills decreased by 16% and increased slightly by 1% respectively (Vol. 1, 2.8).

Statewide, Table 1 data indicates that mean and median monthly landline phone bills for the majority of customers have decreased when adjusting for inflation over the past six years. Reduction in the median bills between the 2004 and 2010 surveys could be attributed to customers whose bills in 2004 included extra service features which contributed to a higher median bill, but who have since migrated from landline subscribership to alternative voice communications services, contributing to a shrinking base of the landline customers. Additionally, increased customer substitution of wireless minutes-of-use for measured toll and long distance service toll calls is another factor that may have contributed to a reduction in landline bills between 2004 and 2010.

Table 2 incorporates data from all customers contacted in the statewide survey, and shows the mean and median bills for all of the largest carriers, while also including data grouped from the smaller ILEC and non-ILEC providers.

Table 2
2010 Total Monthly Phone Bill for all Service Providers[8]

Average Cost	Comcast	Time-Warner Cable	Cox Communications	Verizon	AT&T	Other ILEC Providers	Other Non-ILEC Providers	Overall
Mean	$119.80	$114.59	$98.26	$75.46	$59.11	$57.16	$51.04	$68.53
Median	$130.00	$121.93	$99.61	$58.02	$47.00	$40.00	$33.92	$50.00

Note that the overall mean ($68.53) and median ($50.00) monthly bills when considering all carriers are slightly higher when comparing 2010 numbers against the combined AT&T and Verizon weighted mean ($62.38) and median ($49.20) monthly bills shown in Table 1, above (Vol. 1, table 2.8).

Table 3 demonstrates perceived affordability of customers by age group. The statewide survey finds that approximately 71% of all customers say their landline service bill is affordable (Appendix B, P.19, Q6 Frequency Table). Customers over the age of 40 are about twice as likely as the younger customers to find their landline service not affordable (34% vs. 16%), (Vol. 1, 4.2).

The mean and median monthly billed amounts for CHCF-B customers are $73 and $55 (Addendum, table A.1 and Table 9). The majority of CHCF-B customers (80%) find their landline bill to be affordable (Appendix B, P.94, Q10 Frequency Table). Unfortunately, the CHCF-B survey analysis does not include a cross-tabulation with the age factor.

[8] "Total Monthly Phone Bill" represents landline, digital or Voice over Internet Protocol (VoIP) service, which may include broadband service. It does not include the cost of television service.

Table 3
Statewide and CHCF-B Comparison of Monthly Bill Affordability by Age Group

	Age of Respondent				
	18-29 years	30-39 years	40-59 years	60 years and older	Overall
	%	%	%	%	%
Statewide Affordability	84	70	66	72	71
CHCF-B Affordability	n/a	n/a	n/a	n/a	80

Further questions regarding CHCF-B customers' risk of discontinuing landline service revealed that only 1.6% of customers may forgo phone service entirely under economic pressure (Vol. 2, 6.1 through 6.5). The factors defining "high risk for doing without phone service" are income eligibility level for LifeLine service, lack of access to a wireless phone, and a self-assessment that current basic phone costs as "not affordable" (Vol. 2, p. 158).

Table 4 demonstrates how the risk of discontinuing all phone service is represented demographically. The percentage risk of having to discontinue service is highest for Latinos at 3% (Vol. 2, 6.1). The highest risk for age groups is the 18 to 29 category at 2.4% (Vol. 2, 6.2), and the highest risk for income category is those who earn between $24,001 and $34,000 at 4.4% (Vol. 2, 6.3). All of these demographic subcategories have a disproportionately higher risk of having to discontinue phone service.[9]

Table 4
CHCF-B Customer Risk of Discontinuing Landline Service Measured by Various Demographics

Demographic Category	Demographic Subcategory and Associated Risk %						
By Race/Ethnicity		White	African-American	**Latino**	Asian or Pacific Islander	American Indian	Overall
%		1.3%	0.2%	**3.0%**	0.2%	1.3%	1.6%
By Age Group			**18-29 years**	30-39 years	40-59 years	60 years and older	Overall
%			**2.4%**	1.3%	2.0%	1.0%	1.6%
By Income	$24,000 or Less	**$24,001-$34,000**	$34,001-$39,800	$39,801-$50,000	$50,001-$75,000	Over $75,000	Overall
%	1.1%	**4.4%**	0.8%	1.2%	1.6%	0.3%	1.6%

Table 5 shows that over 50% of the customers in CHCF-B areas stated fees, taxes and surcharges as the main factor that makes it difficult to afford landline service. Note that

[9] We return to this subject in Section H, "Price Sensitivity and Risk".

in Table 5, CHCF-B respondents were allowed to cite more than one reason as a contributing factor making it difficult to afford landline service. Further, fee, taxes and surcharges and the cost of long-distance are reported as factors affecting affordability more than the rate of local service itself. (Vol. 2, 5.27).

Table 5
CHCF-B Customer Reasons why Landline Service is Difficult to Afford

Contributing Factor	**Fees, Taxes, and Surcharges**	Cost of Long Distance	Local Phone Service	Extra Services	Talk Too Long/Too Many Calls	Other People
% Response	**54%**	33%	27%	26%	15%	12%

Table 6 lists fees, taxes and surcharges that are common to all monthly bills, comparing 2004 and 2010. Note that state-imposed fees, taxes, and surcharges are based on the end user's ***intra****state* portion of their bill; likewise, the federal Universal Service Fund charge is based on the ***inter****state* portion of the end user's bill. For both years, the percentage of total additional charges based on the bill is substantial. Table 6 does not include Individual city and/or county UUT rates that range from 2% to 10% (typically falling within the 5% to 6% range) as they are not uniform for all monthly bills.

Table 6
Fees, Taxes, and Surcharges, by % of Monthly Bill

Year	**State**							**Total State Charges**		**Federal**
	ULTS (LifeLine)	**DDTP**	**CHCF-A**	**CHCF-B**	**CTF**	**E-911**	**PUC Users Fee**			**Universal Service Fund Charge**
2004	**1.10%**	**0.3%**	**0.17%**	**2.20%**	**0.16%**	**0.65%**	**0.11%**	**4.69%**		**8.9%**
2010	**1.15%**	**0.2%**	**0.11%**	**0.45%**	**0.08%**	**0.50%**	**0.18%**	**2.67%**		**12.9%**

C. Income

Table 7 and Table 8 (Section D. Features and Services) indicate that the most reliable statewide predictors of higher monthly phone bills are 1) household income strata and 2) the number of service features to which a customer subscribes. Table 7 compares mean and median phone bills by annual household income, and shows that in the two highest annual income strata ($50,001-$75,000 and over $75,000), the respective mean and median are virtually the same at about $92 and $75, well above the overall mean and median response at $68.53 and $50 (Vol. 1, 2.10b).[10]

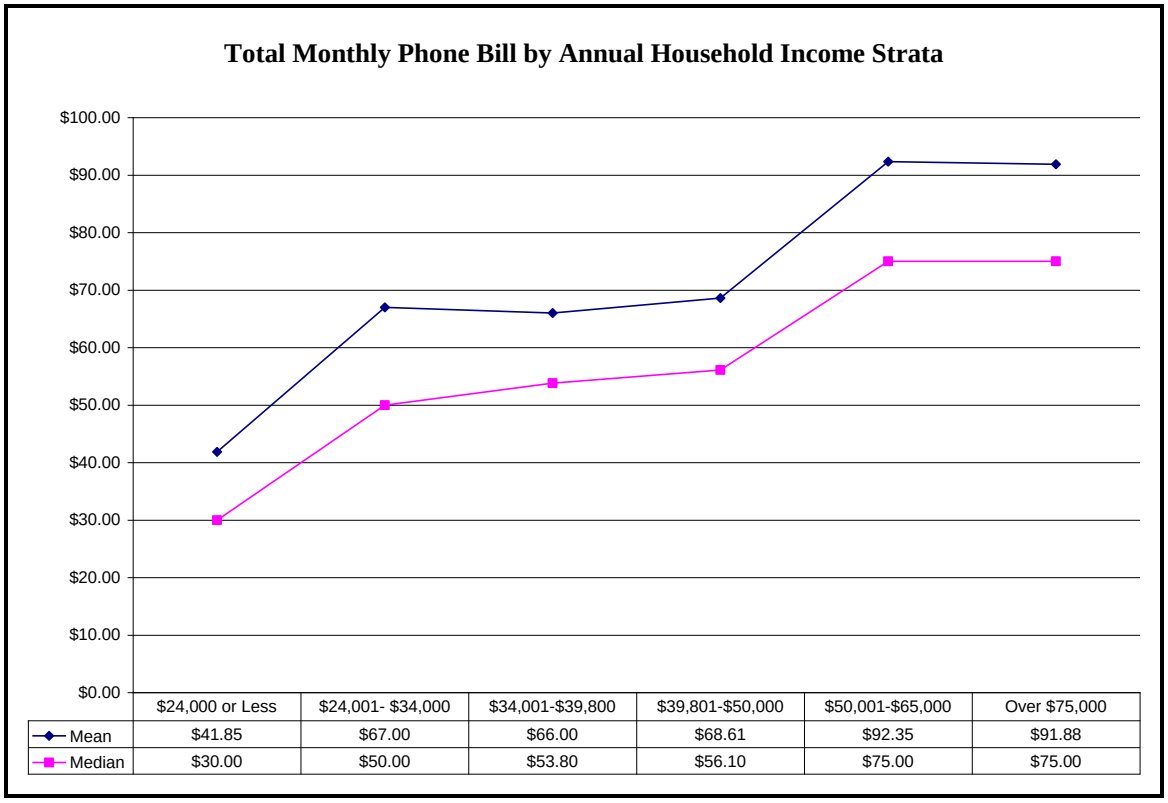
[10] This information was gathered for the statewide survey; the CHCF-B survey gathered income-stratified data for various purposes, but did not measure mean and median monthly phone bill data based on income strata.

Table 7
Total Monthly Phone Bill by Annual Household Income Strata, 2010

	$24,000 or Less	$24,001-$34,000	$34,001-$39,800	$39,801-$50,000	**$50,001-$75,000**	**Over $75,000**	**Overall**
Mean	$41.85	$67.00	$66.66	$68.61	**$92.35**	**$91.88**	$68.53
Median	$30.00	$50.00	$53.80	$56.10	**$75.00**	**$75.00**	$50.00

Chart 1 shows that affordability rises quickly at income levels above $24,000, levels off in the combined $24,001 to $50,000 income levels, and then rises again in the combined levels above $50,000.

Chart 1



Statewide, the percentage of landline only service households decreases dramatically as household income increases (Vol. 1, 1.8). Use of wireless, Internet or Voice over Internet Protocol (VoIP) as an alternative to landline service increases with income (Vol. 1, 5.4c). 28% of CHCF-B respondents have household income over $75,000; 25% have household income of $24,000 or less (Vol. 2, 1.3).

The percentage of landline only service households is inversely related to income. Lower income strata tend to have a higher percentage of households that subscribe only to landline service; higher income strata tend to have a higher percentage of households that subscribe to both wireless and landline service. The lowest annual income strata ($24,000 or less) has the highest percentage of customers who subscribe only to landline service at 34%, and the highest income strata (over $75,000) has the highest percentage of customers who subscribe to both landline and wireless at 82%.

D. Features and Services

Table 8 compares mean and median phone bills based on the number of additional service features subscribed to by a customer.[11]

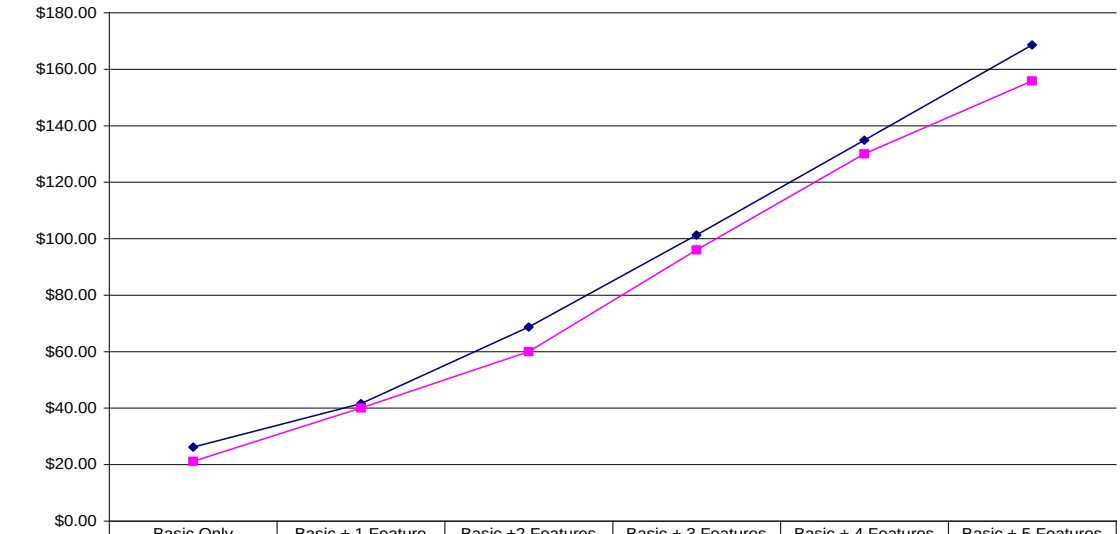
Table 8
Total Monthly Phone Bill by Number of Features and Services, 2010

Number of Features and Services in Addition to Basic Service							
	Basic Only	Basic + 1	**Basic + 2**	**Basic + 3**	**Basic + 4**	**Basic + 5**	**Overall**
Mean	$26.17	$41.58	**$68.73**	**$101.29**	**$134.87**	**$168.59**	**$68.53**
Median	$21.16	$40.00	**$60.00**	**$96.00**	**$130.00**	**$155.79**	**$50.00**

The largest percentage increase for the mean occurs between subscribing to basic service plus one feature and adding a second feature. For the median, the largest percentage increase occurs between subscribing to basic service plus two features and adding a third feature. A doubling of average and mean bills occurs quickly as features are added. Chart 2 below shows that the increase in bills remains fairly steep and constant as more features are added (Vol. 1, 2.10e).

[11] Additional features may include caller ID, call blocking, call forwarding, call waiting, conference calling, voice mail, etc. Services may include broadband, digital subscriber line, toll calling, long distance, etc.

Chart 2



	Basic Only	Basic + 1 Feature	Basic +2 Features	Basic + 3 Features	Basic + 4 Features	Basic + 5 Features
Mean	$26.17	$41.58	$68.73	$101.29	$134.87	$168.59
Median	$21.16	$40.00	$60.00	$96.00	$130.00	$155.79

E. LifeLine

Table 9 compares mean and median phone bills for those who qualify for and subscribe to LifeLine, and those who qualify and do not subscribe, against the statewide mean and median.

Table 9
Total Monthly Phone Bill for Landline Service Reported by LifeLine Status, 2010

	All Households	Qualify for LifeLine	**Qualify and Subscribe**	**Qualify and Do Not Subscribe**
Mean	$68.53	$45.57	**$38.25**	**$58.44**
Median	$50.00	$31.85	**$29.10**	**$40.00**

The statewide data shows that those who qualify and subscribe to LifeLine report monthly mean and median phone bills of $38.25 and $29.10 respectively, while data for those who qualify for LifeLine but for some reason *do not* subscribe, indicate mean and median phone bills of $58.44 and $40, compared to an overall mean and median of $68.53 and $50 per month. Clearly, LifeLine subscription provides benefits in the form of lower bills. The difference between the subscriber and qualified-non-subscriber mean is $20.19 and for the median is $10.90. It is most appropriate to compare these two groups as the income attribute is constant via the qualification standard. However, the

most relevant number for comparison between them is the $10.90 difference in median rather than the mean, as the median reflects the middle number within a range of numbers (Vol. 1, 2.7).

LifeLine subscription benefits those who qualify for this service as reflected by the mean and median amounts of those respondents in lower income strata. The difference between the LifeLine qualified and subscribed to versus all households reflects an income affect. We can expect those in lower reported income strata limiting the amount of their bills by foregoing service features or subscribing to a limited number of service features while qualifying and subscribing to LifeLine service (Vol. 1, 2.7, and Table 7).

The statewide survey indicated that 54% of customers have heard of LifeLine (Vol. 1, 2.11). LifeLine program awareness varies by landline provider. Knowledge of LifeLine is higher for households served by ILECs (Vol. 1, 2.16).

Statewide, the lower the income, the higher the percentage subscribership to LifeLine, as can be expected since program eligibility is tied to income (Vol.1, 1.8). Overall, 49 % of LifeLine subscribers also subscribe to wireless service (Vol. 1, 1.8). Among all LifeLine-eligible households, 51 percent are current LifeLine subscribers (Vol. 1, 2.3).

LifeLine subscribers are much less likely to have wireless service in the household (49%) than customers overall (82%) and qualified non-subscribers (79%), (Vol. 1, p. iv). Older respondents are much more likely than other groups to report being in a landline-only household, among both LifeLine and non-LifeLine subscribers (Vol. 1, 1.9). Statewide, the highest proportion of LifeLine qualified households is among Latinos, at 56 percent; and the lowest proportion of LifeLine qualified households is among non-Latino whites, at 22 percent. Latinos who are eligible and subscribe to the LifeLine service are a little over half of total Latino population (Vol. 1, 2.2).

Tolerance for basic service increases among LifeLine subscribers is lower than for non-LifeLine subscribers. When asked to report the increase threshold that customers might tolerate while still retaining landline service, LifeLine customers report tolerable increases of around $10 to $15 dollars. LifeLine customers generally report tolerable increases for all service features anywhere from 50% to 60% of what non-LifeLine customers report (Vol. 1, 5.1b, 5.1d, 5.1f, and 5.1h); 73% of LifeLine subscribers and 64% of qualified non-subscribers feel their landline service is affordable (Vol. 1, 4.1).

Those who subscribe to landline service only are more likely to subscribe to LifeLine service. Among those in the lowest income groups, 53% of statewide and 65% of CHCF-B customers in the below $24,000 annual household income level subscribe to LifeLine; in the $24,001-$34,000 income group, the respective statewide and CHCF-B subscription rates are 32% and 42% (Vol. 1, 2.3, Vol. 2, 2.5).

F. California High Cost Fund-B

For the first time, a separate survey gathered data from customers that reside specifically within CHCF-B areas. There is no previous CHCF-B billing data against which to compare present billing data. Table 10 shows 2010 customer reported CHCF-B data for AT&T, Verizon, and Frontier Communications of California (Frontier), comparing customers' mean and median phone bills.[12]

Table 10
Total Monthly Phone Bill Comparing CHCF-B and Statewide Monthly Bill Means and Medians Reported by CHCF-B Customers, 2010

	Verizon	Frontier	AT&T	Overall
CHCF-B Mean	$95	$85	$63	$73
Statewide Mean	$75.46	Data not available	$59.11	$68.53
Mean % differential	25.9%	Data not available	6.6%	6.5%
CHCF-B Median	$64	$76	$52	$55
Statewide Median	$58.02	Data not available	$47	$50
Mean % differential	10.3%	Data not available	10.6%	10%

The overall mean and median monthly phone bill of $73 and $55 respectively (Addendum, table A.1) is higher by 6.5% and 10% than the respective statewide survey mean ($68.53) and median ($50.00). AT&T customers residing within CHCF-B areas reported data reflecting the lowest monthly bills, with mean and median of $63 and $52 respectively, but similarly their CHCF-B mean and median are higher by 6.6% and 10.6% when compared to the AT&T statewide survey mean and median.

Frontier customers reported monthly bills that resulted in mean and median of $85 and $76, and Verizon customers' monthly bills indicated a higher monthly mean of $95 compared to Frontier, but a lower median at $64. When comparing Verizon's CHCF-B mean ($95) and median ($64) phone bill to its statewide survey mean ($75.46) and median ($58.02), we find a higher differential of 25.9% and 10.3%, respectively. The data indicates that mean and median phone bills in CHCF-B areas are consistently higher than when compared to statewide data, which may be reflected by CHCF-B respondents residing in relatively sparsely populated areas necessitating a higher frequency of long distance and toll calls, and where a larger proportion of customers are being served by carriers that charge slightly higher basic service charges. Verizon's residential basic flat

[12] SureWest Communications customers were not included in the survey as Surewest does not have CHCF-B areas in its service territory.

rate is more than $3.00 per month higher than AT&T's basic flat rate, and Frontier's basic flat rate is up to $3.00 per month more than AT&T's.[13]

The $31 differential between Verizon customers' mean and median bills in CHCF-B areas suggests that a number of Verizon respondents subscribe to more service features than the majority of Verizon statewide respondents. In fact, the mean monthly bill exceeds the median monthly bill for customers of all three service providers, but for Frontier and AT&T CHCF-B customers, the mean versus median differential is much lower; $9 and $11 respectively (Addendum, table A.1).

In CHCF-B areas, over one-third of LifeLine eligible households (35 percent) choose not to subscribe (Vol. 2, 3.1 through 3.8), and there is some variance among subscription percentage when measured by race/ethnicity and age categories (Vol. 2, 3.1 and 3.3). Thirty-two percent of those who chose not to subscribe to LifeLine did not have wireless access (Vol. 2, 3.6). Choosing to not utilize LifeLine service despite being eligible leaves a higher percentage of customers at risk of losing phone service. When measuring the possibility of customers foregoing landline service due to a sizeable increase, Latinos are more at risk than any other group (3% for Latinos compared to 1.3% for Whites) (Vol. 2, 6.1). Customers who earn less than $34,000 are disproportionately at risk of losing their phone service entirely (1.1% and 4.4%) (Vol. 2, 6.3).

Monthly phone bill costs for CHCF-B customers do not vary much by race/ethnicity. We find that African American respondents report the highest mean ($87) and median ($60) costs, and the largest mean/median differential ($27), suggesting a trend towards subscribing to extra service features. We also find that Latino customers report the lowest mean and median monthly bills, at $61 and $47 respectively (Addendum A.1, table A.2).

On January 1, unless the Commission takes prior action, carriers can implement basic rate de-averaging within their respective service territories to reflect costs *specific* to different geographical areas. Because CHCF-B areas are characterized by low density and higher costs, if the carriers adopt rate de-averaging, resulting rate increases *could* have an effect on customers deciding to discontinue landline service.

The surveys asked statewide and CHCF-B respondents about their tolerance to a percentage change in their basic phone service rate and the threshold at which an increase would cause respondents to discontinue landline service. Responses varied by income group. Statewide respondents indicated that increases in basic rates in excess of the 20% to 25% range—for all customers excluding those in the lowest income bracket—could cause customers to discontinue landline service. Interestingly, customers in the lowest income bracket (at $24,000 or less annually) show a slightly higher tolerance to a basic rate increase at 37%. This may be reflected by customers in the lowest income bracket having fewer alternative voice communications options due to limited income; only 64% of those in the lowest income bracket (up to $24,000 annually) subscribe to wireless

[13] Verizon's basic residential flat rate is $19.50 or $19.91, depending on service area; Frontier's basic flat rate is $15.25 to $19.65 depending on service area; and AT&T's basic flat rate is $16.45.

service, a far lower subscription rate than any of the higher income groups (Vol. 1, table 1.16).

CHCF-B respondents showed a slightly higher response in the 30% tolerance range for the lowest income brackets (less than $24,000 to $34,000, combined). This tolerance increased for the next higher income brackets ($34,001 to $50,000, combined), showing higher tolerance than statewide responses, but the tolerance declines in the highest income brackets ($50,001 to over $75,000), while still showing a higher tolerance than statewide customers. The divergence from the statewide trend *could* indicate that CHCF-B area customers in the higher income brackets do not have as many cost effective alternatives to meet their voice communications needs as do statewide respondents. In either case, carriers must weigh basic rate increase tolerance considerations for all customers when evaluating rate increases, against the possibility of further erosion in landline subscribership (Addendum, table A.4).

Broadband is rated as relatively important to CHCF-B customers. Among those who have the service, it ranks among the last services they would discontinue given a bundled-service rate increase. Basic service and long distance are second only to voicemail/call forwarding as services that many customers would remove in the face of significant rate increase (Vol. 2, 5.23 and 5.24). Though, this finding is highly income dependent.

G. Wireless

Table 11 compares reported mean and median monthly bills for wireless against landline service. Previous tables in our analysis have excluded wireless billings, although 82% of the households contacted in the statewide survey report using wireless service.

Table 11
Statewide Comparison of Wireless and Landline Monthly Bills

	Wireless	Landline
Mean Monthly Bill	$66.51	$68.53
Median Monthly Bill	$56.00	$50.00

Mean and median data indicates that the cost of monthly bills is competitive between wireless and landline service, but the combined cost of paying for both services and the increasing use of wireless as a landline substitute are contributing to the decrease in landline subscribership, especially among lower age groups and lower income brackets (Vol. 1, 1.15-1.19, 2.8). The mean statewide wireless bill is lower than the mean landline bill, yet the median wireless bill is greater than the median landline bill.

The statewide survey finds that landline subscriptions are diminishing and fewer customers are subscribing to LifeLine service (Vol. 1, p. iv). Eighty-two percent of all households now subscribe to or use wireless service (Vol. 1, 1.15-1.19); 23% of California households with voice communications service have only wireless voice

communications, whereas 59% have both wireless and landline and 18% subscribe only to landline (Vol. 1, 1.4b).

Table 12 compares landline and wireless households *and* landline only households to LifeLine subscribership for both statewide and CHCF-B survey respondents. This does not include data for households who subscribe to wireless only. The data demonstrate that statewide landline only subscribers are slightly more likely than landline *and* wireless customers to subscribe to LifeLine service, and emphasize the significant association of customers who subscribe only to landline service being at risk of not having any voice communications service at all.[14]

Table 12
Comparison of Landline Only and Landline *and* Wireless Customers by LifeLine Subscribership, for Statewide and CHCF-B Surveys, between[15]

	Statewide			CHCF-B[16]		
	% of Total		Total	% of Total		Total
	LifeLine Subscribers	Non-LifeLine Subscribers	Households (in millions)	Lifeline Subscribers	Non-LifeLine Subscribers	Households (in thousands)
Landline *only* Customers	**51%**	**17%**	**24%**	**25%**	**9%**	**13%**
Landline *only* Household Count	.96	1.20	2.16	24	28	52
Landline *and* Wireless Customers	**49%**	**83%**	**76%**	**75%**	**91%**	**87%**
Landline *and* Wireless Household Count	.93	6.04	6.97	72	277	349
Total %	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Total Count	1.89	7.24	9.13	96	305	401

Statewide, 24% of the households are landline only, and 76% subscribe to both landline and wireless. In CHCF-B areas only 13% of households rely solely on landline and 87% of households subscribe to both landline and wireless services. Similarly, statewide Lifeline subscribers rely upon landline only service more so than those in CHCF-B areas. Of the statewide survey customers subscribing to LifeLine, 49% have wireless, while 83% of the non-LifeLine customers have wireless. This is an interesting, unexpected finding, implying that households in CHCF-B areas have a greater need or value for

[14] To evaluate the relative dependence of landline *only* households and landline *and* wireless households on the existence of the LifeLine program, we calculated the percentage of each group of these subscribing households against the total number of households that subscribe to the LifeLine program. Table 12 indicates that 960,000, or 51% of the approximately 1,890,000 LifeLine subscribing households are Landline *only* customers, and 930,000, or 49% of the subscribing households are landline *and* wireless households.

[15] Wireless only households are not included in the count or calculations for this table.

[16] The household count for CHCF-B areas is based on Census Block Group data provided by Commission Communications Division staff.

wireless services. For CHCF-B area customers, 75% of LifeLine subscribers have wireless, while 91% of the non-LifeLine subscribers have wireless. For both surveys, those who subscribe to landline service only are more likely to subscribe to LifeLine service (Vol. 1, 1.4b).

CHCF-B data indicates a high prevalence of households having both landline *and* wireless. Of Lifeline subscribers, 25% have landline service only, while 75% of the LifeLine subscribers subscribe to both landline *and* wireless. However, note that 87% of the CHCF-B households subscribe to both landline *and* wireless (Vol. 2, 2.1). Significantly, 9% of the landline only customers *do not* subscribe to LifeLine, while 91% of those who subscribe to both landline *and* wireless do not subscribe to Lifeline service.

Statewide survey data shows that landline *only* households, when measuring their LifeLine subscription percentage against the total of all LifeLine subscriptions, have a higher dependence on this service than landline only CHCF-B area households. In fact, both landline only survey populations demonstrate a dependence on this service. Results from both the surveys demonstrate that when measuring the respective percentages of landline *only* customers that *do not* subscribe to LifeLine, statewide and CHCF-B households show consistency at 17% and 9%, while those who subscribe to both landline *and* wireless are non-subscribers at 83% and 91%. Both survey show that the LifeLine program is still relevant to the needs of many landline only customers.

H. Price Sensitivity and Risk

To find out the cost threshold at which customers might be motivated to discontinue their landline service, the survey asked both statewide and CHCF-B customers about balancing their communications needs against their perceived tolerance of service cost increases, and also measured customers' risk of discontinuing landline service.

Tables 13-15, below illustrates customers' maximum tolerance to percentage increase in phone bills at which they would be motivated to discontinue landline service. The CHCF-B survey notes;

> On average customers report being able to afford a 63% increase in basic phone service. Thus most customers would seemingly absorb, for example, an imaginable increase of around 10%. However, there is reason to be concerned about less affluent customers being unfairly burdened by such an increase. As seen in the previous chapter, customers who are most willing to pay higher rates are those who have the least access to alternative forms of telecommunications services and who do not have sufficient income to acquire alternative services. Therefore, the most dependent customers are the most willing to pay more (Vol. 2, Chapter 6, p.152).

In the tables below, note that the row denoting "percentage at risk" represents the percentage of customers who would react to a sizeable increase in phone service costs by forgoing phone service entirely (Vol. 2, 6.1-6.3). The definition of "high risk for doing without phone service" is being income eligible for LifeLine service, not having access to

a wireless phone, and concluding that current basic phone costs are "not affordable" (Vol. 2, p. 158). The statewide survey did not provide similar "at risk" data.

Table 13, stratified by income group. Table 13 also shows corresponding risk of having to discontinue landline service for CHCF-B customers.

Table 13
Tolerable Percentage Change in Basic Phone Service Rate by Household Income

	$24,000 or less	$24,001-$34,000	$34,001-$39,800	$39,801-$50,000	$50,001-$75,000	Over $75,000
	%	%	%	%	%	%
CHCF-B area mean	32	30	52	141	106	64
% CHCF-B LifeLine Eligible Customers at Risk	1.1	4.4	0.8	1.2	1.6	0.3
Statewide mean	37	24	21	24	20	28

Table 13 data indicates a fairly consistent "tolerance" range expressed in percentage across all income brackets for statewide respondents. For CHCF-B respondents, the lowest income brackets show a similar response to statewide respondents, but the CHCF-B tolerance range increases markedly in the combined $34,001 to $75,000 income brackets, possibly due to customers in these higher income brackets having more relative disposable income to spend on services. The highest income bracket shows a lower tolerance, possibly due to these customers having more voice communications alternatives. Additionally, statewide data indicates some consistency between income ranges, possibly due to the relative availability of alternatives compared to CHCF-B respondents (Addendum, table A.4). For household income, those in the $24,001-$34,000 income range are at highest risk in this group.

Table 14 states the tolerance to percentage increase based on race/ethnicity.

Table 14
Tolerable Percentage Change in Basic Phone Service Bill by Race/Ethnicity

	White	African American	Latino	Asian or Pacific Islander	American Indian	Other
	%	%	%	%	%	%
CHCF-B area mean	59	13	102	73	109	49
% CHCF-B LifeLine Eligible Customers at Risk	1.3	0.2	3.0	0.2	1.3	-
Statewide mean	28	23	28	22	38	48

The statewide mean tolerance is again fairly consistent across identified groups. However, CHCF-B responses vary considerably. African American respondents indicate a very low tolerance to future increases. Latino, Asian, and American Indian respondents indicate a higher tolerance threshold, possibly due to a higher overall dependence on landline service, especially among those who may not subscribe to wireless service. The survey indicated that among those who had landline service, 78% of African Americans and 59% of Latinos would use wireless as an alternative if deciding to discontinue landline service. Both figures are below the 82% wireless subscription percentage for all households (Vol. 1, tables 1.15-1.19 and 5.4a; and Addendum, Table A.5). By race/ethnicity, Latino customers are at highest risk of discontinuing landline phone service entirely in this group.

Table 15 compares the tolerance to percentage increase across age groups.

Table 15
Tolerable Percentage Change in Basic Phone Service Bill by Age Group

	18 to 29	30 to 39	40 to 59	60 or older
	%	%	%	%
CHCF-B area mean	25	28	54	93
% CHCF-B LifeLine Eligible Customers at Risk	2.4	1.3	2.0	1.0
Statewide mean	32	23	26	30

The CHCF-B response is fairly consistent with the statewide response for the 18 to 29 and 30 to 39 age groups, but the tolerance threshold approximately doubles for the 40 to 59 age group, and is more than three times higher for those 60 and older. This may be a reflection of customers in older age brackets having higher reported income and/or having greater reliance on landline services (Addendum, table A.6). By age group, the 18 to 29 demographic are at highest risk of discontinuing landline service in this group.

Table 16 demonstrates a distinction between customers who have an alternative to landline service (Wireless and Landline Subscriber) and those who subscribe to landline only.

Table 16
Tolerable Percentage Change in Basic Phone Service Bill by Voice Communications Type

	Wireless and Landline Subscriber		Landline Only Subscriber	
	Not a LifeLine Subscriber	LifeLine Subscriber	Not a LifeLine Subscriber	LifeLine Subscriber
	%	%	%	%
CHCF-B area mean	78	17	47	28
Statewide mean	23	27	33	44

The lowest tolerance (17%) is among residents of CHCF-B areas who are LifeLine subscribers and who are also wireless subscribers. This makes sense if we view these customers as having a voice communications alternative, but because of low income they have less relative disposable income to cover both services. This low tolerance threshold is also reflected in the statewide response for wireless *and* landline customers whether they are LifeLine subscribers or not. Not surprisingly, for those customers who do not subscribe to wireless, the tolerance threshold is higher. The relatively much higher CHCF-B area interest in wireless and landline subscribers while not being Lifeline subscribers might be reflected by a group of respondents who tend to be older and/or in higher income brackets, reflecting a choice to retain the old technology and/or having more disposable income to spend on services (Addendum, table A.7).

Table 17 below computes the average tolerable amount above the median bill based on the mean tolerable percentage change reported in the statewide survey.

Table 17
Mean Tolerable Change in Statewide Median Monthly Bill by Household Income

	$24,000 or less	$24,001-$34,000	$34,001-$39,800	$39,801-$50,000	$50,001-$75,000	Over $75,000
Tolerable % Change	37%	24%	21%	24%	20%	28%
Median Bill	$30	$50	$53.80	$56.10	$75.00	$75.00
Tolerable Increase Amount	$11.10	$12.00	$11.30	$13.46	$15	$21

We include Table 17 for illustrative purposes to compare variance among household income groups and to show an inclination to tolerate rate increases. What is surprising is that the tolerable amount does not seem to vary much below $39,800 income groups. Further, the variation in tolerable increase between lower and higher income groups and does not vary as much as we would expect. As noted prior, this may be due to lower income groups not having as many alternatives as higher income groups. Additionally, the value of landline is relative to the price of alternative services. Thus it is within

reason that on average, households willingness to pay more is less than the price of alternative service.

I. Noncustomers

"Having other phone service" is the reason many (48%) cited as the reason for not having traditional landline telephone service (Vol. 3, 2.2). Among respondents who have discontinued their phone service, nearly three-quarters of respondents cite this reason, suggesting that the combined expense of maintaining a landline plus other phone service is a strong driver behind a decision to discontinue landline service (Vol. 3, 2.3). Expenses that are largely out of the respondent's control, such as the monthly charge for local service, long distance rates, and fees, taxes and surcharges were, in that order, the other most frequently cited reasons for discontinuing phone service.

A large majority (95%) of respondents has access or subscribes to other than traditional landline telephone service such as wireless or VoIP; and 86% of noncustomers who are eligible for LifeLine service have access to wireless phones (Vol. 3, 2.4 and 2.13d). A large majority (88%) of respondents, particularly among African Americans and Latinos, have either never had traditional telephone service in their household or have been without traditional telephone service for one year or more (Vol. 3, 2.1 and 2.9b). Respondents under the age of 30 are also more likely (69%) than others to never have had traditional telephone service. The rate at which landline service is being discontinued within the past year is highest among respondents 40 years of age and older, respondents with household incomes under $34,000, and LifeLine eligible respondents (Vol. 3, 2.9c, 2.9d and 2.9e).

A majority (58%) of respondents have heard of LifeLine (Vol. 3, 4.1a). A majority (58%) of respondents also claim to be familiar with LifeLine program benefits (Vol. 3, 4.2a). However, fewer (34%) are motivated to have traditional telephone service even if they know their household qualifies for LifeLine service (Vol. 3, 4.4a).

Most respondents think that consumers must meet at least one general requirement to subscribe to basic phone service (Vol. 3, 3.1). Having a good credit rating, being employed, and having a certain income level are the three most commonly mentioned examples that respondents cited when asked about perceived requirements to establish LifeLine service.

III. Methodology

For the CHCF-B Fund survey, PRI collected information on a) the cost of customers' basic telephone service, b) penetration and utilization rates of basic telephone service by household income, c) race/ethnicity, age, household size and other demographic characteristics, and d) the characteristics of noncustomers and their reasons for not having telephone service, while also determining those persons most at risk of losing

basic telephone service. PRI also collected information on customers' and noncustomers' awareness and eligibility for the LifeLine program. Additionally, survey results include an analysis comparing results gathered from contacting residents of pre-2009 CHCF-B areas to those who live in post-2009 CHCF-B areas. Post-2009, CHCF-B areas are now predominantly rural (Vol. 2, 1.1).[17]

For the statewide survey, PRI collected information to gather a) the name of the service provider(s) to which the customer subscribes, b) the number of and type(s) of services to which the customer subscribes (i.e. for landline subscriptions, circuit switched *or* VoIP service), c) customer subscription to both wireless and landline service or wireless service subscription only, d) the customer's price sensitivity and individual perceptions thereof, e) the customer's buying behavior, and f) the customer's awareness of the LifeLine program.

The CHCF-B survey population consisted of households within areas as defined by Census Block Groups (CBGs). The data was derived from residential customer lists provided by companies serving these territories. PRI completed telephone interviews with over 6,000 customers and completed mail surveys with over 1,100 noncustomer households who resided in either pre- or post-2009 CHCF-B areas.

The statewide survey population consisted of 1,377 customers residing throughout California, using combined wireless, landline, and LifeLine sample databases. To increase representation for important subgroups, PRI used a randomly selected sample of residential telephone numbers with additional samples of African Americans, LifeLine program subscribers, and low-income but non-LifeLine households. From these combined databases, PRI contacted customers on a random digit dialed basis. PRI completed interviews with 384 wireless, 636 landline, and 357 landline-with-LifeLine customers. Table 18 shows customers' percentage of survey responses by service provider.

Table 18
Comparing Statewide and CHCF-B Service Providers' Percentage Response

	Verizon	**AT&T**	**Frontier**	**Metro PCS**	**Sprint**	**T-Mobil**	**Comcast**	**Time-Warner Cable**	**Cox Communications**	**Other Carriers**
Statewide	15.7	46.8	0.7	5.7	6.3	5.2	2.2	2.0	2.2	13.2
CHCF-B	30	66	4	NA	NA	NA	NA	NA	NA	NA

[17] Commission Decision (D.) 07-09-020 adopted reforms to the (CHCF-B) program. This reduced the number of Census Block Groups (CBGs) defining the combined CHCF-B areas, so that the fund could better support those "high cost" areas where funding is most necessary to meet universal service goals. As of January 1, 2009, this policy reduced the number of CBGs to 991. The term "Post-2009" refers to this reduction in the number of CBGs in which customers now benefit from the CHCF-B.

Source: Statewide, Appendix B, Affordability Survey, 2010, Q1, pp 6-7.
CHCF-B, Vol. 2, table 1.1

The statewide and CHCF-B surveys used different methodologies for customer contact. The statewide respondents included customers of numerous carriers, as shown in Table 18. CHCF-B respondents were limited to AT&T, Verizon, and Frontier, as this program provides subsidies to carriers of last resort to provide basic service to residential customers in high-cost areas.

IV. Conclusions

California High Cost Fund – B: Discontinuance of the basic service rate freeze beginning January 1, 2011, could lead to an increase in basic rates. At the moment, the basic rate variance between the three largest CHCF-B carriers is about $3 per month. If carriers continue to offer statewide rates within their service territory, we can likely expect small-to-moderate rate changes. However, if carriers were to de-average rates within their service territory, some areas of the state could experience significant rate increases, potentially up to the amount of the CHCF-B $36 subsidy floor.[18] Because the CHCF-B areas are characterized by low population density and are more costly to serve, rate de-averaging would result in higher basic service rates in low-density areas compared to high-density areas within a carrier's service territory.

CHCF-B subsidies were established to supplement revenues to recover the varying costs of serving customers in diverse territories served by a carrier, both to the benefit of customers in the form of lower basic service rates and their service provider in the form of expanded service areas. Though California markets are generally competitive, not all areas of the state are easily served and it is reasonable to expect that competitive providers might ignore the highest cost areas without a CHCF-B type of program. Elimination of the CHCF-B program would likely result in increased rates and/or potential reductions in landline service.[19]

This survey indicates in the at-Risk analysis that about 1.6% of households in existing CHCF-B areas are at risk should basic rates increase above their respective affordability thresholds. Further, these households are more tolerant of rate increases than the statewide respondants, suggesting a greater reliance or value on landline phone service. Without a CHCF-B like program and averaged-rates, households could be subjected to rates beyond their affordability threshold, jeopardizing the achievement of having exceeded the 95% household phone-subscribership goal. We conclude that a CHCF-B like program should continue. However, we note that this survey identifies the increasing use and reliance on landline alternative services such as wireless, VoIP and broadband

[18] Decision 07-09-020 determined that beginning July 1, 2009, high-cost support will be limited to basic access lines in areas with a proxy cost above $36.
[19] Competitive Local Exchange Carriers can exit service relatively more easily than a carrier having Carrier of Last Resort (COLR) status. Incumbent Local Exchange Carriers are obligated to serve as a COLR, however, the filing of an applications for leaving of service is not precluded.

services. CHCF-B policies should take into account the availability and substitutability of these alternative services and should be considered in any program redesign.

California LifeLine Program: This survey concludes that the LifeLine program provides benefits to those who qualify in the form of a reduced phone bill in the amount of $10.90 per month. As can be expected, the lower the reported household income, the higher is the percentage subscribership to LifeLine. This survey confirms that wireless service is also an important service to low income households. However possibly due to affordability issues, only about half of LifeLine subscribed households also subscribe to wireless service, whereas over 80% of non-LifeLine households subscribe to both landline *and* wireless.

Though, not exclusively reflecting LifeLine households, the at-Risk analysis indicates that 4.4% of LifeLine eligible households within $24,001 and $34,000 are at risk of having no phone service should bills increase beyond their affordability threshold. Further, this study finds that lower income households are more sensitive to price changes than higher income households, as indicated in the lower affordability threshold of low-income households relative to higher-income households. Thus, this survey concludes that LifeLine performs an important function in ensuring affordability.

Non-Landline Households: It is clear that alternatives to LifeLine and traditional landline service are an important communications factor for California households. Of those without landline service 95% have access to wireless, digital or VoIP communications services. However, only 63% of non-landline households with incomes less that $24,000 and 71% less than $34,000 have other phone service. Of non-landline respondents, over half have heard of LifeLine, yet fewer are motivated to subscribe even if qualified. This study concludes that the applicability of the California CHCF-B and LifeLine programs as currently constituted are challenged when alternative wireless, VoIP and broadband services are available.

Broadband: It is clear from the CHCF-B survey that broadband service is increasingly important to households as it is the least likely service to be discontinued given a bundled service rate increase.

(END OF ATTACHMENT C)