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November 17, 2004

Ms. Blanca S. Bayó, Director
Division of the Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 040604-TL
Adoption of the National School Lunch Program and an income-based criterion at
or below 135% of the Federal Poverty Guidelines as eligibility criteria for the
Lifeline and Link-up programs

Dear Ms. Bayó:

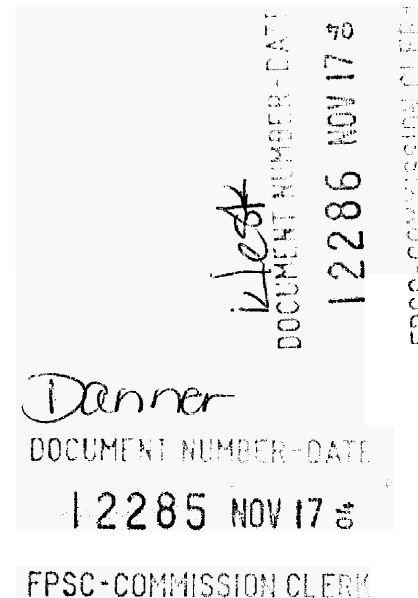
Please find enclosed for filing an original and 15 copies of the Direct Testimonies of
Carl R. Danner and Harold E. West, III on behalf of Verizon Florida Inc. in the above
matter. Service has been made as indicated on the Certificate of Service. If there are
any questions regarding this filing, please contact me at 813-483-1256.

Sincerely,

Richard A. Chapkis DW

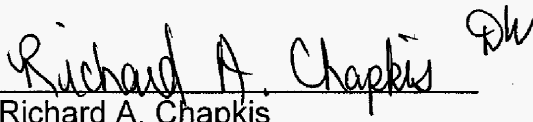
Richard A. Chapkis

RAC:tas
Enclosures



CERTIFICATE OF SERVICE

I HEREBY CERTIFY that copies of the Direct Testimonies of Carl R. Danner and Harold E. West, III on behalf of Verizon Florida Inc. in Docket No. 040604-TL were sent via U. S. mail on November 17, 2004 to the parties on the attached list.


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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Adoption of the National School) Docket No. 040604-TL
Lunch Program and an income-based)
criterion at or below 135% of the Federal)
Poverty Guidelines as eligibility criteria for)
the Lifeline and Link-up programs)

DIRECT TESTIMONY OF CARL R. DANNER

ON BEHALF OF

VERIZON FLORIDA INC.

NOVEMBER 17, 2004

DOCUMENT NUMBER-DATE

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FPSC-COMMISSION CLERK

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. I am Carl R. Danner. I am a Director with Wilk & Associates/LECG, 201
3 Mission Street, Suite 700, San Francisco, CA 94105.

4

5 **Q. PLEASE SUMMARIZE YOUR BACKGROUND AND**
6 **QUALIFICATIONS.**

7 A. I was Advisor and Chief of Staff to Commissioner (and Commission
8 President) G. Mitchell Wilk during his tenure at the California Public
9 Utilities Commission (CPUC), where I played a leadership role in the
10 initiation of a successful price cap incentive regulation program for
11 California local telephone companies. Since leaving the CPUC, I have
12 provided consulting services to various clients on regulation and policy,
13 with emphases on the telecommunications and energy industries. I hold
14 a Masters and Ph.D. in Public Policy from Harvard University, where my
15 dissertation addressed the strategic management of
16 telecommunications regulatory reform. At Harvard, I served as Head
17 Teaching Assistant for graduate courses in microeconomics,
18 econometrics and managerial economics. I hold an AB degree from
19 Stanford University, where I graduated with distinction in both
20 economics and political science. In the summer of 2003, I co-taught
21 classes on UNEs and impairment to new state commissioners and staff
22 at Michigan State University's annual "Camp NARUC" educational
23 program. My experience includes researching and teaching regulation,
24 advising regulators, testifying in regulatory proceedings, and advising

*

1 clients on regulatory issues. My complete resume is attached as
2 Exhibit CRD-1.

3

4 I have previously testified before the Florida Public Service Commission
5 (Commission) on several occasions, most recently in Docket
6 No. 030867-TL last year.

7

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of my direct testimony is to address three issues raised in
10 the Order Establishing Procedure (issued November 1, 2004) on behalf
11 of Verizon Florida Inc. (Verizon):

12 Issue 4: What are the economic and regulatory impacts of
13 implementing the actions taken by the Commission in Order
14 No. PSC-04-0781-PAA-TL?

15 Issue 5A: Should consumers be allowed to self certify for program-
16 based Lifeline and Link-Up eligibility?

17 Issue 6A: What is the appropriate state Lifeline funding mechanism and
18 how should it be implemented and administered?

19

20 **Q. WHAT ARE YOUR PRINCIPAL OBSERVATIONS, CONCLUSIONS
21 AND RECOMMENDATIONS?**

22 A. I offer the following observations, conclusions and recommendations for
23 the Commission's consideration:

24

25

- 1 1. The Commission has appropriately recognized that the purpose of
2 the Lifeline program should be to increase telephone penetration, not
3 to increase the number of people who receive state and federal
4 support. The proposals to expand the Lifeline eligibility criteria will
5 not substantially increase telephone penetration, because most of
6 the people who would receive support under the expanded criteria
7 already have telephone service.
- 8
- 9 2. The prevalence of wireless service helps to ensure that customers
10 are connected to essential services, while reducing the importance of
11 wired service penetration as a measure of access to
12 communications.
- 13
- 14 3. The Commission should not adopt self-certification for Lifeline
15 eligibility because self-certification is likely to result in waste, fraud
16 and abuse, as well as customer confusion and irritation.
- 17
- 18 4. Companies should be permitted to petition to recover Lifeline-related
19 costs if Lifeline enrollment increases dramatically, or if a company
20 believes its particular circumstances so warrant. This will help to
21 ensure the long-term viability of the Lifeline program, and to level the
22 competitive playing field.
- 23
- 24 5. To the extent necessary, Lifeline-related costs should be recovered
25 through general tax revenues. If general tax revenues cannot be

1 used for this purpose, Lifeline-related costs should be recovered
2 through a per-line surcharge.

3

4 6. The Commission should not seek to expand the Lifeline eligibility
5 criteria due merely to a concern about an outflow of funds from
6 Florida to other states. Florida is an overall net beneficiary of federal
7 programs, spending, and taxes. Moreover, Florida should benefit
8 from the FCC's recent initiative to address California's Lifeline
9 program (the principal source of the concern). If every state were to
10 try to increase the size of their Lifeline programs to capture additional
11 funding from other states, the federal program would grow and
12 ultimately burden customers in all states with greater support
13 obligations unrelated to increasing universal service.

14

15 **I. ISSUE NO. 4**

16

17 **A. BACKGROUND**

18

19 **Q. HAS THE COMMISSION RECOGNIZED THAT ADDING MORE**
20 **CUSTOMERS TO THE NETWORK IS THE APPROPRIATE PURPOSE**
21 **FOR LIFELINE PROGRAMS?**

22 **A.** Yes. The Commission made clear that Lifeline is intended to increase
23 telephone subscribership in its comments to the FCC:

24

As we discussed in our December 26, 2001,

25

comments to the Joint Board, the FPSC continues to

1 support the original intent of Lifeline and Link-Up,
 2 which is to help low-income customers obtain basic
 3 telephone service.¹

4
 5 **Q. ARE FLORIDA'S TELEPHONE PENETRATION RATES LOW**
 6 **RELATIVE TO OTHER STATES?**

7 A. No. FCC data² show that Florida's penetration levels are at
 8 approximately the national average, having increased somewhat over
 9 the past ten years for all customers, and at a slightly higher pace for
 10 low-income customers:

		<u>All Customers</u>		<u>Low Income</u>	
		<u>Florida</u>	<u>National</u>	<u>Florida</u>	<u>National</u>
14	1994	92.4%	93.9%	84.2%	85.7%
15	1995	93.9	93.9	86.7	85.1
16	1996	93.4	93.9	86.6	85.4
17	1997	92.1	94.0	84.4	86.0
18	1998	93.3	94.1	85.4	85.7
19	1999	92.6	94.0	87.8	85.5
20	2000	92.4	94.5	85.6	87.5
21	2001	92.3	94.4	84.2	87.6

¹ "Comments of the Florida Public Service Commission Regarding the Federal-State Joint Board on Universal Service Lifeline and Link-Up Recommended Decision," FCC WC Docket No. 03-109, August 18, 2003, page 2.

² Data are percentages of households with telephone service in March of applicable year. Low income customers are those under \$17,954/year in current dollars. FCC, Universal Service Monitoring Report, CC Docket No. 98-202 (2004), Table 6.11.

1	2002	94.7	95.5	89.7	89.1
2	2003	95.1	95.5	89.8	89.2
3					
4	Change	+2.7%	+1.6%	+5.6%	+3.5%

5

6 Notably, the Commission's Proposed Agency Action Order does not
7 identify subscribership levels as a concern in Florida.

8

9 **Q. IS THE WIDESPREAD USE OF WIRELESS SERVICE RELEVANT TO**
10 **LIFELINE GOALS?**

11 A. Yes. Many people contend that Lifeline programs are necessary to
12 ensure that low-income customers have a minimal, "life line" connection
13 to the outside world so they can reach essential services. The fact that
14 over 60 percent of Florida's population (of all ages) has wireless phones
15 helps mitigate concerns about whether some people may be
16 unconnected to essential services, because wireless phones can be
17 used to reach these services.³ Additionally, the fact that an increasing
18 percentage of customers have given up wired service (and rely on

³ As of this writing, there are approximately 11.7 million wireless subscribers in Florida, as determined by assuming that Florida subscribership has increased at the same rate (plus 7.65 percent) as the country as a whole since December 2003 recorded Florida subscriber data. See FCC Ninth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, released September 28, 2004 (http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-216A1.pdf), Appendix A, Tables 1-2; report of current number of U.S. wireless subscribers on CTIA web site (www.wow-com.com, viewed October 29, 2004). As of mid-2003, the US Census Bureau estimated Florida's population as 17,019,068, suggesting a current total of between 18.5 and 19 million based on its recent growth rate. U.S. Census Bureau, Florida Quick Facts (<http://quickfacts.census.gov/qfd/states/12000.html>, accessed October 29, 2004).

1 wireless exclusively)⁴ also renders traditional measures of wireline
2 penetration, such as the FCC data reported above, less relevant for
3 gauging the success of efforts to promote connectivity for customers.
4

5 **B. LIFELINE WILL DO LITTLE, IF ANYTHING, TO PROMOTE**
6 **UNIVERSAL SERVICE; LIFELINE IS PRIMARILY A CASH-**
7 **TRANSFER PROGRAM**

8
9 **Q. DO LIFELINE MONTHLY BASIC RATE DISCOUNTS INCREASE**
10 **TELEPHONE PENETRATION?**

11 A. Monthly rate discounts do relatively little, if anything, to increase
12 penetration. Most, if not all, customers on Lifeline would have a phone
13 even without the Lifeline discount on monthly service charges.
14

15 **Q. HOW WOULD YOU CHARACTERIZE THE LIFELINE PROGRAM'S**
16 **MONTHLY BILL DISCOUNTS?**

17 A. For the most part, Lifeline monthly discounts are a way by which some
18 customers are given small cash grants. To be given a discount on a
19 service one would buy anyway is the same as being given that amount
20 of money in cash.
21

22 **Q. IS VERIZON'S FLORIDA LIFELINE PROGRAM PRINCIPALLY A**
23 **MONEY-TRANSFER PROGRAM, RATHER THAN A WAY TO**
24 **INCREASE SUBSCRIBERSHIP?**

⁴ e.g., the 2004 Census Bureau Current Population Survey found a 6 percent complete replacement rate (Federal Communications Commission, Telephone Subscribership in the United States (August, 2004), page 2 note 2.

1 A. Yes, Lifeline benefits generally go to customers who would already have
2 service. Between March and September of 2004, 4,190 customers
3 signed up for Verizon's Lifeline service. A review of billing records⁵
4 confirmed that 3,184 of these customers already had Verizon non-
5 Lifeline service in March. Therefore – at most – Verizon's Lifeline
6 program could have added 1,006 subscribers to the network in Florida.
7 In other words, at least 76% of new Lifeline recipients already had
8 telephone service, and received no more than the equivalent of a cash
9 grant through their Lifeline discount.

10

11 **Q. YOU JUST STATED THAT AT LEAST 76% OF THE NEW LIFELINE**
12 **RECIPIENTS ALREADY HAD TELEPHONE SERVICE. IS IT CLEAR**
13 **THAT THE REMAINING 24% OF NEW LIFELINE CUSTOMERS**
14 **LACKED TELEPHONE SERVICE BEFORE SUBSCRIBING TO**
15 **LIFELINE?**

16 A. No. We know that at least 76% of the Lifeline recipients already had
17 telephone service before subscribing to Lifeline, but it is not possible to
18 determine directly from the data exactly how many of the remaining 24%
19 of new Lifeline customers lacked telephone service before subscribing
20 to Lifeline. That is because there is a natural churn of all customers,
21 including Lifeline customers, and we cannot tell, for example, how many
22 of the remaining 24% moved into Verizon's service territory from another
23 location, or moved out of a home or household that already had service.

24

⁵ This process involved an electronic review of billing records. At no time did I view or make use of any individual customer identifying information.

1 We can show, however, that a large percentage of the remaining 24% of
2 new Lifeline customers likely had telephone service before subscribing
3 to Lifeline. This can be done by comparing Lifeline customer churn to
4 that of residential customers generally. If many Lifeline customers were
5 taking service for the first time, then their churn rate might be greater
6 than for other residential customers. A measure of this effect is to divide
7 the number of new customers by the existing customer base at the start
8 of the period. For residential customers as a whole, the proportion of
9 new customers was 6.8%. In other words, for every 1,000 residential
10 customers in March of 2004, another 68 new customers subscribed to
11 Verizon R1 service by September of 2004. For Lifeline customers, the
12 proportion of new customers was 5.2%. For every 1,000 Lifeline
13 customers in March, another 52 new customers subscribed to Verizon's
14 Lifeline R1 service by September of 2004. Because of the high
15 telephone penetration rates for residential customers in general across
16 the U.S., we can presume that almost all new residential non-Lifeline
17 customers had service before. The fact that Lifeline and non-Lifeline
18 customers took new Verizon service at comparable rates shows that
19 there was no great influx of new Lifeline customers who previously
20 lacked telephone service.

21

22 **Q. WHAT OTHER EVIDENCE SHOWS THAT THE LIFELINE MONTHLY**
23 **SERVICE DISCOUNT IS AN INEFFECTIVE APPROACH FOR**
24 **INCREASING SUBSCRIBERSHIP?**

25

1 A. There are several sources of evidence that reinforce one another to
2 make clear that basic rate discounts do little, if anything to promote
3 universal service.
4
5 First, it has been well-documented through econometric studies (i.e.,
6 studies that use data on actual customer responses to price changes)
7 that residential customers are highly insensitive to the price of basic
8 service, within the normal ranges the price occurs in the U.S.⁶ Almost
9 regardless of the price, they subscribe anyway, and variations in
10 subscribership across the country are explained instead by other
11 factors. The same result has also been documented for low-income
12 customers, in particular.⁷ The results of two noted economists, Crandall
13 and Waverman, (using data from 1990 and 1995) fail to find any price
14 sensitivity of customers – including low income customers – with respect
15 to the basic monthly rate. These results indicate that monthly Lifeline
16 subsidies produce no increase in penetration at all. By contrast, there is
17 consistent econometric evidence that customers are somewhat sensitive
18 to the one-time service connection fee; indeed, Crandall and Waverman
19 find that low-income customers have a price elasticity of -.10 to -.15
20 with respect to that charge (i.e., a 10 percent change in the service
21 connection charge leads to a 1 to 1.5 percent change in penetration

⁶ Crandall and Waverman provide a summary of econometric study results that have consistently produced this finding based on actual customer behavior. Crandall, Robert W. and Leonard Waverman. Who Pays for Universal Service? (Brookings Institution Press, 2000), Table 5-1, page 91.

⁷ Crandall and Waverman, pages 98-104 (e.g. “The sensitivity of telephone penetration to the recurring monthly price is so small that it is increasingly difficult to detect in modern studies.”).

1 among low-income subscribers).⁸ Therefore, whatever effect these
2 programs have in increasing penetration is almost certainly due to Link-
3 Up, and not Lifeline.

4
5 Second, there are a number of in-depth customer surveys that show that
6 basic rate discounts do little, if anything, to improve telephone
7 subscribership. For example, findings from a Texas survey affirm that
8 local access charges do not keep low-income customers off of the
9 network:

10

11 1. The price of basic telephone service does not seem
12 to be the main barrier to phone subscribership among
13 the survey sample. Across several different
14 questions, people consistently demonstrated
15 awareness of the prices of phone installation and
16 monthly local service, and indicated they could afford
17 these charges.

18

19 2. It is the variable costs of having a phone, as
20 opposed to the fixed cost of installation and monthly
21 service charges, that create affordability problems.
22 The survey results indicated that long-distance
23 charges were the primary reason for disconnection;
24 respondents also indicated that inability to control who
25 uses the phone and control over 900 services come

⁸ Crandall and Waverman, page 98.

1 into play in disconnection situations. This inference is
2 consistent with the finding that phoneless people are
3 interested in fixed-cost services, limited only to local
4 phone service or inexpensive voice mail services.

5

6 3. Affordability problems arise from high installation
7 charges that result from disconnection due to
8 outstanding bills...⁹

9

10 Likewise, findings from a New Jersey survey make clear that providing
11 low-income customers with discounts on the price of local service will
12 not bring large numbers of customers onto the network:

13

14 MYTH #1: The affordability of telephone service
15 hinges on the price of local access. Thus, the price of
16 basic monthly service should be the focus of universal
17 service policy.

18

19 FACT: Most marginal users are driven off the
20 network by usage-related costs, such as long
21 distance calls, collect calls, credit card calls, and
22 optional features, rather than access-related costs. In
23 addition, for new users with low incomes, the chief

⁹ "The Evolution of Universal Service Policy in Texas," Policy Research Project on the Evolution of Universal Telecommunications Service in Texas, Lyndon B. Johnson School of Public Affairs, University of Texas at Austin (1995), pages 17-18 (discussing "primary inferences" that can be drawn from a survey of Texas residents who lacked telephone service).

1 economic barrier is the initial deposit (a minimum of
2 \$100 in New Jersey) required by telephone
3 companies to protect themselves against the buildup
4 of large, usage-related bills which may prove to be
5 uncollectible.¹⁰

6
7 A survey of Californians lacking phone service also showed that Lifeline
8 benefits are not the key to accomplishing universal service goals. Sixty-
9 five percent of the survey respondents had previously been on the
10 network. Reasons cited for a lack of service included:

11	“cost-related reasons”	(56%)
12	“trouble controlling calls”	(35%)
13	“no need for it”	(27%)
14	fear/worry/discomfort calling phone company”	(11%).

15
16 Notably, the “basic monthly cost” was only sixth in ranking on a list of
17 seven issues cited.¹¹

18
19 The foregoing surveys, which show that non-basic rates (e.g.,
20 installation charges, related deposits and difficulty controlling overall

¹⁰ “Universal Service from the Bottom Up: A Profile of Telecommunications Access in Camden, New Jersey,” Rutgers University Project on Information Policy (1995), executive summary (reflecting results of interviews with low-income residents in Camden).

¹¹ Findings were summarized from “Affordability of Telephone Service: A Survey of Customers and Non-Customers,” Field Research Corporation (1993), pages 14, 17 (survey results from California customers).

1 phone bills) are key drivers of telephone penetration, dovetail with the
2 econometric evidence.¹²

3
4 Third, an average bill analysis provides further evidence that the basic
5 rate is not the key driver of telephone penetration. Lifeline customers
6 tend to buy services and use their phones in a very similar way to other
7 residential customers. If the basic rate were the issue, one would
8 expect Lifeline customers to have substantially lower average bills
9 reflecting an inability or unwillingness to pay more than a modest
10 amount for service. However, the monthly bill (pre-discount) of the
11 average Verizon Lifeline customer is slightly higher (\$27.58 in
12 September, 2004) than the average residential bill for non-Lifeline
13 customers (\$26.54 in September, 2004).¹³

14
15 **Q. HAS THE FCC STAFF ESTIMATED WHAT PROPORTION OF**
16 **LIFELINE/LINK-UP BENEFITS ARE PAID TO HOUSEHOLDS THAT**
17 **WOULD HAVE HAD TELEPHONE SERVICE ANYWAY?**

18 **A.** Yes. FCC Staff examined this issue in conjunction with the decision to
19 standardize the income-based eligibility criterion. Nationwide, FCC Staff
20 estimated that about 80 percent of new beneficiaries of the expanded

¹² This is also consistent with the econometric evidence that higher prices for toll and long distance calls decrease customer demand for basic telephone service, and therefore can adversely affect universal service. Hausman, Jerry, Tardiff, Timothy, and Alexander Belinfante. "The Effects of the Breakup of AT&T on Telephone Penetration in the United States," American Economic Review vol. 83, no. 2 (May, 1993), 178-184.

¹³ Data is for customers taking basic residential service (R1), does not include packages.

1 Lifeline/Link-Up program would already have telephone service, and that
2 about 20 percent would be new to the network.¹⁴

3

4 **Q. WOULD THE FCC'S ESTIMATE OVERSTATE THE PROPORTION OF**
5 **NEW FLORIDA LIFELINE CUSTOMERS WHO PREVIOUSLY**
6 **LACKED TELEPHONE SERVICE?**

7 A. Yes. FCC Staff's analysis assumed that there was not an income-based
8 eligibility criterion in existence, but that assumption is not accurate for
9 Florida. In Florida, people who earn less than 125% of the Federal
10 Poverty Guidelines (FPG) are already eligible for Lifeline. The proposal
11 at issue would merely expand the income-based eligibility criterion from
12 125% to 135% of the FPG. Since customer demand for telephone
13 service increases with income, customers earning between 125% and
14 135% of the FPG will on average have the highest existing penetration
15 of those falling under the 135 percent threshold. Therefore, FCC Staff's
16 estimate would overstate the number of customers that would be added
17 to the network in Florida if the Commission were to expand the income-
18 based eligibility criterion.

19

20 This conclusion is bolstered by another conclusion from the same study
21 in which FCC Staff considered, hypothetically, what would happen if the
22 income-based eligibility criterion were expanded from 135% to 150% of
23 the FPG. FCC Staff found that this would have no effect on telephone
24 service penetration – a fact that supports the common sense notion that

¹⁴ FCC, "Report and Order and Further Notice of Proposed Rulemaking," WC Docket No. 03-109, released April 29, 2004, paragraph 10.

1 increasing the income-based eligibility criterion from 0% - 135% of the
2 FPG will have a greater effect on penetration than increasing this
3 criterion from 125% to 135% of the FPG.

4
5 **Q. SHOULD LIFELINE BE USED AS A CASH-TRANSFER PROGRAM**
6 **RATHER THAN A MEANS TO INCREASE TELEPHONE**
7 **SUBSCRIBERSHIP?**

8 A. No. Lifeline should not be used to transfer money between existing
9 subscribers, rather than adding new ones, for at least two reasons.
10 First, welfare payments are typically delivered to low-income individuals
11 through the general tax system. Simply using the tax and benefit
12 system alone would avoid the extra administrative costs of Lifeline,
13 which Verizon has shown would be significant for a self-certification
14 program. Second, the Lifeline program can interfere with the efficient
15 functioning of the competitive communications market in Florida – a
16 substantial sector whose health is important for Florida's economy. The
17 larger the program is, the more cross-subsidies and potential
18 competitive distortions will be created by even the best-designed means
19 of obtaining needed revenues. I address this concern further below,
20 which is an important reason for limiting the program to benefits that
21 actually increase telephone service penetration.

22
23 **Q. DO FLORIDA CUSTOMERS ALREADY PAY A SUBSTANTIAL**
24 **NUMBER OF SURCHARGES, TAXES AND FEES ON THEIR**
25 **TELEPHONE BILLS?**

1 A. Yes. This fact is additional evidence that militates in favor of limiting the
2 Lifeline program to benefits that actually increase subscribership so that
3 a need for carrier cost recovery can be avoided or minimized.

4

5 The following list contains the larger monthly totals of such charges that
6 tend to appear on most, if not all, Verizon customer bills for R1 and B1
7 services:

8 o Residential Customers

9	<u>Charge</u>	<u>Average bill amount, per month</u>
10	Federal Excise Tax	\$1.19
11	Local Communications Service Tax	\$2.01
12	State Gross Receipts Tax	\$0.96
13	TRS Surcharge	\$0.15
14	County 911 Service Fee	\$0.47
15	Number Portability Fee	\$0.21
16	Federal Universal Service Fees	\$1.02
17	Communications Services Tax	\$0.02
18		-----
19	Total	\$6.03

20

21 o Business (Single Line Switched) Customers

22	<u>Charge</u>	<u>Average bill amount, per month</u>
23	Federal Excise Tax	\$1.25
24	Local Communications Service Tax	\$2.55
25	State Gross Receipts Tax	\$1.20

1	TRS Surcharge	\$0.11
2	County 911 Service Fee	\$0.39
3	Number Portability Fee	\$0.24
4	Federal Universal Service Fees	\$0.91
5	Communications Services Tax	\$3.28
6		-----
7	Total	\$9.93

8

9 **II. ISSUE NO. 5A**

10

11 **Q. SHOULD CONSUMERS BE ALLOWED TO SELF CERTIFY FOR**
 12 **PROGRAM-BASED LIFELINE AND LINK-UP ELIGIBILITY?**

13 A. No. As discussed below, the California experience demonstrates that
 14 self-certification is likely to result in waste, fraud and abuse, and, as
 15 discussed in Mr. West's testimony, self-certification, is likely to result in
 16 customer confusion and irritation, which is likely to harm the reputation
 17 of Lifeline providers and the Commission.

18

19 **Q. DOES CALIFORNIA HAVE LONGSTANDING EXPERIENCE WITH A**
 20 **SELF-CERTIFIED LIFELINE PROGRAM?**

21 A. Yes, it does, having used self-certification since the inception of its
 22 Lifeline program in 1984.

23

24

25

1 Q. DOES CALIFORNIA APPEAR TO HAVE A LARGE NUMBER OF
2 SUBSCRIBERS RECEIVING LIFELINE THAT ARE NOT ELIGIBLE
3 FOR BENEFITS?

4 A. While there is no way to be absolutely certain without an audit of some
5 kind, at present (for example) just over 25 percent of the households in
6 Verizon's California service area subscribe to Lifeline service. As the
7 Commission itself observed, it is simply not credible to believe that all of
8 these California households have incomes that actually qualify for the
9 program.¹⁵ It is also obvious that any related increase in California's
10 penetration rate (to the extent there has been such an effect) cannot be
11 anything like the number of Lifeline subscribers now receiving benefits.

12

13 Q. DOES CALIFORNIA VERIFY ELIGIBILITY OF LIFELINE
14 SUBSCRIBERS?

15 A. No.

16

17 Q. HAS VERIZON IDENTIFIED OTHER PROBLEMS THAT WOULD
18 OCCUR DUE TO THE COMMISSION'S PROPOSED SELF-
19 CERTIFICATION PROGRAM?

20 A. Yes. As Mr. West describes in his testimony, significant problems may
21 be created for Verizon, the Commission, and the customers themselves
22 in cases where customers sign up for Lifeline service and are later found
23 ineligible for it. Dealing with such situations (which can occur due to
24 customer confusion or fraud) may prove costly and difficult for those

¹⁵ FCC, "Report and Order and Further Notice of Proposed Rulemaking," WC Docket No. 03-109, paragraph 28.

1 involved. As Mr. West discusses, many customers would be confused
2 and aggravated by a notification that their Lifeline service has been
3 denied and that they owe a back bill for higher charges as a result. For
4 Verizon, the necessity of delivering such an adverse message to the
5 customer may harm its relationships with customers or reputation for
6 customer service, and can be costly as an administrative matter. If
7 Verizon's competitors are not faced with a similar requirement, they will
8 gain a competitive advantage. Related grievances or disputes could be
9 brought to the Commission for resolution, tying up resources and
10 possibly affecting the Commission's own reputation.

11

12 **Q. CAN THE COMMISSION AVOID SUCH PROBLEMS WITH SELF-**
13 **CERTIFICATION BY LIMITED VERIFICATION ACTIVITIES, SUCH AS**
14 **AN ANNUAL SAMPLE AUDIT OF CUSTOMERS?**

15 A. No. I do not believe so. In the first instance, an absence of verification
16 could leave the door open for California-style problems of large numbers
17 of ineligible recipients. A sample audit, by itself, will not address this
18 problem. Additionally, it would not be fair to the customers themselves
19 to allow a potential back-billing obligation to grow over an extended
20 period to where its repayment became a burden – as could occur if
21 verification was only performed at long or irregular intervals (such as the
22 annual sampling process the Commission's Proposed Agency Action
23 suggests). The Commission has previously expressed concerns about
24 the need for specific verification in a self-certified program:

25

1 The FPSC has reservations that a verification process
2 that relies on end-users validating their eligibility can
3 be effective at minimizing waste, fraud and
4 abuse...[A]t a minimum, a periodic verification
5 process should affirmatively validate a customer's
6 eligibility.¹⁶

7

8 **III. ISSUE NO. 6A**

9

10 **Q. WHAT IS VERIZON'S POSITION REGARDING COST RECOVERY OF**
11 **LIFELINE BENEFIT AND PROGRAM COSTS?**

12 A. ETCs should be allowed to recover Lifeline-related costs if there is a
13 rapid and dramatic expansion to Lifeline enrollment, particularly one
14 related to program changes. Carriers should be permitted to petition the
15 Commission when and if they believe the circumstances warrant a
16 limited and targeted cost recovery mechanism to be implemented.

17

18 **Q. AT PRESENT, HOW IS VERIZON'S FLORIDA LIFELINE BENEFIT**
19 **FUNDED?**

20 A. Verizon is not provided any external funding to cover the program's
21 benefits or related administrative costs. Neither is Verizon permitted to
22 adjust its regulated prices to recover these expenses. The costs fall
23 entirely on the company.

24

¹⁶ "Comments of the Florida Public Service Commission Regarding the Federal-State Joint Board on Universal Service Lifeline and Link-Up Recommended Decision," FCC WC Docket No. 03-109, August 18, 2003, page 5.

1 Q. IS IT FAIR OR APPROPRIATE FOR VERIZON, OR OTHER ILECS,
2 TO BE SOLELY RESPONSIBLE FOR FUNDING A SOCIAL
3 PROGRAM?

4 A. Social programs such as Lifeline ought to be a general responsibility,
5 and should not be placed entirely on the companies that are required to
6 provide the services. Moreover, it is not reasonable, in today's
7 competitive environment, to place this obligation on only one category of
8 providers in the marketplace. Of course, Verizon is aware that it
9 previously committed to expand the income-based Lifeline eligibility
10 criterion as soon as it is authorized to rebalance its rates in accordance
11 with Section 364.164, Florida Statutes. At the same time, in light of the
12 highly competitive nature of today's competitive marketplace, it would be
13 reasonable for Commission to allow cost recovery if the Commission's
14 actions result in a demonstrable increase – over present levels – of the
15 ILECs' Lifeline costs.

16
17 Q. CAN PLACING LIFELINE OBLIGATIONS SOLELY ON ILECS CAUSE
18 GENERAL ECONOMIC HARM IN FLORIDA?

19 A. Yes, it can, by distorting investment incentives. A unique economic
20 burden placed on one class of carrier can reduce its expected returns on
21 investment in Florida, leading to less-rapid deployment of new or
22 improved technology, or delays in replacing older technology that is still
23 serviceable but less than ideal. Such problematic incentives can
24 diminish or delay the opportunities for customers to enjoy new or
25 improved communications services in Florida, and possibly reduce the

1 general economic benefits that such investment spending can bring
2 locally to an economy.

3

4 **Q. WHY ARE THESE ECONOMIC CONCERNS OF PARTICULAR**
5 **IMPORTANCE NOW?**

6 A. As a practical matter, the economic concerns I noted are related to the
7 size of the unfunded obligation that carriers must bear. Given the
8 Commission's explicit interest in increasing the number of Lifeline
9 recipients, the funding obligation appears poised to grow – perhaps
10 rapidly and substantially. However, it should be left up to each carrier to
11 determine whether, and when to seek an appropriate support
12 mechanism to fund these benefits.

13

14 **Q. WHAT METHOD WOULD BE BEST FOR FUNDING LIFELINE**
15 **BENEFITS?**

16 A. The best approach would be to fund Lifeline with general tax revenues.
17 This would avoid the administrative expense and inefficiency of layering
18 another program to fund Lifeline on top of existing systems of taxation
19 (with their existing administrative infrastructure). Funding Lifeline with
20 general tax revenues would also permit the Legislature to consider (and
21 prioritize) Lifeline benefits and spending along with other cash or in-kind
22 social benefit programs.

23

24 **Q. WHAT IS THE ESSENCE OF THE PROBLEM OF FUNDING LIFELINE**
25 **BENEFITS AND COSTS?**

1 A. If and when external support is needed, paying for this program will
2 require the equivalent of taxing somebody or something. We can use
3 economic principles and an understanding of the industry's current
4 status to determine a reasonable approach.

5

6 **Q. DO ECONOMIC PRINCIPLES OFFER INSIGHT INTO THE BEST**
7 **METHOD FOR FUNDING LIFELINE?**

8 A. Yes. Economic principles are clear on this point. Any tax creates
9 economic distortions by changing incentives, and therefore economic
10 behavior, away from what otherwise would have made the most sense
11 to consumers and to producers. For example, a price increase on a
12 service (due to a tax) encourages consumers to use less of that service
13 than they would have if they had been able to pay a true economic (i.e.,
14 non-taxed) price. As a result, consumers lose the benefits they would
15 have obtained from greater consumption, while producers lose
16 analogous surplus they would have made from similarly increased sales.
17 Therefore, a tax that changes consumer and producer behavior least
18 (and therefore causes the least economic losses) is the best tax if one
19 has to be levied.

20

21 Another way to think about the question is to recognize that a tax
22 creates three kinds of costs: (1) the funds actually collected as tax
23 revenues, (2) the administrative costs of collecting the tax, and (3) the
24 economic losses caused to consumers and producers as a byproduct of
25 collecting the tax in a particular manner. Surprising as it may seem, in

1 the case of some poorly designed taxes, the economic losses induced
2 by their method of collection can exceed the overall revenues
3 collected – so the total cost of raising a single tax dollar can be two
4 dollars, or more.

5

6 **Q. TO MINIMIZE ECONOMIC LOSSES, WHAT ESSENTIAL PRINCIPLE**
7 **SHOULD THE COMMISSION RESPECT?**

8 A. The most efficient tax is that which changes economic behavior the
9 least. It is more costly to raise tax revenues from goods and services for
10 which consumer demand is highly price-sensitive – i.e., those with larger
11 (or more negative) price elasticities – because demand for the product in
12 question may diminish significantly as a result of the price increase
13 caused by the tax. It is less costly to raise tax revenues where
14 consumer demand is relatively insensitive to price, because consumers
15 will buy almost as much of the product as they would have absent the
16 tax, and therefore suffer fewer economic losses from being forced to
17 give up something they would prefer to use or consume.

18

19 **Q. DO THE PRINCIPLES OF EFFICIENT TAX COLLECTION HAVE**
20 **SPECIFIC IMPLICATIONS FOR COLLECTING REVENUES FROM**
21 **TELECOMMUNICATIONS SERVICES TO SUPPORT LIFELINE?**

22 A. Yes. It is highly inefficient to tax wireless or long distance services,
23 because demand for them is substantially sensitive to price. It is much
24 less costly to tax basic local service prices because demand for them is
25 much less sensitive to price. M.I.T. economist Dr. Jerry Hausman made

1 this point in a quantitative analysis of the harm caused to the economy
2 by the taxation of wireless services:

3 I calculate the efficiency cost to the economy of
4 raising the approximately \$4.79 billion that is currently
5 raised from wireless taxation to be about \$2.56 billion
6 (in addition to the \$4.79 billion in tax revenue) or the
7 efficiency loss to the economy for every \$1 raised is
8 about \$0.53. Furthermore, for every additional dollar
9 raised, the marginal efficiency loss to the economy
10 varies between \$0.72 to \$1.14. This cost to the
11 economy is high compared to other taxes used by the
12 federal and state governments to raise revenues...

13
14 [O]ther commodities can be taxed to raise the same
15 revenue without creating nearly the same deadweight
16 losses or losses in economic efficiency. Within
17 telecommunications, a tax on monthly local landline
18 access rates will create almost no deadweight loss or
19 loss in economic efficiency since the price elasticity
20 for local access has been estimated to be very near
21 zero: -0.005.¹⁷

22

¹⁷ Hausman, Jerry. "Efficiency Effects on the U.S. Economy from Wireless Taxation," National Tax Journal (vol. LIII, No. 3, part 2; 2000), pages 733-742. Excerpt is from page 735, citations omitted.

1 Therefore, any surcharge on telecommunications services used to fund
2 Lifeline should be levied only on basic monthly rates if and when a
3 company seeks recovery.

4

5 **Q. WHAT OPTIONS EXIST FOR ESTABLISHING A SURCHARGE ON**
6 **BASIC LOCAL RATES TO FUND LIFELINE SERVICE, AND WHICH**
7 **OPTION DO YOU RECOMMEND?**

8 **A.** Generally, I would identify two options: (1) an industry-wide pool or
9 fund, or (2) a surcharge levied by each local service provider to fund its
10 own Lifeline discounts. Of these, the former carries potential
11 disadvantages in terms of necessary administration costs, and a need to
12 collect and distribute funds between carriers. The latter carries potential
13 disadvantages from a competitive standpoint, because one carrier might
14 have to charge a higher surcharge than another, which could skew
15 customer choices between providers. On the other hand, for major
16 carriers (that are now providing all the Lifeline service available in
17 Florida), there may be little practical difference between the two
18 approaches since each carrier will both be collecting (through
19 surcharges) and disbursing (through Lifeline benefits to its customers)
20 substantial amounts of support. Therefore, I recommend that the
21 Commission authorize each carrier that offers Lifeline service to
22 surcharge the basic rates of its own customers for the costs of providing
23 that service (including relevant administrative costs).

24

25

1 Q. WHAT DISADVANTAGES EXIST FOR YOUR RECOMMENDED
2 APPROACH, AND HOW CAN THEY BE ADDRESSED?

3 A. One important concern is competitive neutrality, because competing
4 wireline carriers would not pay support to other wireline carriers that are
5 providing Lifeline. A solution to this concern may be to require all
6 certificated wireline carriers to offer Lifeline service if they provide any
7 basic service – with the same ability to collect the costs through a
8 surcharge on their own customers. Rather than requiring all carriers to
9 contribute, this approach would attempt to equalize burdens by requiring
10 all carriers to offer Lifeline service.

11

12 Some other concerns are more difficult to deal with in the context of any
13 Lifeline program that is funded through surcharges or assessments on
14 telecommunications services of some kind. Other competing
15 technologies might be difficult to tax (such as VoIP providers), or
16 unreasonably costly to tax (such as wireless service). Given the shifting
17 boundaries of technology and service in the industry, some providers
18 may brand or structure their service offerings to try to escape a definition
19 that would require them to offer a Lifeline option – in the same way
20 some providers will likely try to escape any definition of what services
21 might be taxed through an alternative surcharge approach. Ultimately,
22 given the increasingly competitive nature of this industry, any industry-
23 based cross-subsidy (which Lifeline is) will become more difficult and
24 perhaps impossible to sustain as competitive alternatives undercut
25 whatever support sources for that subsidy (i.e., levies on particular

1 services) are attempted. This is an important reason to try to limit the
2 program's scope, as much as possible, to benefits that actually increase
3 telephone penetration rather than those that simply transfer money
4 among telephone service customers who would have had phones
5 anyway.

6

7 **Q. SHOULD FLORIDA BE CONCERNED ABOUT A FUNDING**
8 **OUTFLOW TO OTHER STATES DUE TO THE FEDERAL**
9 **UNIVERSAL SERVICE PROGRAM?**

10 **A.** No, for three reasons.

11

12 First, residents of all states pay Federal taxes, and participate in a wide
13 variety of programs that provide corresponding benefits to one degree or
14 another. Residents of Florida will come out ahead with respect to some
15 programs, while coming out behind on others. This is fair, because it is
16 almost certainly impossible to design a tax and benefit system to be net
17 neutral to every state with respect to every program.

18

19 Florida tends to be a net beneficiary of Federal programs. In 1977, the
20 late Senator Daniel Patrick Moynihan initiated an ongoing, annual
21 nationwide study of these "balances of payments" across the country.
22 As of 1998, Florida residents each received an average of \$125 more
23 from the Federal government than they paid to it.¹⁸ By contrast, a

¹⁸ Leonard, Herman B., Walker, Jay H. and Jose A. Acevedo. The Federal Budget and the States: Fiscal Year 1998. Taubman Center for State and Local Government, John F. Kennedy School of Government and Office of Senator Daniel Patrick Moynihan (December 9, 1999), page 51.

1 negative universal service outflow of \$20 million/year would amount to
2 about \$1 per Florida resident. While this analysis is somewhat dated
3 because the study program was discontinued for a number of years, it is
4 notable that Floridians received a net Federal benefit in 15 of the 16
5 years the report references (1983-1998).¹⁹ The principal drivers of that
6 positive balance of payments, Social Security and Medicare,
7 presumably continue to provide substantial cash flows into Florida.

8
9 Second, the FCC has now required California to address the problem
10 caused by its enormous, unverified Lifeline program that is the principal
11 cause for the funding outflow that most states experience.²⁰ While it is
12 not yet known what specific form that remedy will take, the FCC's action
13 offers a reason to expect that the size of the outflow will decrease over
14 time.

15
16 Third, if the origin of the concern is an out-of-control California Lifeline
17 program, it does not necessarily follow that other states should attempt
18 to catch up to California so as to improve their balance of payments for
19 this particular program. Such a possible motivation is not unique to
20 telecommunications; a similar temptation would exist for any Federal
21 program that provides support based on the number of enrolled
22 beneficiaries, where any state could theoretically increase its financial

¹⁹ The last year for which the study was performed was 1999; however, the latest report I could obtain was 1998. As of this writing, the study has been revived and I understand that data analysis is underway for an updated report that may include all years subsequent to 1999. I will furnish an updated report to the Commission if it becomes available prior to the hearing in this matter.

²⁰ FCC, "Report and Order and Further Notice of Proposed Rulemaking," WC Docket No. 03-109, paragraphs 28-32.

1 benefits at the expense of the rest of the country. With respect to
2 Lifeline, the end result of such efforts would be a much bigger, national
3 problem in terms of increasing cross-subsidies between customers, for
4 reasons in fact unrelated to universal service, at a time when
5 intensifying competition should signal the need to reduce subsidies
6 instead. The Commission has pointed to related concerns:

7 It has become increasingly clear that greater emphasis
8 must be placed on accountability. The FPSC believes that
9 the long-term sustainability of the fund is critical, and that
10 appropriate accountability standards are necessary to
11 insure the long-term success of the program.²¹

12
13 Therefore, I believe the Commission should consider changes to its
14 Lifeline program with regard to whether they will increase telephone
15 penetration, not with regard to the net flow of funds for just one of the
16 many Federal programs that collectively benefit Florida.

17
18 **Q. DOES THAT COMPLETE YOUR DIRECT TESTIMONY AT THIS**
19 **TIME?**

20 **A. Yes.**
21
22
23
24

²¹ "Comments of the Florida Public Service Commission Regarding the Federal-State Joint Board on Universal Service Lifeline and Link-Up Recommended Decision," FCC WC Docket No. 03-109, August 18, 2003, page 2.

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Consultant, Wilk & Associates, Incorporated, San Francisco, CA (1992-1999)

Expert consultant to clients in the telecommunications, natural gas, electricity and postal industries regarding regulation and public policy. Analyzed industry trends; provided case-specific advice regarding legislative and regulatory efforts; delivered expert testimony; served in "sounding board" role to evaluate client initiatives from the perspective of a senior government decision maker; helped develop corporate strategies vis a vis public policy; reviewed and analyzed technical issues of economics, finance and statistics; assisted with public relations and corporate communications efforts; prepared and edited client draft expert testimony, legal briefs, lobbying documents and reports. Typical client interactions at officer level up to CEO; frequent interactions also with attorneys and external affairs staff. Client relationships and assignments fulfilled in many states and nationwide.

Commissioner's Advisor, California Public Utilities Commission, San Francisco, CA (1987-92)

Senior Advisor and Chief of Staff for former CPUC President and Commissioner G. Mitchell Wilk. Lead Commission Advisor on telecommunications issues; also responsible for transportation, water, and selected energy matters. Helped develop Commission regulatory policy, manage proceedings and cases, direct efforts of CPUC staff, draft and revise Commission decisions. Central involvement in successful CPUC regulatory reform initiatives in local exchange, cellular, long distance and pay phone sectors of telecommunications. Analyzed proposed legislation and assisted in formulating Commission legislative strategy

and positions. Made numerous public appearances representing the Commission, including testimony before state legislative oversight committees. Served as media contact on many issues, gave print and radio interviews, and prepared and reviewed press releases.

Staff Analyst, Policy and Planning Division, CPUC (1982-87)

Analyzed regulatory policies and assisted in CPUC organizational strategic planning. Co-author of several Commission Reports to the Legislature regarding telecommunications issues. Advised Executive Director on strategic planning opportunities for the agency and on strategies for effective use of computers and office automation. Helped design agency reorganization that clarified staff advocacy, advice and implementation roles.

Consultant, Citizens Utility Board, Chicago, Illinois (1985-87)

Consultant to consumer advocacy board on several matters before the Illinois Commerce Commission involving energy utility diversification, nuclear power "construction work in progress," and realignment of local telephone usage rates. Testified before ICC.

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Co-taught graduate courses in Government Regulation of Business (Harvard University, Kennedy School of Government), and Telecommunications Regulation (Golden Gate University, San Francisco). Head teaching assistant for graduate courses in microeconomics, econometrics, and managerial economics (Kennedy School). Guest lecturer in graduate and executive programs at U.C. Berkeley Hass Graduate School of Business, U.S.C. Graduate School of Management, U.C. Berkeley Sloan Summer Institute, University of San Francisco, the Naval Postgraduate School (Monterey), and the Michigan State University Institute of Public Utilities ("Camp NARUC").

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Articles:

“Open Letter to California’s Governor” (with David J. Teece, and other energy experts), in Montgomery Research, Inc. (ed.) The Utilities Project Volume 4 (San Francisco, CA, 2004).

“California: Policy and Reform” (with David J. Teece), in Montgomery Research, Inc. (ed.) Leadership in a Shifting Market, The Utilities Project Volume 3 (San Francisco, CA, 2003).

Second “Manifesto on the California Electricity Crisis” (with David J. Teece et al.). A co-author of, and one of 20 signatories to a statement on forward-looking policy responses to California’s electricity problems, Haas School of Business, U.C. Berkeley, January 31, 2003.

“California’s Electricity Markets: Structure, Crisis, and Needed Reforms,” (January 2003; see <http://www.lecg.com/website/home.nsf/OpenPage/Energy-ResearchPapersTestimony>). Contributor to, and principal editor of comprehensive LECG study documenting history of California electricity crisis and exploring potential reforms.

“Enduring Lessons of the California Electricity Crisis,” in *Regulatory Review 2002/2003*, edited by Peter Vass (Centre for the Study of Regulated Industries, University of Bath School of Management, Bath, UK, March, 2003); reprinted in *The Development of Energy Regulation – A Collection of Reviews* (CRI, May, 2003).

“The Next Stage of Local Telephone Regulatory Reform” (with G. Mitchell Wilk), in *Markets, Pricing and Deregulation of Utilities*, edited by Michael A. Crew and Joseph Schuh (Kluwer Academic Publishers, Boston, MA, 2002).

“The California Electricity Manifesto: Choices Made and Opportunities Lost” (with James D. Ratliff and David J. Teece), in *Electricity Pricing in Transition*, edited by A. Faruqui and B.K. Eakin (Kluwer Academic Publishers, Boston, MA, 2002).

“Manifesto on the California Electricity Crisis,” (with David Teece et al.). A co-author of, and one of 31 signatories to a policy statement on appropriate governmental responses to the electricity crisis, Haas School of Business, U.C. Berkeley, January 26, 2001.

"Give Electricity Consumers A Chance," (with John Scadding), San Diego Union-Tribune, August 7, 2000.

"Bundling and Other Possible Ends to Legacy Regulation: Reply to Professor Noam's Article" (with G. Mitchell Wilk), NRRI Quarterly Bulletin 20, No. 2 (Summer, 1999), 119-123.

"Postal Service and the Telecommunications Analogy," in *Emerging Competition in Postal and Delivery Services*, edited by M.A. Crew and P.R. Kleindorfer (Kluwer Academic Publishers, 1999).

"Common Ground," Public Utilities Fortnightly, May 1, 1993 (analyzes policy similarities between competitive telecommunications and natural gas markets).

"'Infrastructure' and the Telephone Network: Defining the Problem," Incidental Paper, Program on Information Resources Policy, Harvard University (July, 1992).

"The Oligopoly Paradox: Cellular Telephones and a Difficult Regulatory Problem," Journal of Policy Analysis and Management 10, Vol. 4, 671-675 (1991).

"Private Pay Phones and AOS: A Current Note in a Continuing Regulatory Theme" (with G. Mitchell Wilk), paper delivered at Annual Williamsburg Regulatory Conference, December 1988.

"Mixing Computer III and Cost of Service Regulation: Some State Concerns," Telematics, Vol. 4, No. 5, 3-5 (1987).

**Case
Studies:**

"Competitive Bypass of Pacific Gas & Electric," in *Cases in Microeconomics*, Jose A. Gomez-Ibanez and Joseph P. Kalt (1990).

"The CPUC and Telecommunications," Harvard Business School Case Program, Harvard University (1987).

**Testimony/
Comments:**

Federal Communications Commission
Federal District Court, Northern District of California
California Legislature
California Public Utilities Commission
Florida Public Service Commission
Hawaii Public Utilities Commission
Illinois Commerce Commission
Indiana Utility Regulatory Commission

Oregon Public Utility Commission
Texas Legislature
Washington Utilities and Commerce Commission

**Invited Speeches/
Presentations:**

Bellcore and Bell Canada Telecommunications Costing Conference
CPUC Telecommunications Training Seminar
California Telephone Association Annual Conference
Capitol Publications Seminar on Computer III and ONA
Cellular Telecommunications Industry Association
ComNet West
ElectroniCast Network Futures Conference
Golden Gate University
Hawaii Public Utilities Commission
Infocast Competitive Power for California Conference
Information Industry Association
The Junior Statesmen Foundation
Los Angeles County Bar, Antitrust & Trade Regulation Section
National Association of Regulatory Utility Commissioners
National Association of Telecommunications Officers and Advisors
National Engineering Consortium: Eastern Communications Forum
Personal Communications Industry Association: Supercomm
Probe Research
RBOC and GTE Affiliated Interests Group Conference
Rutgers University Postal and Regulated Industries Conferences
San Diego Communications Council
Telocator Spring International Convention
United States Telephone Association Capital Recovery Seminar
UC Berkeley Haas Graduate School of Business
UC Berkeley Graduate School of Public Policy: Sloan Summer Institute
Washington Independent Telephone Association
Washington Utilities and Commerce Commission
Western Conference of Public Service Commissioners

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