BEFORE THE

Federal Communications Commission

WASHINGTON, D.C.

In the Matter of	)	
	)	
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
	)	
	)	

COMMENTS OF TIME WARNER TELECOM INC.

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ATTORNEYS FOR TIME WARNER TELECOM INC.

April 17, 2008

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Time Warner Telecom Inc. ("TWTC")[1],, by its attorneys, hereby files these comments[2] in response to the Notice of Proposed Rulemaking in the above-referenced proceeding and in the accompanying Recommended Decision of the Federal-State Joint Board on Universal Service.[3]

I. INTRODUCTION AND SUMMARY

The *NPRM* and the *Recommended Decision* address a wide range of issues associated with ensuring sufficient levels of support for voice and broadband services while limiting the increase in the size of the federal subsidy pool. The *Recommended*

[1] Time Warner Telecom Inc. amended its Certificate of Incorporation effective March 12, 2008 to change its name to tw telecom inc. in preparation for a broader name change that will be effective July 1, 2008. The company will continue to use and be known as Time Warner Telecom Inc., its trade name, until July 1, 2008.

[2] In these comments, TWTC restricts its discussion to universal service funding issues related to non-rural carriers.

[3] *See High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, Notice of Proposed Rulemaking, 23 FCC Rcd 1531, (2007) ("*NPRM*"); High-Cost Universal Service Support; *Federal-State Joint Board on Universal Service, Recommended Decision*, 22 FCC Rcd 20477 (2007) ("*Recommended Decision*").

Decision proposes separate Provider of Last Resort (POLR), Broadband and Mobile Funds as a means of advancing this objective. Although the creation of such separate funds appears to be appropriate, such funds will only be efficiently targeted and effective if the Commission accounts for certain basic, but underappreciated, principles and facts.

For example, neither the Joint Board nor the Commission appears to have focused sufficiently on the fact that it makes no sense to subsidize rates for services that have been freed from rate regulation. Service providers will set prices for such services based on considerations of demand elasticity, and subsidies will have no effect on rate levels or affordability.

In addition, neither the *Recommended Decision* nor the NPRM seems to account fully for the fact that legacy voice networks have already been deployed to reach virtually every community in the country, that those networks have been largely depreciated and paid for, and, when the time comes for replacement, carriers will not deploy circuit-switched networks, but rather next-generation broadband networks. Furthermore, such packetized networks offer carriers much higher revenue opportunities at much lower costs than has been the case with circuit-switched networks.[4] The higher revenues yielded by broadband networks appear to cover ILECs' incremental costs of providing service in virtually every area served.

[4] For example, RBOCs have seen substantial increases in their wireline average revenue per unit. *See* Verizon, *Verizon Caps Successful Year With Strong 4Q Results* (Jan. 28, 2008) *available at* http://newscenter.verizon.com/press-releases/verizon/2008/verizon-caps-successful-year.html ("Due to continued strong demand for broadband and TV services, ARPU in legacy Verizon wireline markets (which excludes former MCI consumer markets) increased 11.0 percent to $59.48, compared with the fourth quarter 2006.").

Nor have regulators adequately examined the flawed assumption that ILECs' provider of last resort or "POLR" obligations justify limiting subsidies exclusively to ILECs. All eligible telecommunications carriers commit to essentially the same obligation to serve all customers in an area, making it logical to allow all carriers to obtain access to subsidies. Moreover, this approach promotes competition, which itself should ultimately render universal service subsidies unnecessary.

When these principles and factors are accounted for, clear and substantial opportunities for improving the existing federal subsidy regime become apparent. *First*, the Commission should not subsidize any services subject to rate deregulation. Subsidies for deregulated services such as broadband, mobile wireless (and in certain areas, local exchange service) should be limited to the one-time costs of constructing networks in unserved or underserved areas. Subsidies in this case from all funds should provide only targeted support to wireless and wireline networks in those areas where the one-time forward-looking cost of building a broadband network is so high that a private firm would not be able to justify construction in the absence of subsidies. *Second*, the Commission should abandon its outdated cost model for non-rural carriers and should replace it with a system of targeted support for modern facilities. *Third*, competitors should continue to be eligible to receive subsidies where an incumbent is eligible to receive support.

Finally, there is no basis for the Commission to adopt competitive bidding as a means of choosing the firm that provides subsidized services. Auctions are extremely complex and would be needlessly costly to conduct. Moreover, reverse auctions are only successful in markets where multiple networks are able to bid. In these markets, it is

likely that the services at issue have been deregulated due to the presence of the very competitors that make auctions possible. As explained, it makes no sense to subsidize services that have been freed of rate regulation.

II. THE COMMISSION SHOULD REVISE THE FEDERAL SUBSIDY REGIME TO MORE EFFECTIVELY TARGET SUBSIDIES TO SERVICES AND LOCATIONS THAT TRULY REQUIRE SUPPORT

A. Fundamental Flaws In The Current Federal Subsidy Regime Cause The Total Size Of The Subsidy Pool To Be Far Larger Than Is Necessary Or Appropriate.

The current federal subsidy system is too large because it is based on outdated assumptions that are illogical in today's environment. For example, the current system is based on an assumption that rates for services that have been deregulated should be subject to subsidy, which, as explained below, makes no sense in an environment where many state commissions have price deregulated bundled services. There is also an assumption that non-rural ILECs need at least some support to ensure that rates are affordable, but this is unlikely to be the case when all of the revenues yielded by the ILECs' subsidized networks are considered. In addition, the model that estimates non-rural ILECs' costs is both inaccurate and unnecessary. Finally, it is assumed that ILECs' provider of last resort "obligations" justify universal service subsidies, when this too is not the case.

1. It Does Not Make Sense To Subsidize Services That Have Been Deregulated.

Many of the services that would be eligible for subsidy under the framework proposed by the Joint Board in the *Recommended Decision* are not subject to rate regulation. This is the case with all mobile wireless services and broadband internet

access services. It is also the case with basic telephone service in many areas.[5] Where this is the case, it makes no sense for the Commission to seek to use subsidies as a means of ensuring that rates remain "affordable." This is because, where incumbents' rates are deregulated, prices rise to whatever level the market will bear (i.e., the point at which additional rate increases cause customer defections that offset higher revenues from customers that stay). *See Gillan Dec*. ¶ 16. Providing ILECs with federal support does not keep rates affordable because support does not change the profit-maximizing rate levels chosen by the incumbent.

Furthermore, in nearly all instances in which rates have been deregulated, it is because the state (in the case of local telephone service) or federal (primarily in the case of mobile wireless and broadband internet access) regulator has concluded that competitive pressures will discipline the ILECs' prices.[6] Federal subsidies are designed to provide support to carriers who would, in the absence of subsidy, be unable to serve a particular area. The fact that rates are deregulated in a particular area as the result of competition is *prima facie* evidence that subsidies are unnecessary.

In fact, support is simply supplemental revenue to an incumbent. *See id*. ¶ 21. There is no end to the competitive mischief made possible by supplemental revenues, which can fund winback programs, competitive investments, or targeted rate reductions

[5] For example, in Texas, almost 70 percent of AT&T's exchanges are deregulated. *See* Declaration of Joseph Gillan n.9 ("*Gillan Decl*."); Petition for Review of Monthly Per Line Support Amounts from the Texas High Cost Universal Service Plan, Texas P.U.C., Universal Service Reform Coalition Testimony of Michael D. Pelcovits, P.U.C. Dkt. No. 34723, n.12 (2008) ("*Gillan Testimony*"). In exchanges still under some form of regulation, AT&T is not price regulated for bundled voice services. *See id.* at 45.

[6] It is important to note that the ILECs in many cases have raised rates in those areas where rates have been deregulated and where there is allegedly sufficient competition to constrain ILECs' rates. *See Gillan Decl.* n.9.

in anticipation of competition. Consequently, federal USF payments are more likely to serve as a barrier to entry than keep rates affordable.

2. It Is Unlikely That Non-Rural Carriers Require Any Subsidies To Maintain Their Networks Today.

The current federal High Cost Fund subsidies are not based on a comparison between average and forward looking costs.[7] This regime only accounts for the costs of circuit-switched services, and it implicitly assumes that a carrier's revenues from other services provided over the subsidized network are insufficient to cover its costs in high-cost areas. This implicit assumption must now be reevaluated. This is because, in many instances, the ILECs' revenues in high cost areas are sufficient to cover their costs of service if all (voice, video and data) services that are provided over common facilities are taken into account. *See Gillan Decl.* ¶ 24. Indeed, most ILECs' revenues are greater than their variable costs, which are (at most) the costs associated with their current POLR obligation to provide service. *See id.* ¶ 23. These increasing revenues stem from the deployment of new services and features such as wireline broadband internet access. To the extent that incumbents rely on legacy circuit-switched networks to provide service, those networks have been largely or entirely paid for. *See id.* ¶ 27. Based on these factors, any incumbent claims that continued subsidies are needed at the same levels as in the past are grounded in assumptions derived from another regulatory era, without an adjustment for the conditions that are actually shaping the industry today. *See id.* ¶ 12.

[7] However, the CALLS Plan subsidy is based on a revenue calculation, making the discussion herein even more relevant to that subsidy. *See Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers*; *Low-Volume Long-Distance Users; Federal-State Joint Board On Universal Servic*e, Sixth Report and Order *et al.*, 15 FCC Rcd 12962 ¶¶ 206-207 (2000).

The current system overcompensates ILECs for the cost of their shared-use networks in several ways. *First*, as noted above, ILECs have been investing in new technologies that create new sources of revenue. For example, Verizon reported an $18.7 billion increase in revenues at the end of 2007, and explained that the introduction of new products and services, including FiOS, have "led to increased revenue per customer, which has helped offset the losses we experienced in some of our legacy products."[8] Despite these rapidly increasing revenues, the current cost model that AT&T, Verizon, and other incumbents use to estimate their "need" for federal USF support does not take these factors into account. Therefore, any model adopted must account for the importance of packet technology (and the services made possible by packet-based networks) and other new services that contribute to an ILEC's revenues. Internet access alone, which relies on the same loop plant as basic local service, accounts for a significant portion of the revenues generated by the shared-use loop facility. *See id.* ¶ 24. Yet none of these revenues are taken into account in determining the need for high cost support.

Second, packet-based networks not only enable ILECs to offer more services over shared facilities, but they also substantially reduce the cost of providing these services, particularly voice services. *See id.* ¶ 23. For instance, AT&T has announced that, as a result of its long-term investment plan to achieve "convergence to IP," its networks are evolving, converging, and becoming more efficient and capable, allowing "cost reduction

[8] *See Verizon Communications 2007 Annual Report* at 7, *available at* http://investor.verizon.com/financial/quarterly/pdf/07_annual_report.pdf.

opportunities to continue indefinitely."[9] Similarly, Verizon estimated back in 2004 that "its move to packet telephony will let it halve the $4.2 billion in capital and operational costs currently devoted to sustaining its PSTN facilities."[10] Packetized networks are characterized by economies of scope that far exceed those of circuit switched networks. This essentially means that, the more services a carrier provides over the network, the lower its incremental costs are for each service.[11]

Third, the costs of building a network from scratch are significantly higher than the costs associated with continued operation and recovery of non-depreciated investment. As described below, the FCC's High Cost model provides sufficient support to pay for a network built from the ground up. But the incumbents have largely paid for the construction of their circuit-switched voice networks. For example, investments by incumbents in copper networks, which have been in place for many years, have been largely recovered. *See Gillan Testimony* at 52; *Pelcovits Testimony* at 21. In many cases, the costs incurred by the ILECs in their initial investments were substantially lower than the costs the ILECs would incur today.

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[9] *See* Presentation by John Stankey, Group President-Telecom Operations, AT&T Inc., at 54 delivered to 2007 Analyst Conference, Dec. 11, 2007, *available at* http://www.att.com/Common/merger/files/pdf/Stankey_bw.pdf.

[10] *See* Redorbit.com, *Verizon Takes Next Big Step Towards VoIP* (Dec. 24, 2004) *available at* http://www.redorbit.com/news/technology/113914/verizon_takes_next_big_step_toward_voip/.

[11] *See* Petition for Review of Monthly Per Line Support Amounts from the Texas High Cost Universal Service Plan, Texas P.U.C., Universal Service Reform Coalition Testimony of Michael D. Pelcovits, P.U.C. Dkt. No. 34723, at 16 (2008) ("*Pelcovits Testimony*").

In sum, the ILECs are highly profitable, have shrinking investment bases and increasing revenues, and are only likely to become more profitable in the future. Because revenue from new investments and depreciation of old investments are allowing ILECs to enjoy growing consumer revenues per line, it does not make sense to set support levels for the POLR fund at the same levels as the current High Cost Fund.

3. The High Cost Model Used To Establish Non-Rural High Cost Support Is Fundamentally Flawed

The current federal USF Cost Model is no longer reliable because it does not reflect the manner in which costs are incurred or the revenue opportunity available from the networks currently in service. For example, the High Cost Model assumes that carriers deploy and will continue to deploy exclusively circuit-switched networks, but most networks being deployed today are packet-switched. *See Gillan Decl.* ¶ 12. Similarly, the current model assumes that ILECs construct their distribution networks with fiber feeder cable and copper to the end user premises, but AT&T and Verizon are currently deploying passive optical networks, in Verizon's case with fiber all the way to the home.[12] It makes no sense to rely on a model that estimates the cost to rebuild a circuit-switched network with copper distribution facilities at a time when that basic architecture has been superseded by packet technology and fiber loops.

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[12] *See, e.g.*, Press Release, AT&T, Inc., New-Generation Gigabit Passive Optical Network (G-PON) Equipment from Alcatel-Lucent, Ericsson Will Be Used in "New Build" Neighborhoods across AT&T's Local Telecommunications Footprint, June 15, 2007, *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=23962; News Release, Verizon, Verizon Tops 1 Million FiOS Customers, Jan. 28, 2008, *available at* http://investor.verizon.com/news/view.aspx?NewsID=886 (noting that Verizon delivers FiOS TV, FiOS Internet and voice service over an advanced fiber-optic network all the way to customers' homes).

Furthermore, the current model estimates the cost to *replace* the existing network.[13] But, the RBOCs have largely recovered their investments in digital local circuit switching through depreciation. *See Gillan Testimony* at 67. Incumbents do not therefore incur replacement costs for circuit switches. Instead, ILEC costs associated with these networks are generally limited to the costs of keeping such networks in "steady state." *See Gillan Decl*. ¶ 23. Thus, even if the current model perfectly predicted the cost to replace a network based on circuit switches, that information would not tell the Commission anything about the cost of maintaining even the circuit-switched networks typically in service today.

Nor is there any point in spending millions of dollars to develop a new cost model based on the costs to replace new packet based networks, because the access connections to that network will be funded, where needed, by the Broadband Fund. As explained below, that fund should provide only *targeted* support to those areas where the one-time, forward-looking cost of building a broadband network is so high that a private firm would not be able to justify construction absent subsidies. In any event, the only purpose of a supplemental POLR fund would be to make sure that the existing voice network does not deteriorate until replaced.

4. ILEC POLR Obligations Do Not Justify Subsidies.

The current federal High Cost models and funding levels were established to provide sufficient revenues for ILECs to (1) construct networks from scratch to effectuate

[13] *See Federal-State Joint Board on Universal Service*, Report & Order, 12 FCC Rcd 8776, ¶ 214 (1997) ("*Universal Service Order*") (explaining that to "ensure that universal service support mechanisms send the correct signals for entry, investment, and innovation in the long run, the Commission should use…the forward-looking economic cost of *building* and operating the network needed to provide the services") (emphasis added).

the Commission's goal of delivering affordable telecommunications service to "consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas;" (*see Universal Service Order* ¶ 1; 47 U.S.C. § 254(b)(3)) and (2) provide sufficient funding to the households where the ongoing cost of providing phone service exceeded the regulated rate for phone service. Today, the goal of universal availability of affordable telephone service has been essentially realized. With the help of the current cost model and universal service funding levels, nearly every household is now passed by a network capable of providing wireline phone service, and in many cases broadband[14] as well as video service.[15] In an environment of virtually ubiquitous networks, the POLR obligation can be satisfied by funding the incremental, one-time cost of extending networks to the few remaining unserved locations, plus the cost to maintain the network in a steady-state without deterioration.

Moreover, an incumbent's need for a limited subsidy to fulfill their POLR obligation does not justify restricting the subsidy only to incumbent carriers. To qualify as an eligible telecommunications carrier ("ETC") to receive USF high cost funding, a CLEC is required to assume the obligation to provide the subsidized services throughout the geographic area for which the CLEC acts as an ETC. 47 U.S.C. 214(e)(1)(A).[16]

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[14] *See High-Speed Services for Internet Access: June 27, 2007*, Industry Analysis and Technology Division, FCC Wireline Competition Bureau, at 3 (Mar. 2008), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-280906A1.pdf (reporting that as of June 27, 2007, 96% of U.S. households had access to broadband services).

[15] *See* News Release, AT&T, Inc., *AT&T Delivers Strong Fourth Quarter, Reaffirms 2008 and Multi-Year Outlook*, Jan. 24, 2008, *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=25073 (noting that by the end of 2010, AT&T's U-verse service will 30 million homes in 22 different states).

[16] While incumbent LECs are required to share their facilities with ETCs under Section 259, that provision does not require that incumbent LECs extend their facilities to all

Accordingly, CLECs eligible to receive universal service subsidies bear the same provider of last resort obligations as the ILEC in such areas. Moreover, ensuring that subsidies are "portable" from the ILEC to an ETC obviously fosters competition in high cost areas.[17] Unfortunately, under the current rules, the level of subsidies to which an ILEC is eligible is not set based on the number of lines the ILEC serves. Thus, a competitor receives a subsidy when it wins an ILEC customer, but the level of the subsidy received by the ILEC remains unchanged. As a result, an ILEC's per-line subsidy actually increases when it loses a customer.[18] This regime is economically inefficient, leads to increases in the size of the high cost fund and does not reflect the fact that ILECs' costs decrease when they serve fewer lines. It should therefore be changed to account for the fact that an ILECs' costs decline at least to some extent when it loses customers.

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locations in a subsidized area; it only requires that incumbents share their *existing* facilities. *See Implementation of Infrastructure Sharing Provisions in the Telecommunications Act of 1996*, Report and Order, 12 FCC Rcd 5470, ¶ 96 (1997) ("We also affirm our tentative conclusion that no incumbent LEC should be required to develop, purchase, or install network infrastructure, technology, facilities, or functions solely on the basis of a request from a qualifying carrier to share such elements when such incumbent LEC has not otherwise built or acquired, and does not intend to build or acquire, such elements.").

[17] *See Universal Service Order* ¶¶ 287-289 (noting that portability fosters competition because if a CLEC can serve a customer's line at a much lower cost than can an ILEC, this may indicate an inefficient ILEC; but the presence of a more efficient competitor will force the ILEC to either increase its efficiency or lose customers).

[18] *See* Billy Jack Gregg, Director, Consumer Advocate Division, Public Service Commission of West Virginia, testimony before the Communications Subcommittee, Senate Commerce, Science and Transportation Committee at n.21 (March 1, 2007), *available at* http://commerce.senate.gov/public/_files/Testimony_BillJackGregg_WVPubServiceCommiss_BillyJackGreggTestimonySenateCommerce3107.pdf ("Because the High Cost Loop mechanism is designed to recover an incumbent's full revenue requirement regardless of the number of lines served, the loss of lines by the incumbent will increase per line support, all other things being equal").

Finally, the Joint Board (*see Recommended Decision* ¶ 35) and the Commission have both understandably expressed concern that CLEC eligibility for high cost subsidies has caused the high cost fund to increase too much in recent years. But that increase appears to have been due to the participation of wireless carriers in the fund far more than the participation of wireline competitors.[19] Wireless subsidies would be transitioned to the new Mobile Fund under the Joint Board's proposal. Allowing wireline competitors that would continue to be eligible for reimbursement from the POLR fund to compete for subsidized customers is unlikely to increase the size of the fund significantly in the future.

B. The Commission Should Modify Its Existing Subsidy Scheme To Account For These Flaws

By accounting for the flaws and incorrect assumptions that undergird the existing federal subsidy regime, the Commission can target subsidies far more effectively and reduce the overall size of the subsidy pool. Indeed, in a recent settlement in a Texas universal service proceeding, the incumbent LECs (including AT&T and Verizon) have essentially conceded that the considerations described herein and in the attached declarations support substantial reductions in legacy universal service subsidies. In that settlement, AT&T, Verizon and other ILECs have agreed to reduce the subsidy pool in Texas from $395 million to $237 million over the next several years.[20] Similar reforms

[19] *See High-Cost Universal Service Support*, Recommended Decision, 22 FCC Rcd 8998 ¶ 7 (2007) ("The growth of support to wireless competitive ETCs may indeed have been much greater than the growth of support to wireline competitive ETCs").

[20] *See* Regulatory Source Associates, LLC, Anna-Maria Kovacs, "Telecom Regulatory Note, USF Reform in Texas" (Apr. 9, 2008).

in California have reduced the subsidy pool by nearly 75 percent.[21] Adoption of several basic reform principles at the federal level would enable to Commission to achieve similar reductions.

First, federal subsidies should not provide *ongoing* support for the provision of any services that have been price deregulated. As explained, in markets for non-rural carriers that have been deregulated, market forces, not regulation, determine rate levels. This means that ongoing support should not be available for mobile wireless services or broadband services in any geographic area, and ongoing support should be available for basic telephone service only in areas where prices for such services remain rate-regulated.

The Commission should limit application of federal subsidies to services that are price deregulated to project-specific network extensions needed to serve unserved or underserved areas. Once such network extensions have been completed, there should no need to subsidize ongoing carrier operations because (1) the vast majority of costs incurred by telecommunications carriers are the one-time, sunk costs associated with network deployment and the incremental costs of providing services are relatively low, and (2) new networks should yield substantial revenue opportunities for carriers once constructed.

[21] *See* California Public Utilities Commission, Press Release, *PUC Better Targets High Cost Areas, Saves Consumers $300 Million* (Sept. 7, 2007) ("By today's decision, the CHCF-B, currently at $436 million annually, will decline by approximately $315.4 million by July 1, 2009, representing a 74 percent reduction in subsidy expenditures. Thus, the CHCF-B retail surcharge born by telephone consumers will be reduced from 1.3 percent to 0.5 percent, effective January 1, 2008.").

Second, the support for ongoing operations for services in markets that continue to be subject to regulation should be available where the incremental cost of network extension plus steady-state maintenance exceed the total revenues yielded by a subsidized network in an area.

Third, because all ETCs, competitors and incumbents alike, have POLR obligations, there is no justification for restricting federal USF subsidies to incumbents alone. As explained above, continuing to provide CLECs with federal USF support and portability rights serves to foster competition and increase the efficiency of ILECs. Moreover, the lack of subsidies for which incumbents are eligible should be reduced to account for cost savings associated with line loss.

III. REVERSE AUCTIONS SHOULD NOT BE USED AS A MECHANISM TO ADMINISTER THE NEW FUNDS.

The reverse auction model poses two significant problems: one theoretical, and one practical. The theoretical problem, or the "reverse auction paradox" as Mr. Gillan puts it, is that a reverse auction would be inconsistent with a deregulatory model. *See Gillan Testimony* at 90-91. A reverse auction can only be successful where multiple networks can bid for support. However, where multiple networks can bid, it is often the case that the market is deregulated. As explained, subsidies are inappropriate in deregulated markets. Accordingly, because a reverse auction is only effective under the same conditions (the presence of multiple providers) in which support is likely to be inappropriate in the first place, reverse auctions would only be useful under certain conditions.

The practical problem associated with reverse auctions is that there are significant institutional and regulatory processes that must be resolved before conducting a reverse

auction. As Commissioner Copps aptly noted in his concurrence, there are "many unanswered questions regarding such a bidding approach on quality of service and provider of last resort obligations, not to mention many other concerns that have been raised."[22] For example, the FCC will have to determine the appropriate area to subject to an auction, and there may be many instances where competitors might only be able to serve a subset of the designated area, making bidding infeasible. Given the administrative complexities of a reverse auction, and the fact that it is most likely to be viable only under the same set of conditions that make it unnecessary, the Commission should not devote any resources to it at this time.

IV. CONCLUSION

For the foregoing reasons, TWTC's suggestions regarding the recommendations of the Federal-State Joint Board on Universal Service should be adopted.

[22] *NPRM,* Statement of Commissioner Michael J. Copps, Approving in Part & Concurring in Part.

Respectfully submitted,

/s/

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April 17, 2008

APPENDIX A

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of High-Cost Universal Service Support Federal-State Joint Board on Universal Service	)))))	 WC Docket No. 05-337 CC Docket No. 96-45

DECLARATION OF JOSEPH GILLAN

I. Introduction and Qualifications

1. My name is Joseph Gillan. My business address is PO Box 7498, Daytona Beach, Florida, 32116. I am a consulting economist with a practice specializing in the telecommunications industry.

2. I am a graduate of the University of Wyoming where I received B.A. and M.A. degrees in economics. My graduate program focused on the analysis of economic issues involving public utilities, including telecommunications.

3. In 1980 I was recruited to join the Policy Analysis and Research Division at the Illinois Commerce Commission, the state agency responsible for regulating public utilities in Illinois. From 1980 to 1985, I was responsible for the policy analysis of issues created by the emergence of competition in regulated markets, in particular the telecommunications industry.

4. While on the staff of the Illinois Commission, I was named to the Staff Subcommittee for the Communications Committee of the National Association of

Regulatory Utility Commissioners (NARUC). I was also appointed to the Research Advisory Council overseeing the National Regulatory Research Institute, NARUC's research arm located at Ohio State University.

5. In 1985, I left the Commission to join U.S. Switch, a venture firm organized to develop interexchange access networks in partnership with independent local telephone companies. At the end of 1986, I resigned from my position as Vice President, Marketing and Strategic Planning, to begin a consulting practice.

6. Over the past twenty years, I have provided testimony before more than 35 state commissions, seven state legislatures, the Commerce Committee of the United States Senate, and the Federal/State Joint Board on Separations Reform. I have also been called to provide expert testimony before federal and state civil courts by clients as diverse as the trustees of a small competitive carrier in the Southeast to Qwest Communications. In addition, I have filed expert analysis with the Finance Ministry of the Cayman Islands and before the Canadian Radio-television and Telecommunications Commission.

7. I currently serve on the Advisory Council to New Mexico State University's Center for Public Utilities (since 1985) and I am an instructor in their "Principles of Regulation" program taught twice annually in Albuquerque. I have also lectured at Michigan State University's Regulatory Studies Program, the School of Laws at the University of London, and at Northwestern University's School of Law.[1]

[1] A complete summary of my qualifications, listing of testimony and publications is provided as Exhibit JPG-1, attached to this declaration.

8. The purpose of my declaration is to focus on a specific area of the federal universal service system that is frequently overlooked – *i.e.*, the subsidy provided to the nation's largest incumbent local exchange carriers under the guise of high-cost support calculated by a (now obsolete) cost model, plus the revenue support flowing from the CALLS plan. Together, these programs funnel from the consumers and businesses that ultimately pay into these funds nearly $500 million each year to Qwest, Verizon and AT&T, with nearly 90% of the subsidy provided Verizon and AT&T alone. The distortion caused by providing subsidies to these carriers is particularly important because it is in the areas served by these carriers that most wireline competition occurs. Consequently, to the extent the subsidy is not needed to support service in high-cost rural areas, it is available to subsidize the competitive strategies of these incumbents in their metropolitan markets.

II. Summary of Federal Subsidies Provided Regional Bell Operating Companies

9. AT&T, Verizon and Qwest today receive subsidies under two programs. The first (High-Cost Model Support) is designed to provide support to states with unusually high statewide average cost, calculated using a model of intended to measure forward-looking cost. The second (Interstate Access Support) is the byproduct of a controversial negotiated reduction in interstate carrier access charges, partially funded by a shift in revenues to the universal service system.[2] The projected annual subsidy provided by each program is summarized below:

[2] *Sixth Report and Order* in CC Docket Nos. 96-262 and 94-1, *Report and Order* in CC Docket No. 99-249, and the *Eleventh Report And Order* in CC Docket No. 96-45, Rel. May 31, 2000 ("*CALLS Order*").

Table 1: Projected Annual Subsidy - 2008[3]
(millions)

RBOC	Cost-Model	CALLS	Total
Qwest	$24.5	$34.8	$59.3
Verizon	$29.9	$195.2	$225.1
AT&T	$111.4	$93.1	$204.5
Total	$165.8	$323.1	$488.9

10. As Table 1 discloses, the largest category of subsidy (by almost 2:1) is the revenue-*replacement* mechanism adopted by the CALLS Order. AT&T is the largest recipient of High-Cost Model subsidy as the result of its acquisition of BellSouth. AT&T's High-Cost Model subsidy is associated with three states: Mississippi ($80.1 million), Alabama ($22.7 million) and Kentucky ($8.6 million).[4] AT&T receives an additional $63 million in annual subsidy in Mississippi through its wireless affiliate, New Cingular Wireless PCS, LLC. The principal question addressed by my declaration is whether it is appropriate to provide hundreds of millions of annual subsidy to these large incumbent telephone companies.

11. First, in many areas of the nation, retail prices – at least the most *relevant* retail prices associated with the bundles and packages preferred by consumers – are no longer regulated. In these circumstances, prices levels are determined by market conditions, which is to say that the prices rise (or fall) to whatever level best meets the commercial objectives of the incumbent. As I show below, packages and bundles are most commonly (if not always) *voluntarily* offered by these carriers using statewide rate plans that bear no relationship to underlying cost differences, if any. There is no reason to provide

[3] Source: USAC 2Q2008 projected support, Appendix HC01.

[4] Together, these three states receive 76% of all High Cost Model subsidy in the nation.

incumbents a governmentally-managed subsidy as "compensation" for doing what they have already determined to be in their self-interest.

12. Second, the cost model used to calculate what constitutes "high-cost" for a non-rural carrier is effectively obsolete. The Hybrid Cost Proxy Model (HCPM) used by the FCC to estimate cost is a full *decade* old, and is grounded in a circuit-switched architecture that is no longer forward-looking because of the emergence of packet technology.[5] On the other hand, at the end of this declaration, the evidence suggests that the *actual* investment costs incurred by the RBOCs have largely been recovered, although geographically precise estimates are not available.[6] As a result, the current subsidy mechanism is an expensive paradox, providing the RBOCs subsidy that is *neither* related to the carriers' forward-looking costs *nor* their need to recover prior investments.

13. In order to rationalize the universal service system, the FCC must establish a clear and identifiable public benefit *greater* than the $500 million per year cost that the system imposes on consumers and business to provide subsidy to AT&T, Verizon and Qwest. Where the subsidy is no longer connected to retail rates – *i.e.*, where prices are deregulated – that benefit cannot be attributed to the achievement of rates lower than they

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[5] The basic model structure was adopted by the FCC in its *Fifth Report and Order*, Federal Communications Commission CC Dockets 96-45 and 97-160, Rel. October 28, 1998 ("*Platform Order*"), while specific inputs were adopted a year later. *Tenth Report and Order*, Federal Communications Commission CC Dockets 96-45 and 97-160, Rel. November 2, 1999 ("*Inputs Order*").

[6] As explained later in this affidavit (*see* ¶27 *infra*), the RBOCs do not routinely maintain accounting records that track investment and accumulated depreciation by geographic area. As such, it is not possible to calculate with precision the net investment remaining in allegedly higher-cost rural markets. The most significant variable affecting the percentage of recovered cost is time-since-installation and it is reasonable to assume that, on average, the age of plant in slow-growing rural areas is older – and, therefore, farther along in its recovery – than investment overall.

would otherwise be, because where prices are deregulated, rates *become* what they would otherwise be. Moreover, the subsidy is no longer tied to the cost of expected *future* investments, because the cost-model used to calculate the subsidy does not model the packet-based architecture that will replace today's network. On the other hand, there is no evidence that the subsidy is needed to recover past investment, which is largely recovered and declines each year. With no clear benefit achieved by the continuation of these corporate subsidies, they should be eliminated as soon as practical.

III. Retail Rate Deregulation

14. A primary purpose of federal USF is to ensure that consumers in all regions of the nation have access to telecommunication services that are reasonably comparable to the rates charged in urban areas.[7] Universal service subsidies are provided, in part, on the assumption that, in the absence of such subsidies, prices would increase in some areas (but not others).

15. Importantly, when the federal USF was adopted, the predicate assumption – that is, that the incumbents would charge significantly higher rates in rural markets than urban markets – was untested.[8] In the twelve years since the federal Act was passed, however,

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[7] 47. U.S.C. § 254(b)(1),(3) and (5).

[8] The Commission's NPRM initiating this review appears to be grounded in the same assumption, expressing the concern that competition may be increasing pressures on incumbents to raise prices in rural markets to unaffordable levels:

> New entrants often compete only in densely populated areas that have relatively low costs. This makes it more difficult for incumbent LECs to charge the same rates in both their low-cost densely populated areas and their higher cost, more remote areas.

Notice of Proposed Rulemaking, In the Matter of High-Cost Universal Service Support, WC Docket No. 05-337 and CC Docket No, 96-45, Rel. January 29, 2009 at ¶ 22.

a number of states have granted the incumbents pricing flexibility that today provides data as to whether the assumption is valid.

16. To begin, in many states – including the major recipient-states of Mississippi, Kentucky and Alabama – most rates have been deregulated. Where rates are no longer subject to regulation, price levels will rise until further increases are unprofitable to the incumbent. Generally speaking, this will occur at the point where the price of the service, relative to its alternatives in the market, is sufficiently high that the revenue losses associated with the customers that move to alternatives are larger than the revenue increase produced by the higher rates charged those that remain.[9] Universal service subsidies simply do not change this basic math. Because *deregulated* price levels are likely to be the same whether subsidies are provided or not, there is no price-related justification for continuing subsides to areas where the incumbent has been granted flexibility.

17. Importantly, when *seeking* pricing flexibility, the incumbents themselves have predicted that rates would remain reasonable for competitive and administrative reasons. The following exchange between the Chairman of the Oklahoma Corporation

[9] For instance, in many of AT&T Texas' exchanges, rates for all but "stand-alone" basic local service – that is, basic local service purchased without other features or functions, are deregulated. AT&T has used this flexibility to introduce a "new" version of its residential local exchange service, which it calls "Standard Plus." Under the terms of AT&T's "Standard Plus" tariff, a Standard Plus line is, in effect, any residential local exchange line that does *not* qualify as a "stand-alone" local exchange line. *See* AT&T-Texas Local Exchange Tariff, Section 1, Sheet 3, Revision 5. Because most residential subscribers subscribe to *some* additional feature or service (*e.g.*, Call Waiting), AT&T was able to implement a local rate increase through the introduction of a new, higher-priced service that most consumers were automatically subscribed to by virtue of the decision under the pre-existing rate schedule to add a feature or service to their account. Overall, since May 2006, AT&T has used Standard Plus to increase local rates (at least for any customer that subscribes to more than simply stand-alone basic local service) in Texas by between 58% (in its largest exchanges) and 90% (in its smallest markets).

Commission ("OCC") and the economic witness sponsored by AT&T Oklahoma (then SBC Oklahoma) during the proceeding where that incumbent sought statewide pricing flexibility illustrates this point:

> Q. Some people say that Southwestern Bell in Oklahoma, if they were given complete pricing flexibility, as is sought in this application, would be inclined to … increase the rates in rural, non-competitive areas and then be more competitive in metropolitan areas. … Would Bell be likely to have a different pricing strategy in rural areas given the degree of competition that exists there as compared to the metro or suburban areas if they were trying to do what's best for their shareholders?
>
> A. … One thing I've seen in other states is the desire to not complicate pricing, as you've [the OCC Chairman] have described it, but to simplify it. One thing I could imagine SBC might want to do, for example, that they cannot do today, is to have a single statewide price. That is the way that other competitors compete in the marketplace….
>
> So what I've seen in the marketplace when companies get pricing flexibility there is a trend towards simplification not complexity and that is consistent with economic principals that complexity is costly for providers to administer and for consumers to understand.[10]

18. Factually, the evidence supports the view that incumbents favor statewide prices, particularly for those flagship products – i.e., bundles or packages that combine local service with other products, such as Internet Access or long distance service – that are the principal focus of their marketing and sales efforts. Even where basic local rates (by themselves) have not been deregulated, it is common for incumbents to be able to price packages and bundles at their discretion. Consequently, the statewide (and regionwide)

[10] Transcript of Proceedings, Cross Examination of Dr. Debra Aron, on behalf of SBC Oklahoma, Oklahoma Corporation Commission Docket PUD 200500042, June 23, 2005 at Tr. 109-110.

pricing that characterizes such services is not the product of any regulatory obligation, but is a commercial strategy voluntarily adopted by the carrier.

19. There are numerous examples of statewide pricing of packages and bundles. For instance, the price of AT&T's All Distance Online Select,[11] is the same ($40 per month) in Weleeltka, Oklahoma as it is in Oklahoma City. Similarly, AT&T's Complete Choice package is a flat $30 per month throughout the state.[12] Not only are *these* prices the same in urban and rural Oklahoma, AT&T charges these same prices (*i.e.*, the same prices as in Oklahoma) in its Texas markets, with the prices remaining the same whether the service is offered Dallas or Pyote, Texas.[13]

20. Verizon's pricing approach is no different, with a clear strategy of introducing and marketing its packages under statewide rate schedules. For instance, in Texas, Verizon charges the same rate for its Local Package ($29.99 per month)[14] and Regional Package ($42.95 per month)[15] in its Irving (population 191,615) or Alba, Texas (population 430) exchanges.

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[11] All Distance Online Select is a package of unlimited local and long distance service, plus 13 features.

[12] AT&T's Complete Choice includes unlimited local calling, inside wire maintenance and 12 features.

[13] Statewide pricing can be found in AT&T's BellSouth region, where BellSouth's comparable products– such as Complete Choice, Area Plus Service, the 2 Pack Plan, and the Preferred Pack Plan – are all offered for a single price.

[14] Local Package includes unlimited direct-dialed local calling with Extended Area Service, unlimited local directory assistance, and a choice of up to three calling features including Caller ID, Three-Way Calling and Call Waiting.

[15] Regional Package includes unlimited direct-dialed local and toll calling with a choice of five calling features.

21. The fundamental conclusion from the above is that the incumbent LECs are voluntarily offering (and heavily marketing) services at statewide prices in a manner that is indifferent to the claimed underlying cost or available subsidy, and without any regulatory obligation.[16] There is no reason to provide subsidy for such lines, because there is no linkage between the subsidy provided and the rates charged consumers.

IV. High Cost Model Support is Based on an Obsolete Model

22. The discussion above demonstrates that, for most services in many areas, the RBOCs *prefer* to charge statewide prices whether or costs (forward-looking or otherwise) vary between areas. Such a strategy may reflect (in addition to other factors) the conclusion by such carriers that the true-cost difference is far less than the modeled-cost difference produced by the FCC's Hybrid Cost Proxy Model.

23. Notably, the Hybrid Cost Proxy Model used to calculate subsidy today is an anachronism because it models the cost to rebuild a circuit-switched network that will never be rebuilt. Rather than rebuild (from scratch) rural networks as assumed by the model, it is more likely that these networks will be maintained in steady-state form until replaced by the deployment of less costly packet-networks in the future. Until that time, the basic financial equation to the RBOC is only whether the revenues from such exchanges exceed variable costs and contribute to the recovery of undepreciated investment (and earnings).

[16] Similar statewide pricing schedules can be found in other Verizon states, as well as the Qwest region.

24. In considering the business implications of new packet technology, a couple of factors are important to consider. One is that the basic business model of the incumbents is changing. Traditional voice service –- particularly traditional basic local voice service – is no longer these carriers primary revenue source. Rather, the major national carriers (AT&T and Verizon) are focused on selling bundles combining long distance, wireless and/or high-speed Internet access, with traditional voice service becoming an increasingly small percentage of their revenues.[17] Moreover, as the Commission is aware, AT&T and Verizon are both focused on deploying fiber networks supporting entertainment services, where voice imposes a trivial claim on the capacity of the network.[18]

25. The emergence of next generation technology means that the circuit-switched architecture assumed by the HCPM is no longer the relevant technology. This conclusion is obvious in urban markets, where HCPM does not even model the architecture that is actually being deployed. But there are also numerous examples of *rural* carriers deploying packet technology,[19] and the Rural Utility Service has qualified (or conditionally qualified) softswitch products offered by MetaSwitch, Nortel and Taqua for deployment in rural networks.

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[17] Verizon, for instance, now derives 63% of its revenues from wireless services and complex services sold to enterprise customers. Verizon 3Q2007 Earnings Report, October 29, 2007.

[18] I use the term "all-media" to refer to a managed-packet network designed to support data, voice and, at least in residential applications, video services as well.

[19] For instance, rural carriers announcing packet-network deployments include 3 Rivers Communications (MT), Big River Telephone (MO/IL/KY), Blackfoot Telephone (MT), Mountain Rural Telephone Cooperative (KY), ENMR Plateau Telephone Cooperative (NM/TX), Valley Telephone Cooperative (AZ/NM), and Mescalero Apache Telecom (NM).

26. With the emergence of packet technology (as well as the potentially lower costs associated with wireless networks), it is no longer reasonable to calculate subsidy based on the estimated cost to rebuild a traditional circuit-switched network. The HCPM does not consider any of the cost efficiencies of packet switching and/or wireless technology and, as such, overstates cost. Nor does the model consider the radically different business model of incumbents, which diminishes the importance of voice service as a revenue and cost driver.

27. To be clear, I am not recommending that the Commission develop a new cost-model to replace the HCPM, a process that would be excessively costly, controversial and time-consuming. However, the Commission should no longer view the results produced by HCPM as "proof" that subsidy is needed to compensate an incumbent for the costs of some vaguely-defined regulatory obligation in a particular area or state. As a practical matter, so long as the revenues produced by rural markets exceed the variable costs to maintain these properties in a steady-state form – a goal that is simplified by the relatively slow growth in such areas – then these rural markets are likely to be accretive to earnings and their existence benefits the incumbent overall. Moreover, these incumbents are well on the way to recovering the full cost of their existing networks, and are likely farther along in the recovery of rural investment that is likely to be older than their network overall.

Table 2: Investment Recovery by RBOCs[20]

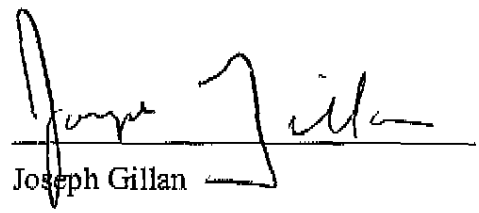
RBOC	Accumulated Depreciation	Total Investment	Percent
Qwest	30,857,287	44,190,122	69.8%
AT&T	142,708,141	204,961,679	69.6%
Verizon	104,256,663	149,701,387	69.6%
	277,822,091	398,853,188	

IV. Conclusion

28. The empirical underpinnings of the existing subsidy system no longer reflect reality. The principal goal of USF support – that is, that prices be comparable in urban and rural markets – is being achieved by the commercial pricing strategies of the large incumbents, without regard to modeled cost-differences or subsidy levels, at least with respect to the packages and bundles that consumers prefer. If the outcome (statewide pricing) would result with or without the subsidy, what purpose does the subsidy serve? As incumbents gain more and more pricing flexibility, price levels will increasingly be determined by market conditions (whatever they are), and the justification for corporate subsidies will decline. Moreover, the cost-model used to provide subsidy is no longer a valid estimated of expected future investment, and there does not appear to be any need for subsidy to ensure that prior investment is fully recovered. With the efficiency and equity claims nullified, the Commission should move to eliminate its traditional subsidy system in favor of targeted support for specific investments where valid.

[20] Source: 2007 ARMIS 43-03, Table 1 (Total Regulated).

Pursuant to 47 C.F.R. § 1.16, I declare under penalty of perjury that the foregoing is true and correct.



Joseph Gillan
April 17, 2008

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Education

B.A. Economics, University of Wyoming, 1978.
M.A. Economics, University of Wyoming, 1979.

Professional History

Gillan Associates, Economic Consulting (1987-Present)

Mr. Gillan manages a private consulting practice specializing in the economic evaluation of regulatory policies and business opportunities in the telecommunications industry. Since forming his consulting practice in 1987, Mr. Gillan has advised business clients as diverse as AT&T and TDS Telecom (a small entrant seeking the authority to compete in a rural area). Mr. Gillan has also acted as the principal economic consultant to the Competitive Telecommunications Association (COMPTEL) as well as CompSouth.

Vice President, US Switch, Inc. (1985-1987)

Responsible for crafting the US Switch business plan to gain political acceptance and government approval. US Switch pioneered the concept of "centralized equal access," which positioned independent local telephone companies for a competitive long distance market. While with US Switch, Mr. Gillan was responsible for contract negotiation/marketing with independent telephone companies and project management for the company's pilot project in Indiana.

Policy Director/Market Structure - Illinois Commerce Commission (1980-1985)

Primary staff responsibility for the policy analysis of issues created by the emergence of competition in regulated markets, in particular the telecommunications industry. Mr. Gillan served on the staff subcommittee for the NARUC Communications Committee and was appointed to the Research Advisory Council overseeing NARUC's research arm, the National Regulatory Research Institute.

Mountain States Telephone Company - Demand Analyst (1979)

Responsible for conducting statistical analysis of the demand for access by residential subscribers.

Professional Appointments

Guest Lecturer	Northwestern University Law School 2007
Guest Lecturer	School of Laws, University of London, 2002
Instructor	Michigan State University, Regulatory Instructional Program, 2005-Present

Instructor	Principles of Regulation, New Mexico State University Center for Regulation
Advisory Council	New Mexico State University, Center for Regulation, 1985 – Present
Faculty	Summer Program, Public Utility Research and Training Institute, University of Wyoming, 1989-1992
Contributing Editor	Telematics: The National Journal of Communications Business and Regulation, 1985 - 1989
Chairman	Policy Subcommittee, NARUC Staff Subcommittee on Communications, 1984-1985
Advisory Committee	National Regulatory Research Institute, 1985
Distinguished Alumni	University of Wyoming, 1984

Selected Publications

"The Local Exchange: Regulatory Responses to Advance Diversity", with Peter Rohrbach, Public Utilities Fortnightly, July 15, 1994.

"Reconcentration: A Consequence of Local Exchange Competition?", with Peter Rohrbach, Public Utilities Fortnightly, July 1, 1994.

"Diversity or Reconcentration?: Competition's Latent Effect", with Peter Rohrbach, Public Utilities Fortnightly, June 15, 1994.

"Consumer Sovereignty: An Proposed Approach to IntraLATA Competition", Public Utilities Fortnightly, August 16, 1990.

"Reforming State Regulation of Exchange Carriers: An Economic Framework", Third Place, University of Georgia Annual Awards Competition, 1988, Telematics: The National Journal of Communications, Business and Regulation, May, 1989.

"Regulating the Small Telephone Business: Lessons from a Paradox", Telematics: The National Journal of Communications, Business and Regulation, October, 1987.

"Market Structure Consequences of IntraLATA Compensation Plans", Telematics: The National Journal of Communications, Business and Regulation, June, 1986.

"Universal Telephone Service and Competition on the Rural Scene", Public Utilities Fortnightly, May 15, 1986.

"Strategies for Deregulation: Federal and State Policies", with Sanford Levin, Proceedings, Rutgers University Advanced Workshop in Public Utility Economics, May 1985.

"Charting the Course to Competition: A Blueprint for State Telecommunications Policy", Telematics: The National Journal of Communications Business, and Regulation, with David Rudd, March, 1985.

"Detariffing and Competition: Options for State Commissions", Proceedings of the Sixteenth Annual Conference of Institute of Public Utilities, Michigan State University, December 1984.

Listing of Expert Testimony – Court Proceedings

MCI, L.L.C. dba Verizon Business vs. Vorst Paving, Inc., (Civil Action NO. CV: 106-064 District Court for the Southern District Of Georgia) (Damages Claim)

United States of America v. SBC Communications Inc. and AT&T Corp. (Civil Action No. 1:05CV02102 District Court for the District of Columbia) (Inadequacy of Proposed Final Judgment Settling SBC Merger with AT&T)

United States of America v. Verizon Communications Inc. and MCI Inc. (Civil Action No. 1:05CV02103 District Court for the District of Columbia) (Inadequacy of Proposed Final Judgment Settling Verizon Merger with MCI)

T & S Distributors, LLC, ACD Telecom, Inc, Telnet Worldwide, Inc et al. v. Michigan Bell Telephone Company (Civil Action No. 04-689-CK Ingham Circuit Court, State of Michigan) (Enforcement of contract; Industry definitions of local exchange service and end user)

Dwayne P. Smith, Trustee v. Lucent Technologies (Civil Action No. 02-0481 Eastern District of Louisiana)(Entry and CLEC Performance)

BellSouth Intellectual Property v. eXpeTel Communications (Civil Action No. 3:02CV134WS Southern District of Miss.)(Service definition, industry structure and Telecom Act of 1996)

CSX Transportation Inc. v. Qwest International, Inc. (Case No. 99-412-Civ-J-21C Middle District of Florida) (industry structure and wholesale contract arrangements).

Winn v. Simon (No. 95-18101 Hennepin Cty. Dist. Ct.)(risk factors affecting small long distance companies)

American Sharecom, Inc. v. LDB Int'l Corp. (No. 92-17922, Hennepin County District Court) (risk factors affecting small long distance companies)

World Com, Inc. et al. v. Automated Communications, Inc. et al. (No. 3:93-CV-463WS, S.D. Miss.) (damages)

International Assignments

Recovering Contribution: Lessons from the United States' Experience, Report submitted to the Canadian Radio-television and Telecommunications Commission on behalf of CallNet.

Forcing a Square Peg into a Round Hole: Applying the Universal Service Cost Model in the Cayman Islands, Analysis Presented to the Government of the Cayman Islands on behalf of Cable and Wireless.

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Texas	Docket No. 34723	Universal Service Reform	Reform Coalition
Missouri	Case TO-2006-0360	Wire Center Classification	CLEC Coalition
FCC	WC Docket 06-172	E911 as Measure of Local Comp	CLEC Coalition
Georgia	Docket 14361-U	Time Value of Money	CLEC Coalition
Kentucky	Case No. 2006-000316	271 Pricing – Loop and Switch	Southeast Tel
New York	Case No. 06-C-0897	Verizon Pricing Flexibility	CompTel/XO
Tennessee	Docket 06-00093	AT&T-BellSouth Acquisition	CLEC Coalition
Mississippi	No. 2006-UA-164	AT&T-BellSouth Acquisition	NuVox/TWTC
Kentucky	Case No. 2006-00136	AT&T-BellSouth Acquisition	NuVox/Xspedius
Indiana	Cause No. 42986	Wire Center Impairment List	COVAD/NuVox
Ohio	05-1393-TP-UNC	Wire Center Impairment List	CLEC Coalition
Illinois	Docket 06-0029	Wire Center Impairment List	CLEC Coalition
Illinois	Docket 06-0027	AT&T Illinois Deregulation	Data Net Systems
Oklahoma	Cause PUD 20060034	Wire Center Impairment List	CLEC Coalition
Kansas	06-SWBT-743-COM	Wire Center Impairment List	CLEC Coalition
Arkansas	Docket 05-140-C	Wire Center Impairment List	CLEC Coalition
Georgia	Docket 19341-U (II)	Establishing Section 271 Rates	CompSouth
Texas	Docket 31303	Wire Center Impairment List	CLEC Coalition
Washington	Docket UT-050814	Verizon-MCI Merger	Covad
California	Application 05-04-020	Verizon-MCI Merger	Cox
California	Application 05-04-020	Verizon-MCI Merger	Covad/CalTel
Oklahoma	Cause 200400695	Supersedes Bond	Cox

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Florida	Docket 041269-TP	TRRO Implementation	CompSouth
Mississippi	Docket 2005-AD-139	TRRO Implementation	CompSouth
South Carolina	Docket 2004-316-C	TRRO Implementation	CompSouth
Kentucky	Case No. 2004-00427	TRRO Implementation	CompSouth
Alabama	Docket No. 29543	TRRO Implementation	CompSouth
Louisiana	Docket No. U-28356	TRRO Implementation	CompSouth
North Carolina	Docket P-55, Sub 1549	TRRO Implementation	CompSouth
Tennessee	Docket No. 04-00381	TRRO Implementation	CompSouth
Georgia	Docket No. 19341-U	TRRO Implementation	CompSouth
California	Application 05-02-027	SBC-AT&T Merger	Cox
California	Application 05-02-027	SBC-AT&T Merger	CalTel
Oklahoma	Cause 200400695	SBC Deregulation	Cox
Kansas	05-SWBT-907-PDR	SBC Deregulation	Cox-WorldNet
Wisconsin	6720-TI-196	SBC Deregulation	CUB
Oklahoma	Cause 200400042	Status of Local Competition	Cox
Michigan	Case U-14323	SBC Deregulation	Talk America
Oklahoma	Cause RM 200400014	Regulatory Flexibility for SBC	CLEC Coalition
New Mexico	Case No. 3567	Regulation of Wireless Carriers	Wireless Coalition
North Carolina	Docket P-19 Sub 277	Alternative Regulation	CompSouth
North Carolina	Docket P-55 Sub 1013	Alternative Regulation	CompSouth
Mississippi	Docket 2003-AD-714	Switching Impairment	CompSouth
Kentucky	Case No. 2003-00379	Switching Impairment	CompSouth
Texas	Docket 28607	Switching Impairment	CLEC Coalition
Massachusetts	D.T.E 03-60	Switching Impairment	CLEC Coalition
Louisiana	Docket U-27571	Switching Impairment	CompSouth
New Jersey	Docket TO03090705	Switching Impairment	CLEC Coalition
Kansas	03-GIMT-1063-GIT	Switching Impairment	CLEC Coalition
South Carolina	Docket 2003-326-C	Switching Impairment	CompSouth

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Alabama	Docket 29054	Switching Impairment	CompSouth
Illinois	Docket No. 03-0595	Switching Impairment	AT&T
Indiana	Cause No. 42500	Switching Impairment	AT&T
Pennsylvania	Case I-00030099	Switching Impairment	CLEC Coalition
Tennessee	Docket No. 03-00491	Switching Impairment	CompSouth
North Carolina	P-100, Sub 133Q	Switching Impairment	CompSouth
Georgia	Docket No. 17749-U	Switching Impairment	CompSouth
Missouri	Case TW-2004-0149	Switching Impairment	CLEC Coalition
Michigan	Case No. U-13796	Switching Impairment	CLEC Coalition
Florida	Docket No. 030851-TP	Switching Impairment	FCCA
Ohio	Case 03-2040-TP-COI	Switching Impairment	AT&T/ATX
Wisconsin	05-TI-908	Switching Impairment	AT&T
Washington	UT–023003	Local Switching Rate Structure	AT&T/MCI
Arizona	T-00000A-00-0194	UNE Cost Proceeding	AT&T/WCOM
Illinois	Docket 02-0864	UNE Cost Proceeding	AT&T
North Carolina	P-55, Sub 1013 P-7, Sub 825 P-19, Sub 277	Price Cap Proceedings	CLEC Coalition
Kansas	02-GIMT-555-GIT	Price Deregulation	Birch/AT&T
Texas	Docket No. 24542	Cost Case	AT&T
North Carolina	Docket P-100, Sub 133d	UNE Cost Proceeding	CLEC Coalition
Georgia	Docket No. 11901-U	DSL Tying Arrangement	WorldCom
Tennessee	Docket No. 02-00207	UNE Availability/Unbundling	CLEC Coalition
Utah	Docket No. 01-049-85	Local Switching Costs/Price	AT&T
Tennessee	Docket No. 97-00309	Section 271 Compliance	CLEC Coalition
Illinois	Docket No. 01-0662	Section 271 Compliance	AT&T
Georgia	Docket No. 14361-U	UNE Availability/Unbundling	CLEC Coalition
Florida	Docket 020507-TL	Unlawful DSL Bundling	CLEC Coalition
Tennessee	Docket No. 02-00207	UNE Availability/Unbundling	CLEC Coalition

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Georgia	Docket No. 14361-U	UNE Costs and Economics	AT&T/WorldCom
Florida	Docket 990649-TP	UNE Cost and Price Squeeze	AT&T/WorldCom
Minnesota	P-421/CI-01-1375	Local Switching Costs/Price	AT&T
Florida	Docket 000075-TP	Intercarrier Compensation	WorldCom
Texas	Docket No. 24542	Unbundling and Competition	CLEC Coalition
Illinois	Docket 00-0732	Certification	Talk America
Indiana	Cause No. 41998	Structural Separation	CLEC Coalition
Illinois	Docket 01-0614	State Law Implementation	CLEC Coalition
Florida	Docket 96-0768	Section 271 Application	SECCA
Kentucky	Docket 2001-105	Section 271 Application	SECCA
FCC	CC Docket 01-277	Section 271 for GA and LA	AT&T
Illinois	Docket 00-0700	Shared Transport/UNE-P	CLEC Coalition
North Carolina	Docket P-55 Sub 1022	Section 271 Application	SECCA
Georgia	Docket 6863-U	Section 271 Application	SECCA
Alabama	Docket 25835	Section 271 Application	SECCA
Michigan	Case No. U-12622	Shared Transport/UNEs	AT&T
Ohio	Case 00-942-TP-COI	Section 271 Application	AT&T
Alabama	Docket No. 25835	Structural Separation	SECCA
Alabama	Docket No. 27821	UNE Cost Proceeding	ITC^Deltacom
Louisiana	Docket U-22252	Section 271 Application	SECCA
Mississippi	Docket 97-AD-321	Section 271 Application	SECCA
South Carolina	Docket 2001-209-C	Section 271 Application	SECCA
Colorado	Docket 99A-577T	UNE Cost Proceeding	AT&T
Arizona	Case T-00000A-00-0194	UNE Cost Proceeding	AT&T
Washington	Docket UT-003013	Line Splitting and Combinations	AT&T
Ohio	Case 00-1368-TP-ATA Case 96-922-TP-UNE	Shared Transport	AT&T/PACE
North Carolina	P-100 Sub 133j	Standard Collocation Offering	CLEC Coalition
Florida	Docket 990649-TP	UNE Cost Proceeding	CLEC Coalition

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Michigan	Case No. U-12320	UNE Combinations/Section 271	AT&T
Florida	Docket 00-00731	Section 251 Arbitration	AT&T
Georgia	Docket 5825-U	Universal Service Fund	CLEC Coalition
South Carolina	97-239-C	Universal Service Fund	CLEC Coalition
Texas	PUC Docket 22289/95	ETC Designation	Western Wireless
Washington	Docket UT-003013	UNE Costs and Local Competition	AT&T
New York	Docket 98-C-1357	UNE Cost Proceeding	Z-Tel
Colorado	Docket 00K-255T	ETC Designation	Western Wireless
Kansas	99-GCCZ-156-ETC	ETC Designation	Western Wireless
New Mexico	98-484-TC	ETC Designation	Western Wireless
Illinois	Docket 99-0535	Cost of Service Rules	AT&T/MCI
Colorado	Docket 00-B-103T	U S WEST Arbitration	ICG Comm.
North Dakota	PU-1564-98-428	ETC Designation	Western Wireless
Illinois	Docket 98-0396	Shared Transport Pricing	AT&T/Z-Tel
Florida	Docket 981834-TP	Collocation Reform	CLEC Coalition
Pennsylvania	M-00001353	Structural Separation of Verizon	CompTel/ATX
Illinois	Docket 98-0860	Competitive Classification of Ameritech's Business Services	CompTel/ AT&T
Georgia	Docket 6865-U	Complaint re: Combinations	MCIWorldcom
Virginia	Case No. PUC 990100	GTE/Bell Atlantic Merger	AT&T
Florida	Docket 990649-TP	UNE Cost and Pricing	CLEC Coalition
Nebraska	Application C-1960/PI-25	IP Telephony and Access Charges	ICG Communications
Georgia	Docket 10692-U	Pricing of UNE Combinations	CLEC Coalition
Colorado	Docket 99F-141T	IP Telephony and Access	Qwest
California	Case A. 98-12-005	GTE/Bell Atlantic Merger	AT&T/MCI
Indiana	Case No. 41255	SBC/Ameritech Merger	AT&T
Illinois	Docket 98-0866	GTE/Bell Atlantic Merger	AT&T

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Ohio	Case 98-1398-TP-AMT	GTE/Bell Atlantic Merger	AT&T
Tennessee	Docket 98-00879	BellSouth BSE	SECCA
Missouri	Case TO-99-227	§ 271 Review: SBC	AT&T
Colorado	Docket 97A-540T	Stipulated Price Cap Plan/USF	CLEC Coalition
Illinois	ICC Docket 98-0555	SBC/Ameritech Merger	AT&T
Ohio	Case 98-1082-TP-AMT	SBC/Ameritech Merger	AT&T
Florida	Docket 98-1121-TP	UNE Combinations	MCI WorldCom
Georgia	6801-U	§ 251 Arbitration: BellSouth	AT&T
Florida	92-0260-TL	Rate Stabilization Plan	FIXCA
South Carolina	Docket 96-375	§ 251 Arbitration: BellSouth	AT&T
Kentucky	Docket 96-482	§ 251 Arbitration: BellSouth	AT&T
Wisconsin	05-TI-172/5845-NC-101	Rural Exemption	TDS Metro
Louisiana	U-22145	§ 251 Arbitration: BellSouth	AT&T
Mississippi	96-AD-0559	§ 251 Arbitration: BellSouth	AT&T
North Carolina	P-140-S-050	§ 251 Arbitration: BellSouth	AT&T
Tennessee	96-01152	§ 251 Arbitration: BellSouth	AT&T
Arizona		§ 251 Arbitration: US West	AT&T Wireless
Florida	96-0883-TP	§ 251 Arbitration: BellSouth	AT&T
Montana	D96.11.200	§ 251 Arbitration: US West	AT&T
North Dakota	PU-453-96-497	§ 251 Arbitration: US West	AT&T
Texas	Docket 16226	§ 251 Arbitration: SBC	AT&T/MCI
Alabama	Docket 25703	§ 251 Arbitration: BellSouth	AT&T
Alabama	Docket 25704	§ 251 Arbitration: GTE	AT&T
Florida	96-0847-TP	§ 251 Arbitration: GTE	AT&T
Kentucky	Docket 96-478	§ 251 Arbitration: GTE	AT&T
North Carolina	P-140-S-51	§ 251 Arbitration: GTE	AT&T
Texas	Docket 16630	§ 251 Arbitration: SBC	LoneStar Net
South Carolina	Docket 96-358	§ 251 Arbitration: GTE	AT&T

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Texas	Docket 16251	§ 271 Review: SBC	AT&T
Oklahoma	97-0000560	§ 271 Review: SBC	AT&T
Kansas	97-SWBT-411-GIT	§ 271 Review: SBC	AT&T
Alabama	Docket 25835	§ 271 Review: BellSouth	AT&T
Florida	96-0786-TL	§ 271 Review: BellSouth	FCCA
Georgia	Docket 6863-U	§ 271 Review: BellSouth	AT&T
Kentucky	Docket 96-608	§ 271 Review: BellSouth	AT&T
Louisiana	Docket 22252	§ 271 Review: BellSouth	AT&T
Texas	Docket 16226	UNE Cost	AT&T/MCI
Colorado	97K-237T	Access Charges	AT&T
Mississippi	97-AD-321	§ 271 Review: BellSouth	AT&T
North Carolina	P-55 Sub 1022	§ 271 Review: BellSouth	AT&T
South Carolina	97-101-C	§ 271 Review: BellSouth	AT&T
Tennessee	97-00309	§ 271 Review: BellSouth	AT&T
Tennessee	96-00067	Wholesale Discount	AT&T
Tennessee	97-00888	Universal Service	AT&T
Texas	Docket 15711	GTE Certification as CLEC	AT&T
Kentucky	97-147	BellSouth BSE Certification	SECCA
Florida	97-1056-TX	BellSouth BSE Certification	FCCA
North Carolina	P691 Sub O	BellSouth BSE Certification	SECCA
Florida	98-0696-TP	Universal Service	FCCA
New York	97-C-271	§ 271 Review: Bell Atlantic	CompTel
Montana	D97.5.87	§ 271 Review: US West	AT&T
New Mexico	97-106-TC	§ 271 Review: US West	AT&T/CompTel
Nebraska	C-1830	§ 271 Review: US West	AT&T
Alabama	Docket 25980	Universal Service	AT&T
Kentucky	Admin 360	Universal Service	AT&T
North Carolina	P100-S133B	Universal Service	AT&T

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
North Carolina	P100-S133G	Universal Service	AT&T
Illinois	95-0458/0531	Combined Network Elements	WorldCom
Illinois	96-0486/0569	Network Element Cost/Tariff	WorldCom
Illinois	96-0404	§ 271 Review: Ameritech	CompTel
Florida	97-1140-TP	Combining Network Elements	AT&T/MCI
Pennsylvania	A-310203-F0002	Local Competition	CompTel
Georgia	6415-U/6527-U	Local Competition	CompTel
Illinois	98-NOI-1	Structural Separation	CompTel/Qwest
New York	98-C-690	Combining Network Elements	CompTel
Texas	Docket 17579	§ 251 Arbitration: SBC (2nd)	AT&T/MCI
Texas	Docket 16300	§ 251 Arbitration: GTE	AT&T
Florida	Docket 920260-TL	Price Cap Plan	IXC Coalition
Louisiana	Docket U22020	Resale Cost Study	AT&T/LDDS
California	Docket R.93-04-003	Rulemaking on Open Network Architecture	LDDS/WorldCom
Tennessee	Docket 96-00067	Avoidable Cost/Resale Discount	AT&T
Georgia	Docket 6537-U	Unbundled Loop Pricing	CompTel
Georgia	Docket 6352	Rules for Network Unbundling	AT&T
Pennsylvania	Docket A-310203F0002	Introducing Local Competition	CompTel
Florida	Docket 95-0984-TP	Interconnection Terms and Prices	AT&T
Kentucky	Case No. 365	Local Competition/Universal Service	WorldCom
Mississippi	Docket 95-UA-358	Introducing Local Competition	AT&T/WorldCom
Florida	Docket 95-0984-TP	Interconnection Terms and Prices	AT&T
Illinois	Docket 95-0458	Wholesale Local Services	WorldCom
California	Dockets R.95-04-043/044	Local Competition	WorldCom
Florida	Docket 95-0696-TP	Universal Service and Carrier of Last Resort Obligations	IXC Coalition

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Georgia	Docket 5755-U	Removing Subsidies from Access	AT&T
South Carolina	Docket 95-720-C	Price Regulation	ACSI
Michigan	Case No. U-10860	Interconnection Agreement	WorldCom
Mississippi	Docket 95-US-313	Price Regulation Plan	WorldCom/AT&T
Missouri	Case TR-95-241	Expanded Local Calling	MCI
Washington	Docket UT-941464	Interconnection Complaint	IXC Coalition
Maryland	Case No. 8584 – Phase II	Introducing Local Competition	WorldCom
Massachusetts	DPU 94-185	Introducing IntraLATA and Local Competition	WorldCom
Wisconsin	Docket 6720-TI-111	IntraLATA Equal Access	Schneider Com.
North Carolina	Docket P-100, Sub 126	Expanded Local Calling	LDDS
Georgia	Docket 5319-U	IntraLATA Equal Access	MCI/LDDS
Mississippi	Docket 94-UA-536	Price/Incentive Regulation	LDDS
Georgia	Docket 5258-U	Price Regulation Plan	LDDS
Florida	Docket 93-0330-TP	IntraLATA Equal Access	IXC Coalition
Alabama	Docket 23260	Access Transport Rate Structure	LDDS
New Mexico	Docket 94-204-TC	Access Transport Rate Structure	LDDS
Kentucky	Docket 91-121	Alternative Regulation Proposal	Sprint, AT&T and LDDS
Texas	Docket 12784	Access Transport Rate Structure	IXC Coalition
Illinois	Docket 94-0096	Customer's First Proposal	LDDS
Louisiana	Docket U-17949-D	Alternative Regulation	AT&T, Sprint and LDDS
New York	Case No. 93-C-0103	Rochester Plan-Wholesale/Retail	LDDS
Illinois	Dockets 94-0043/46	Access Transport Rate Structure	IXC Coalition
Florida	Docket 92-1074-TP	Expanded Interconnection	Intermedia
Louisiana	Docket U-20800	Access Transport Rate Structure	LDDS
Tennessee	Docket 93-008865	Access Transport Rate Structure	LDDS

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Ohio	Docket 93-487-TP-ALT	Alternative Regulation	Allnet/LCI/LDDS
Mississippi	Docket 93-UN-0843	Access Transport Rate Structure	LDDS
South Carolina	Docket 93-756-C	Access Transport Rate Structure	IXC Coalition
Georgia	Docket 4817-U	Access Transport Rate Structure	IXC Coalition
Louisiana	Docket U-20710	Pricing and Imputation Standards	LDDS
Ohio	Case 93-230-TP-ALT	Alternative Regulation	MCI/Allnet/LCI
New Mexico	Docket 93-218-TC	Expanded Local Calling	LDDS
Illinois	Docket 92-0048	Alternative Regulation	LDDS
Mississippi	Docket 93-UN-0038	Banded Rates for Toll Service	LDDS
Florida	Docket 92-1074-TP	Expanded Interconnection	Florida Coalition
Louisiana	Docket U-20237	Preferential Toll Pricing	LDDS, MCI and AT&T
South Carolina	Docket 93-176-C	Expanded Local Calling	LDDS & MCI
Mississippi	Case 89-UN-5453	Rate Stabilization Plan	LDDS & ATC
Illinois	Docket 92-0398	Local Interconnection	CLEC Coalition
Louisiana	Docket U-19993	Payphone Compensation	MCI
Maryland	Docket 8525	Payphone Compensation	MCI
South Carolina	Docket 92-572-C	Payphone Compensation	MCI
Georgia	Docket 4206-U	Payphone Compensation	MCI
Delaware	Docket 91-47	Application for Rate Increase	MCI
Florida	Docket 88-0069-TL	Comprehensive Price Review	Florida Coalition
Mississippi	Case 92-UA-100	Expanded Local Calling	LDDS & ATC
Florida	Docket 92-0188-TL	GTE Rate Case	MCI & FIXCA
Wisconsin	Docket 05-TI-119	IntraLATA Competition	MCI & Schneider
Florida	Docket 92-0399-TP	Payphone Compensation	MCI & FIXCA
California	Docket I,87-11-033	Alternative Regulation	Intellical
Florida	Docket 88-0068-TL	Rate Stabilization	Public Counsel and Large Users

Summary of Expert Testimony and Affidavits – Domestic Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
New York	Case 28425, Phase III	Access Transport Rate Structure	Empire Altel
Wisconsin	Docket 05-TR-103	Intrastate Access Charges	MCI & CompTel
Mississippi	Docket 90-UA-0280	IntraLATA Competition	Intellicall
Louisiana	Docket U-17949	IntraLATA Competition	Cable & Wireless
Florida	Docket 88-0069-TL	Rate Stabilization	Florida Coalition
Wisconsin	Docket 05-TR-103	Intrastate Access Charges	Wisconsin IXCs
Florida	Docket 89-0813-TP	Alternative Access Providers	Florida Coalition
Alaska	Docket R-90-1	Intrastate Toll Competition	Telephone Utilities of Alaska
Minnesota	Docket P-3007/NA-89-76	Centralized Equal Access	MCI & Telecom*USA
Florida	Docket 88-0812-TP	IntraLATA Toll Competition	Florida Coalition
Wisconsin	Docket 05-TR-102	Intrastate Access Charges	Wisconsin IXCs
Wisconsin	Docket 6655-NC-100	Centralized Equal Access	Wisconsin IXCs
Florida	Docket 88-0069-TL	Rate Stabilization	Florida Coalition
Wisconsin	Docket 05-NC-100	IntraLATA Toll Competition	Wisconsin IXCs
Florida	Docket 87-0347-TI	AT&T Regulatory Relief	Florida Coalition
Illinois	Docket 83-0142	Intrastate Access Charges	Illinois Consolidated
Texas	Docket 8218	WATS Prorate Credit	TEXALTEL
Iowa	Case RPU 88-2	Centralized Equal Access	MCI & Teleconnect
Florida	Docket 87-1254-TL	Regulatory Flexibility for LECs	Microtel
Wisconsin	Docket 05-TR-5, Part B	IntraLATA Competition and Access Charges	Wisconsin State Telephone Assc.
Florida	Docket 86-0984, Phase II	Intrastate Loop Cost Recovery	Florida Coalition

APPENDIX B

JANUARY 11, 2008

PUC DOCKET NO. 34723
SOAH DOCKET NO. 473-08-0288

PETITION FOR REVIEW OF MONTHLY PER LINE SUPPORT AMOUNTS FROM THE TEXAS HIGH COST UNIVERSAL SERVICE PLAN PURSUANT TO PURA § 56.031 AND P.U.C SUBST. R. 26.403	**§ § § § § § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

UNIVERSAL SERVICE REFORM COALITION DIRECT TESTIMONY OF JOSEPH GILLAN

REDACTED VERSION

Table of Contents

Attachments

I. INTRODUCTION

A. Witness Qualifications

Q. Please state your name, business address and occupation.

A. My name is Joseph Gillan. My business address is P. O. Box 7498, Daytona Beach, Florida 32116. I am an economist with a consulting practice specializing in telecommunications.

Q. Please briefly outline your educational background and related experience.

A. I am a graduate of the University of Wyoming where I received B.A. and M.A. degrees in economics. From 1980 to 1985, I was on the staff of the Illinois Commerce Commission where I had responsibility for the policy analysis of issues created by the emergence of competition in regulated markets, in particular the telecommunications industry. While at the Commission, I served on the staff subcommittee for the NARUC Communications Committee and was appointed to the Research Advisory Council overseeing the National Regulatory Research Institute.

In 1985, I left the Commission to join U.S. Switch, a venture firm organized to develop interexchange access networks in partnership with independent local telephone companies. At the end of 1986, I resigned my position of Vice President-Marketing/Strategic Planning to begin a consulting practice.

Over the past twenty years, I have provided testimony before more than 35 state commissions, six state legislatures, the Commerce Committee of the United States Senate, and the Federal/State Joint Board on Separations Reform. I have also been called to provide expert testimony before federal and state civil courts by clients as diverse as the trustees of a small competitive carrier in the Southeast to Qwest Communications. In addition, I have filed expert analysis with the Finance Ministry of the Cayman Islands and before the Canadian Radio-Telecommunications Commission.

Finally, I serve on the Advisory Council to New Mexico State University's Center for Regulation (since 1985) and I am an instructor in their "Principles of Regulation" program taught twice annually in Albuquerque. I also lecture at Michigan State University's Regulatory Studies Program ("Camp NARUC"), and have been an invited speaker at the School of Laws of the University of London, and Northwestern University's Law School. A complete listing of my qualifications is provided in Attachment JPG-1 (attached).

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Sprint Communications Company, L.P., SprintCom, Inc., Sprint Spectrum L.P., Nextel of Texas, Inc., NPCR, Inc., Time Warner Telecom of Texas, L.P., Time Warner Cable Information Services, LLC, and TXC Digital Phone LLC, collectively, the "Universal Service Reform Coalition" ("URC" or "Coalition").

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to respond to the direct testimony of AT&T Texas and the other ILECs and to present the recommendations of the Coalition as to how the Commission should restructure the Texas High Cost Universal Service Plan ("THCUSP" or "High Cost Fund"), recognizing the significant changes that have occurred in the marketplace and regulatory framework since the Commission first initiated the Fund in 2000.[1] I also briefly introduce the testimony of the other witnesses for the Coalition, and explain how their testimony supports the Coalition's recommendation for USF Reform in Texas.

[1] *Final Order, Compliance Proceeding for Implementation of the Texas High Cost Universal Service Plan*, PUC Docket 18515, Adopted January 13, 2000 ("*High Cost Order*").

B. Summary

Q. Please summarize your testimony.

A. This proceeding provides the Commission its first opportunity to reform the High Cost Fund since the program was initiated, nearly a decade ago.[2] In that time, the market, the industry, and the Commission's own regulatory authority have undergone changes that have significant implication for how the Fund should operate today.

In January of 2000, when the Commission implemented the High Cost Fund, the nation was just beginning its experiment with local competition. Although the federal Telecommunications Act was four years old, the transformative step of RBOC entry to long distance had just begun,[3] and the FCC's policy shift away from UNEs would have been (at that point) impossible to predict. SBC had acquired its second RBOC (Ameritech),[4] while earlier that year, AT&T had

[2] Although the Commission did not implement the High Cost Fund until 2000, the rule setting forth its basic structure was adopted in 1998.

[3] The FCC approved its first RBOC request to provide interLATA long distance services (Verizon in the State of New York) just three weeks prior to this Commission's *High Cost Order* (Memorandum Opinion and Order, Federal Communications Commission CC Docket No. 99-295, Adopted December 21, 1999). At that time, SBC's long-distance approval for Texas was still six months away (Memorandum Opinion and Order, Federal Communications Commission CC Docket No. 00-65, Adopted June 30, 2000).

initiated its (ultimately ill-fated) entry to the cable industry.[5] AT&T and MCI were the most significant competitors to SBC and Verizon, and the FCC Chairman – among others – considered the notion that SBC and AT&T could merge "unthinkable."[6]

The basic architecture of the local network was voice-centric, grounded in "wire centers" that defined areas served by digital circuit-switches, with predominantly narrow-band loops reaching customer locations. Although the technology of individual network components was evolving, the basic architecture of the wireline network – distribution, feeder, switches and transport – had been relatively stable for decades.

Against a backdrop of unknown competitive development, the Commission established a High Cost Fund that reflected the prevailing assumptions of its day. Specifically, that incumbent local exchange carriers (ILECs) would require externally provided subsidies to offset the relatively higher per unit costs of providing service in rural markets, in part because competition was expected to

[4] Memorandum Opinion and Order, Federal Communications Commission CC Docket No. 98-141, Adopted October 6, 1999 ("SBC/*Ameritech Merger Order*").

[5] Memorandum Opinion and Order, Federal Communications Commission CC Docket No. 98-178, Adopted February 17, 1999 ("*AT&T/TCI Merger Order*").

[6] *FCC Chairman Reed Hundt Calls Combination Of AT&T And An RBOC "Unthinkable,"* News Release, Federal Communications Commission, June 19, 1997.

erode so-called "implicit subsidies" in other markets. Cost models were developed that estimated the cost to rebuild the network (using the most efficient technology *then* currently available) to identify areas of high cost, which were compared to a benchmark to estimate the level of subsidy needed to, as the legislative authorization for the High Cost Fund put it, "assist telecommunication providers in providing basic local telecommunications service at reasonable rates in high cost rural areas."[7]

Q. Have conditions changed that must be considered in the reform of high cost support today?

A. Yes. As set forth in more detail in the testimony below, the High Cost Fund should be reformed so that it is more consistent with conditions that exist today. First, with respect to the companies that receive support from the High Cost Fund the Commission's ability to "assist" in achieving reasonable rates has been superceded in many areas of the state – including some areas that the ILECs assert are high cost – by the deregulation of most retail telephone services pursuant to various deregulatory provisions in PURA. The Commission no longer has rate

[7] PURA § 56.021 (1).

authority over business services in *any* exchange in state,[8] nor will it have rate authority following this proceeding over *any* residential service in any deregulated exchanges.[9] In these two markets – *i.e.*, residential service in deregulated exchanges and business services everywhere – the Commission's role in retail pricing has been replaced by the Legislature's determination that competition, rather than regulation, should govern rate levels.

Second, there has been a sea change in technology and network architecture that is re-defining the industry. With respect to wireline networks, the ascendancy of packet-based technology and broadband access methods make possible the deployment of *all media* networks that support voice, data and video applications. Even in rural areas, packet-technology is replacing the circuit-switched architecture of the past. Meanwhile, the expansion of wireless networks – and the increasing acceptance of wireless service by consumers – provides a technological alternative to the deployment of wireline networks in less dense areas.

Third, and in response to the capabilities of new technology, the basic business

[8] Business and numerous ancillary residential services are defined as "nonbasic services" (PURA § 58.151) and have not been subject to rate caps in Texas since September 1, 2005 (PURA § 58.152).

[9] PURA§ 65.052 sets forth the procedure to determine whether a local exchange market should be deregulated. In markets that have been deregulated, only the price of stand-alone basic local service remains capped, and even then, only until such time that "the commission has the opportunity to revise the monthly per line support" provided by the High Cost Fund. (PURA § 65.153).

model of the incumbents (and others) is changing. Traditional voice service –- particularly traditional basic local voice service – is no longer the primary revenue source or focus for most carriers. The major local carriers – AT&T and Verizon in particular – are focused on selling bundles combining long distance, wireless and/or high-speed Internet access, with traditional voice service becoming an increasingly small percentage of their revenues.[10] Moreover, each of these carriers (albeit through affiliates that may not be the Texas ILEC) is actively deploying networks relying on forward-looking technology to offer video services as well.[11]

Q. What do these changes mean to the Commission's analysis in this proceeding?

A. These trends underscore the need for fundamental reform in the way that the High Cost Fund operates in Texas. Every dollar in subsidy required by the High Cost Fund must be collected from working families and businesses, which, in turn, reduces disposable income and revenues available for investment (and/or return).

[10] Verizon, for instance, now derives 63% of its revenues from wireless services and complex services sold to enterprise customers. Verizon 3Q2007 Earnings Report, October 29, 2007.

[11] Notably, despite actually *deploying* networks that rely on packet technology to support broadband services, for TUSF purposes, these same incumbents *model* the cost to replicate the existing network using old technology. I discuss in significantly more detail below how this violation of forward-looking cost principles improperly inflates the cost estimates produced by HM 5.3.

Where there is a continuing and legitimate need, providing assistance to companies serving high cost rural areas may be a worthy goal. But every dollar in subsidy provided these large carriers must come from somebody and, as a result, mean that other worthy goals – whether an extra movie for a family, or delaying an investment by a small business – may go unmet.

Obviously, the carriers sponsoring my testimony are also large companies and are concerned with the competitive distortion caused by their largest competitors receiving unearned revenues, as well as the impact on their customers. Significantly, the private interests of these carriers align with the public interest of those consumers and businesses that are asked to provide the subsidy that is the topic of this proceeding and the Commission must balance both.

Q. What are the specific reforms being recommended by the Coalition?

A. First, and perhaps most simply, the Commission should no longer permit TUSF support in any market where the Commission no longer has the authority to regulate the reasonableness of local rates.[12] PURA compels the Commission to

[12] As indicated earlier, the markets that have been deregulated are, for residential services, certain geographic markets meeting specific criteria set forth by the legislature and, for business services, the entire state. According to the Commission's 2007 Scope of Competition report, 75% of all residential lines and 70% of all local lines in Texas are located in deregulated exchanges. (Scope report, pages 4 and 36).

distribute support in a manner that assures reasonable rates for basic local service,[13] and in those markets where rates have been deregulated, the Commission can no longer provide any such assurance. In these markets, the Legislature has decided that market forces, not regulation, shall determine rate levels (not the Commission). Giving the incumbent subsidies in this context will not reduce the incumbent's rates from profit-maximizing levels, it will merely provide the incumbent more revenue and higher profits.

Second, the Commission should recognize the informational limitations inherent in HM 5.3. The HM 5.3 model no longer complies with forward-looking principles because it does not model the network architecture that would be – and, in fact, is being – deployed by a carrier today. HM 5.3 was designed to model a circuit-switched network, while the technology of choice today is packet-based. This is an industry in transition between technologies with significantly different cost characteristics and business opportunities. The fact that HM 5.3 is the *only* cost model available does not correct for its obsolescence. As we (the URC-sponsored witnesses) explain in greater detail, the HM 5.3 model should be seen as a *tool*, but not an *answer* in itself. HM 5.3 may inform the Commission as to

[13] Commission Powers and Duties, PURA §56.023(a)(1) states (emphasis added):

> The Commission shall in a manner that assures reasonable rates for basic local telecommunications service, adopt eligibility criteria and review procedures, including a method for administrative review, the commission finds necessary to fund the universal service fund and make distributions from that fund;

relative cost differences in different areas of Texas, but it should not be relied upon to provide precise estimates of actual cost levels that conclusively demonstrate the need for support.

Finally, it is important that the Commission separate its High Cost Benchmark – that is, the point at which the High Cost Fund provides support – from measures of the incumbent's revenues. To be sure, even when the Commission first established the High Cost Fund, its benchmark was not *precisely* tied to any individual carrier's actual revenues, but was instead based on a statewide average with adjustments.[14] Today, it is clear that even this linkage must be abandoned. The incumbents enjoy growing revenues per line and per customer, albeit from non-local services such as long distance, Internet access, wireless and, increasingly, video services. Many of these non-local services are provided, either entirely or in part, over the ILEC's local network. Significantly, these revenues are frequently housed in a range of corporate affiliates and are no longer measurable by narrowly looking at the single affiliate designated the incumbent telephone company. Moreover, as more and more customers shift to single-price bundles and packages, it becomes increasingly difficult to isolate which revenues are associated with which services. For a decade, the Commission has defined

[14] For instance, the 1997 Benchmark was based on revenues from basic local and discretionary services, plus a "reasonable allocation" of toll and access revenues. *High Cost Order* at 43.

"high cost" as cost in excess of $38 per month and,[15] other than to adjust this amount for inflation so this definition of high costs remains constant in real terms, there is no reason to lower it, as recommended by AT&T.

Q. Which issues are addressed in your testimony?

A. The primary issues addressed in my testimony (as listed in the *Preliminary Order)*[16] are:

1. What monthly per-line support amount should be available to eligible telecommunications providers (ETPs) pursuant to P.U.C. Subst. R. 403(e)(1)?

   (c). Pursuant to PURA § 56.03, has the adequacy of basic rates to support universal service been considered in calculating the appropriate monthly per-line support amounts under P.U.C Subst. R. 26.403(e)(1)?

   (d). Should provider of last resort (POLR) obligations be taken into account in determining the monthly per-line support amounts ? If so, how?

2. Which eligible lines should receive support under P.U.C Subst. R. 26.403(e)(1)(C)?

3. Pursuant to P.U.C Subst. R. 26.403(e)(1), what total monthly base support amount should be available for ETPs?

5. Should the Commission require any additional reporting from ETPs, as provided by P.U.C. Subst. R. 26.403(f)(3), to facilitate the assessment of

[15] As discussed earlier, because business services are deregulated throughout the State of Texas, there is no need to define "high cost" with respect to business lines.

[16] Docket No. 34723, Preliminary Order, at 2-3 (October 9, 2007) ("*Preliminary Order*").

the contributions to and disbursements from the Texas Universal Service Fund?

Q. Which issues are addressed in the testimony of other URC witnesses?

A. URC witness Terry Murray's testimony addresses two areas. First, as indicated above, HM 5.3 is the only practically available cost model to define high cost rural areas, despite its limitations. Ms. Murray proposes a number of input adjustments in that model to better approximate underlying cost relationships. As such, Ms. Murray's testimony directly addresses the following issues:

1. What monthly per-line support amount should be available to eligible telecommunications providers (ETPs) pursuant to P.U.C. Subst. R. 403(e)(1)?

   (a). What is the monthly cost per-line of providing basic local telecommunications services and other services included in the benchmark using a forward-looking economic cost methodology?

   (b). What are the appropriate benchmark or benchmarks to be used in determining the monthly per-line support amount under P.U.C. Subst. R. 26.403(e)(1),

Mr. Rowland Curry conducted the actual computer runs of HM 5.3 using the inputs recommended by Ms. Murray, and is sponsoring the specific outputs from HM 5.3. Mr. Curry is also providing testimony that summarizes the ILECs' Construction Charge tariffs that provide an additional capital recovery option to these companies in high cost rural areas.

Dr. Michael Pelcovits' testimony addresses the core economic equation of providing multiple communication services over a common platform and the impossibility of narrowly comparing the revenue from one service (local) to the cost of a network capable of providing multiple services. Dr. Pelcovits also addresses important network trends that are not reflected in HM 5.3, as well as providing a discussion on the rapidly evolving business models of incumbent LECs. Dr. Pelcovits' economic evaluation of these market developments provides additional support to the URC's recommendations.

Q. Has the Coalition estimated the size of a reformed High Cost Fund that implements your recommendations?

A. Yes. Table 1 (below) summarizes the annual effect of the reforms recommended by the Coalition, using as the starting point, the level of annual subsidy requested by AT&T and Verizon.[17] As Table 1 illustrates, the level of subsidy appropriate in this environment is far less than the level being sought by these ILECs.

[17] For consistency, Table 1 (and the analysis of the Coalition) uses as its starting point, the level of support projected by the ILECs using HM 5.3 and the benchmark suggested by the company. Significantly, however, although Verizon has filed this information (which produces the support level of $291.5 million), Verizon is not asking that the Commission establish its support at this level. Rather, Verizon recognizes the significant limitations in the model approach and instead is recommending that the Commission cap support at current levels (which, for Verizon, is alleged to be ********** per year). *See* Direct Testimony of Orville Douglas Fulp at 18.

Table 1: Annual Effect of Recommended High Cost Reforms
($ millions)

Category	AT&T	Verizon
Requested Amount	$276.7	$291.5
Reforms		
Reject ILEC "POLR" Additive	($65.4)	($57.2)
Eliminate Subsidy in Deregulated Markets	($65.9)	($27.2)
Retain Uniform Statewide Benchmark	($53.1)	($19.6)
Index Benchmark to Inflation	($39.7)	($38.4)
Limited Refinement to HM 5.3 Inputs	($38.0)	($105.7)
Recommended Annual Subsidy	$14.6	$43.0

Q. Is the Coalition also recommending changes to the support levels for Windstream and Embarq?

A. The commercial interests of the Coalition members are most affected by the competitive implications of unjustified subsidies being provided to AT&T and Verizon, the carriers with whom Coalition members predominately compete. As such, the Coalition has focused its resources on the filings made by these companies.

Moreover, the data in this proceeding makes clear that Embarq and Windstream are in a different position from AT&T/Verizon, and that there are relevant differences that may cause the Commission to evaluate their needs differently. For instance, both Embarq and Windstream serve almost exclusively high cost rural areas (or, at least, areas alleged to be high cost) located in regulated

exchanges.[18] Embarq claims that 102 of its 107 exchanges are high cost,[19] while Windstream claims that its entire Texas territory requires support.[20] As a result, the Commission can more directly measure total assistance (if any) required by these companies in high cost rural areas by looking at the companies' total financial return (which, by definition, must be earned in its "high cost" areas).

For these companies, the Coalition makes a pragmatic recommendation: that the Commission freeze support at current levels while, in a separate investigation, the Commission examines whatever residual support requirement might exist after determining the level of retail rates that would be adequate to support universal service.

[18] Only five of Embarq's exchanges have been deregulated and none of Windstream's. *Staff's Petition to Determine Whether Markets of Incumbent Local Exchange Carriers (ILECs) Should Remain Regulated*, Docket No. 31831, Order (Dec. 28, 2005); *Petition of AT&T Texas to Determine Whether Markets of Incumbent Local Exchange Carriers (ILECs) with Populations Less than 30,000 Should Remain Regulated*, Docket No. 32977, Order (Oct. 17, 2006).

[19] Embarq Direct Testimony of Ken Dickerson, Attachment A, Schedule KWD-1.

[20] Windstream Direct Testimony of Gerald Harris, Exhibit GH-4.

II. CONDITIONS HAVE CHANGED SINCE THE HIGH COST FUND WAS FIRST ESTABLISHED

Q. Which provisions of PURA provide legislative guidance to the Commission concerning the goal and operation of the High Cost Fund?

A. There are three primary provisions in PURA that address the goals and operation of the High Cost Fund:

> Sec. 56.021 The Commission shall adopt and enforce rules requiring local exchange companies to establish a universal service fund to:
>
> (1) assist telecommunications providers in providing basic local telecommunications service at reasonable rates in high cost rural areas;

> Sec. 56.023 The Commission shall:
>
> (1) in a manner that assures reasonable rates for basic local telecommunications service, adopt eligibility criteria and review procedures, including a method for administrative review, the commission finds necessary to fund the universal service fund and make distributions from that fund;

> Sec. 56.031 The Commission may revise the monthly per line support amounts to be made available from the Texas High Cost Universal Service Plan … at any time after September 1, 2007, after notice and an opportunity for hearing. In determining appropriate monthly per line support amounts, the commission shall consider the adequacy of basic rates to support universal service.

Q. In your view,[21] what do these provisions require that the Commission consider in this, its first review, since the High Cost Fund was established?

A. The Legislature identified several elements that should guide an evaluation of the High Cost Fund to better reflect current regulatory, market and technological conditions. To begin, the statute makes clear that the fundamental goal of the high cost fund is to "assist telecommunications providers in providing basic local telecommunications service at reasonable rates in high cost rural areas."[22] Significantly, there are *two* components to this objective, each of which is important.

First, the statute limits the role of the High Cost Fund to "high cost rural areas," not every area of the state. Although the statute does not define the term (thereby deferring to this Commission's judgment and implementation), it is apparent that the Legislature intended to focus funding on areas with unusually low density and high cost. Second, the purpose of the High Cost Fund is not to guarantee a provider's revenues or profits – or to provide absolution from normal business risk. Instead, the statute adopts the more reasonable goal of providing an "assist"

[21] As my qualifications attest, I am not an attorney and am therefore not attempting to offer a legal opinion. I do, however, have more than 25 years of practical experience in the application of regulatory law and its effects on markets. It is from this perspective that I base my testimony.

[22] PURA §56.021(1).

to the maintenance of reasonable rates for basic local service in these high cost rural areas.

Q. Are these goals reinforced by the other two provisions in PURA (*i.e.*, §56.023(1) and §56.031)?

A. Yes. PURA §56.023(1) speaks to requirements imposed on the Commission's design and operation of the High Cost Fund. This provision holds the Commission to a high standard, requiring that it design its distribution system to "assure" reasonable rates. Moreover, PURA §56.031 (which, in effect, is the provision that authorizes the review in this docket) expressly requires that the Commission consider "the adequacy of basic rates to support universal service" when determining the appropriate monthly per line support.

Q. When the Commission first established the High Cost Fund, what was the basic formula used to compute the monthly per line support?

A. The basic formula employed by the Commission was a comparison of a benchmark to an estimate of the forward-looking economic cost to provide basic local service. Although the Commission's rule retains the same basic structure – that is, it anticipates calculating per line support as the difference between an

estimate of forward-looking costs and a benchmark – the existing rule was amended to delete language specifying (a) which eligible lines should receive support, and (b) how the benchmark would be calculated.

Q. What is the impact of the rule changes on this proceeding?

A. The rule amendment "opened" the rule in a manner that enables the Commission to more fully consider the implication of conditions that differ from those in 1998 when the basic structure of the High Cost Fund was established.[23] The amendment facilitates the Commission's review of factors affecting the "benchmark" part of the calculation that should have a substantial impact on the way per line support is calculated in the future, as well as addressing which lines should be used to determine a carrier's monthly subsidy.

Q. What factors made these rule changes necessary?

A. The key factors are the fundamental changes that have occurred over the past decade in technology, the business models adopted by the incumbents, and

[23] The Commission's basic rule governing the High Cost Fund was adopted in January 1998, even though the cost modeling and other calculations needed to make the fund operational were not completed until January 2000. *See* 32 TexReg 2347, April 27, 2007.

regulatory oversight. Collectively, these changes require that the High Cost Fund be substantially reformed.

A. Technological Change

Q. What are the major technological changes that have occurred over the past decade?

A. There are three core changes that are most noteworthy (in no particular order). The first has been the development of the Internet and the various broadband access technologies (principally DSL and cable and, more recently, fiber-to-the home) that it relies upon. Second is the introduction of "managed-packet" technology that assures an acceptable quality-of-service for time-delay sensitive services such as voice, effectively rendering obsolete circuit-switched technology.[24] Finally, there is the wide acceptance of wireless service, which is far more extensively deployed and utilized today than it was ten years ago.

[24] By obsolete, this does not mean that every circuit-switch will be replaced immediately. Rather, my point is that the architecture that will drive new investment decisions will be a packet-based (not circuit-switched) network.

Q. The first technological change you identified is the deployment of broadband access technologies and the Internet. How does the deployment of Internet access in Texas today compare with 1998?

A. In December 1999 (just before the High Cost Fund became operational), there were only 152,000 high-speed lines in Texas.[25] By December 2006 (the date of the most recent FCC report), there were nearly 5.5 *million* high-speed lines in the State, of which approximately 2 million were DSL.[26] This technology, which barely *existed* in the marketplace at the time that the Commission operationalized the High Cost Fund, is today the leading access technology in terms of ongoing deployment and investment.

Q. How is the growing deployment of broadband access reinforced by the second technological change you identified, the emergence of managed-packet technology?

A. Managed-packet technology enable packets with different service requirements – for instance, the requirement of voice service that voice packets achieve real-time

[25] High-Speed Services for Internet Access: Subscribership as of June 30, 2000, Industry Analysis and Technology Division, Common Carrier Bureau, Federal Communications Commission, Released October 30, 2000, at Table 5.

[26] High-Speed Services for Internet Access: Status as of December 31, 2006, Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, Released October 31, 2007, at Table 9.

delivery requirements for high quality service – to be carried over common packet transport facilities. The emergence of managed-packet technology, in effect, eliminates the only remaining advantage of circuit-switched technology — *i.e.*, the low and unvarying latency (delay) made possible by a dedicated transmission path. With the ability to match the quality inherent in a circuit-switched architecture, while maintaining the cost advantages and flexibility of a packet network, managed-packet technology effectively obsoletes circuit-switched technology. (I discuss the *implications* of this technological change in the following section concerning changes in the business model of the local exchange carriers).

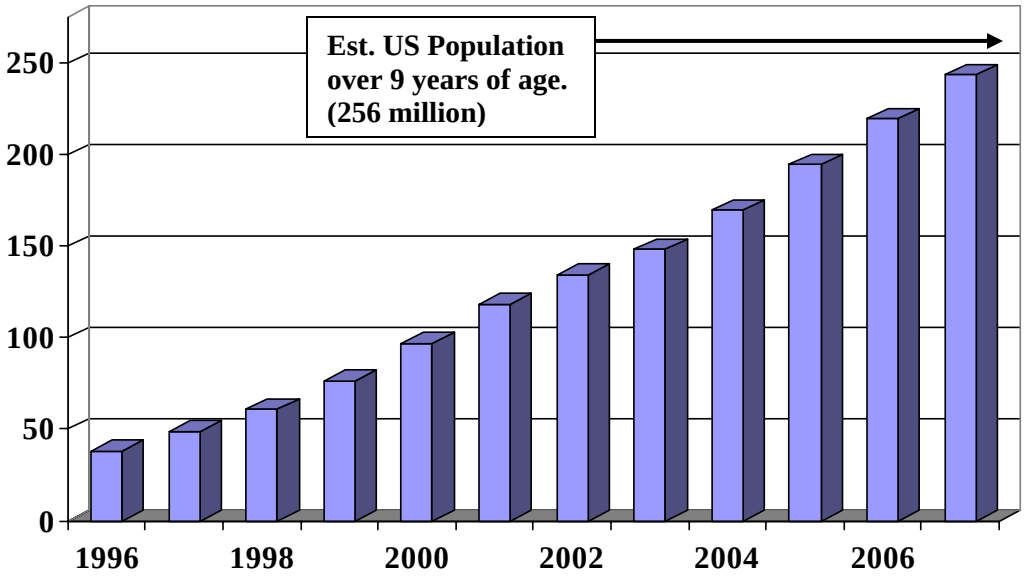
Q. Please contrast the state of wireless today to that which existed when the Commission first addressed the High Cost Fund.

A. Although wireless service existed at the time that the High Cost Rule was adopted (1998), it was not as ubiquitous as today. It was in May of 1998 that AT&T[27] introduced the Digital One Rate providing subscribers a single, all-inclusive rate for incoming or outgoing calls anytime, anywhere in the United States, thereby

[27] When AT&T introduced the Digital One Rate, it was not affiliated with SBC as part of the "new AT&T."

eliminating roaming and long-distance charges.[28] As the chart below demonstrates, the number of wireless subscribers (2007 estimate of 243 million) is rapidly approaching the total population of the United States above the age of 9 years old.

Figure 1: Estimated Number of Wireless Subscribers[29]
(millions)



[28] Remarkably, when it was introduced, the Digital One Rate was seen as targeted at a niche market of users. As described by Darryl Sterling, an analyst with the Boston consulting firm Yankee Group:

> Only 6.2 percent of wireless users use their cellular phones more than 300 minutes a month. AT&T is going after a very small--but very profitable--part of the market.

AT&T goes after High-End market with Digital One Rate Plan - Company Business and Marketing, Home Office Computing, Sept, 1998.

[29] Semi-Annual Wireless Industry Survey Results, CTIA-The Wireless Association, Estimates as of June of Each Year. Estimated US Population as of July, 2007, US Census Bureau, December 27, 2007 adjusted by Age Distribution from 2000 Census (Source: CensusScope.Org).

Not only has the number of wireless subscribers grown over the past 10 years, so has the number of cell sites. In 1998, there were 65 thousand cell sites in the United States; by June of 2007, that number had more than tripled to over 210 thousand.[30]

Q. In addition to these national estimates, is there Texas-specific data that supports the conclusion that wireless service is far more accepted, and far more ubiquitous, today then when the High Cost Fund was initially established?

A. Yes. Beginning in 2001, the FCC began reporting wireless subscription data for individual "Economic Areas,"[31] including a number of areas in Texas.[32] Comparing this data to national data confirms that wireless penetration in Texas is

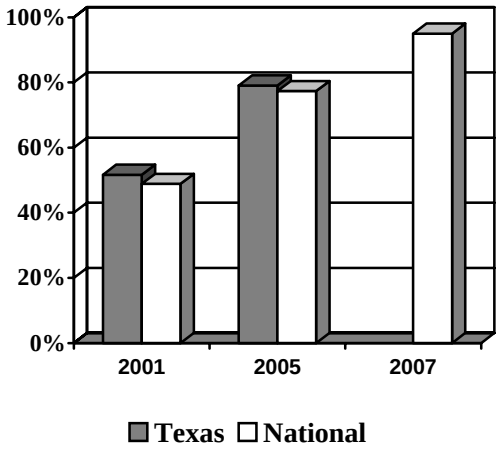
[30] *Ibid*.

[31] Economic areas are collections of counties aggregated by the Bureau of Economic Analysis to report regional economic statistics. Each economic area consists of one or more economic nodes - metropolitan areas or similar areas that serve as centers of economic activity - and the surrounding counties that are economically related to the nodes. The main factor used in determining the economic relationships among counties is commuting patterns, so each economic area includes, as far as possible, the place of work and the place of residence of its labor force. Although the BEA modified the EA structure in 2004, the FCC continues to report data based on the prior EA designations. *See* Eleventh Report, In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, FCC, WT Docket No. 06-17, released September 29, 2006, FCC 06-142 ¶ 13.

[32] The Economic Areas that are all (or part) in Texas are: McAllen-Edinburg-Mission, Houston-Galveston-Brazoria, Austin-San Marcos, Dallas-Fort Worth, Beaumont-Port Arthur, San Antonio, Corpus Christi, Lubbock, Abilene, Amarillo, Hobbs, Odessa-Midland, and San Angelo.

generally tracking penetration growth in the nation overall. *See* Figure 2 (right).[33]

Figure 2: Wireless Penetration as a Percentage of the Population Over Age 9



It is important to point out that the Texas-specific penetration rates are now two years old. The national data (based on the CTIA's annual estimate of wireless subscribers), however, indicates that wireless subscription rates have continued to increase to a point where wireless service is logically nearing saturation.

Q. Are you claiming that wireless service is a substitute for wireline phone service?

A. Not in the sense that I believe that the price of wireless service necessarily limits an incumbent's ability to increase the price of its wireline services. Wireless service, however, is effectively *defined* as a substitute to wireline phone service

[33] Source: Wireless Subscription by Economic Area from Eleventh Report, Federal Communications Commission, WT Docket No. 06-17, September 29, 2006 (2005 data), and Seventh Report, WT Docket No. 06-17, July 3, 2002 (2001 Data). EA Population is based on 2000 Census with Growth Rate for Texas developed by US Census Bureau and Age Distribution from 2000 Census for US overall.

by statute, which requires that the Commission count an unaffiliated CMRS provider as a competitor when deterimining whether to deregulate a market.[34] Consequently, it would appear that the Legislature has directed the Commission to treat wireless service as equivalent to wireline service, at least with respect to determining whether a market should be regulated. If wireless is a sufficient substitute for there to be deregulation, there is no reason (as a matter of public policy) that it not be viewed as sufficient to satisfy a universal service obligation.

Q. Does AT&T believe that wireless service is the key technology for the provision of voice service?

A. Yes. At a recent investor conference, AT&T explained that it believes that wireless service is the anchor product to its bundles:

> AT&T chairman and CEO Randall Stephenson said that the anchor for the triple play bundle of the future will be wireless telephony, not wireline service, adding that the telecom giant will be more aggressive this year both within its region and possibly outside its territory with the three-product bundle.
>
> "In region without a doubt, it will continue to get more aggressive" Stephenson said at the Citigroup Entertainment, Media & Telecommunications conference in Phoenix Tuesday. "The triple

[34] PURA §65.052(b)(2)(C). By its terms, §65.052(b)(2)(C) only applies to markets with a population of between 30,000 and 100,000 (markets with a population in excess of 100,000 are deregulated by statute). The Commission, however, adopted a standard for markets with populations less than 30,000 that would also count an unaffiliated provider of wireless service as a competitor of the same weight as a facilities-based wireline carrier (Subst. R. §26.134).

> play option – wireless, broadband and video – that will be our strategic product set in the marketplace in region."
>
> "I happen to be one of those people that believe the voice product of the future is wireless," Stephenson said, adding that while some pundits have predicted that as much as 20% of homes could be wireless-only, he estimated that it "could be higher than that."[35]

Although AT&T's Chairman views wireless service as the voice product of the future, AT&T's witnesses ignore *every* implication of that perspective in determining cost and/or need in high cost rural areas, focusing exclusively on the (alleged) costs of wireline network deployment while ignoring bundles altogether.

B. Changes in ILEC Business Models and Revenues

Q. Have the signficant changes in technology summarized above caused ILECs (particularly AT&T and Verizon) to change their business models?

A. Yes. The opportunities provided by these new technologies have substantially changed ILEC business models and the telecommunications market structure overall, particularly when compared to the environment that existed when the Commission first established the High Cost Fund. These changes are most apparent in the two largest ILECs – AT&T and Verizon – companies that bear

[35] *Stephenson: Future of the Bundle is Wireless*, by Mike Farrell, Multichannel News, January 8, 20008.

little similarity to their predecessor entities (Southwestern Bell and GTE) as they existed in 1998.

Q. Please describe the industry landscape as it existed in 1998.

A. In 1998, the march of consolidation had only just begun. In the prior year, SBC had acquired Pacific Telesis, and Bell Atlantic merged with NYNEX to become a larger, but still regional, carrier.[36] For their part, AT&T had acquired Teleport, and MCI and WorldCom had merged to form what many considered to be the two principal competitive threats to the incumbents. Two additional mergers had been announced – SBC with Ameritech and Bell Atlantic with GTE – that provided the first hints at the emergence of "national-local" carriers.

The FCC issued its first local competition report in 1998, revealing that Competitive Local Exchange Carriers ("CLECs") and, using a term that would later fall to history, Competitive Access Providers ("CAPs"), served a scant 1.6% of the national local market (measured in revenues).[37] In Texas, GTE had

[36] The SBC/Pacific Telesis merger was approved by the FCC on January 31, 1997 and the Bell Atlantic-Nynex merger was approved August 14, 1997.

[37] *Local Competition*, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, December 1998, Table 2.1

provisioned more UNE Loops (8 thousand) than SBC (fewer than 500),[38] while most of the local competition in SBC's territory was based on resale (2.9%).[39]

In 1998, Local Telephone Companies were still *telephone* companies, with the full promise of their transformation still ahead of them. As Bell Atlantic explained in its 1998 Annual Report:

> Today, we serve residential customers' needs for data transport primarily through the sale of additional phone lines. We also are rapidly deploying high-speed digital lines using a technology called ADSL…. We hope to further drive consumer acceptance and market penetration for ADSL through a unique marketing agreement with America OnLine, which will package our high-speed transport with the popular AOL portal.[40]

Q. Have the ILECs shifted their business since the late 1990's?

A. Yes. The ILECs are well aware of the business potential from new technologies, as well as the business risk from inaction. AT&T and Verizon are no longer regional carriers, but through continuing mergers, including mergers with what had been their principal rivals (AT&T and MCI), are today national carriers with unmatched – if not unmatchable – geographic footprints and market share.

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38 *Ibid*, Table 3.3.

39 *Ibid*, Table 3.4.

40 1998 Bell Atlantic Annual Report, March 1999 at 5.

One consequence of the reformulated incumbent strategy is a change in their revenue mix, with an increasing reliance on services utilizing new technology, including Internet access, wireless, managed-packet services to larger customers and, in the future, video service. This transformation has been underway for many years. For example, Verizon's 2003 Annual Report stated:

> Our [Verizon's] emphasis is on revenue transformation, devoting more resources, including capital spending, from traditional services to the higher growth markets such as wireless, digital subscriber lines (DSL), long distance and other data services as well as expanded services to enterprise markets. In 2003, approximately 47% of our revenues were earned in these growth areas, compared to 38% in 2001.[41]

In large measure, Verizon has indicated that it has achieved its intended shift. Its third quarter 2007 quarterly report included the heading "Successful Transformation," supported by the following quote from CEO Ivan Seidenberg: "In recent years, we [Verizon] have transformed our business model and revenue base."[42] For its part, AT&T lists among its recent corporate accomplishments the following: "AT&T's revenue mix has been remade. Sales to wireless and business customers now make up 75 percent of the company's total revenues."[43]

Q. Are AT&T and Verizon reporting strong consumer revenue growth?

[41] Verizon 2003 Annual Report, at 14.

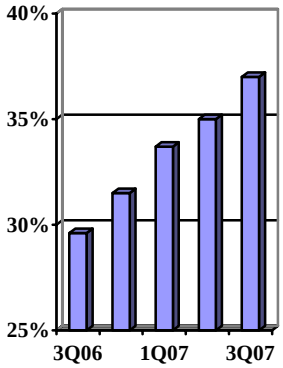
[42] *Verizon Reports Continued Success in 3Q 2007*, Verizon 3Q2007 Earnings Release, October 29, 2007. Notably, in 3Q2007, Verizon had reported that its retail consumer revenues were only 16% of the company's revenues.

[43] http://www.att.com/gen/press-room?pid=1728

A. Yes. Both Verizon and AT&T are reporting consumer revenue is growing significantly and is expected to continue to grow in the future. For instance, AT&T reports that it expects monthly revenue per customer to grow from the $50s today to more than $70 by 2010, accompanied by the exhortation: "We will win at the local level."[44]

AT&T's confidence could come from the fact that it is projecting the *continuation* of an existing trend, not some future or speculative market change. AT&T has enjoyed steadily increasing revenue per consumer primary line, reporting an average of $58.55 in the 3rd Quarter of 2007.[45] A large component of AT&T's increasing revenues is the result of growing DSL penetration, which is rapidly approaching 40% of its consumer lines.

Figure 3: AT&T's DSL Penetration Rate



Verizon similarly reports increasing revenue per consumer, reporting an increase from $53.06 per month in the third quarter of 2006 to $58.79 a year later, an

[44] AT&T 2007 Analysts Conference, http://www.att.com/gen/investor-relations?pid=10872, December 11, 2007.

[45] AT&T Investor Update, Slide Presentation, 3Q2007 Earnings Conference Call, October 23, 2007.

increase of more than $5 per unit.[46] In the second quarter of 2007, Verizon singled out its success in Texas specifically, reporting to investors that its consumer average revenue per unit ("ARPU") in Texas had increased by 20%.[47]

Q. Why is DSL penetration particularly important?

A. DSL is particularly relevant because it relies on the same underlying loop facilities as traditional voice service. In the past, the cost of loop plant was recovered through a combination of local and access charges, but today there are four core services using these facilities: local, *retail* long distance, Internet access, and terminating access service.[48] Importantly, the revenues from several of these sources are booked to different affiliates, and are therefore difficult to track and subject the ILEC's business or accounting decisions.[49] The fact that ILECs

[46] Verizon reports consumer revenue measured in "average revenue per unit" (ARPU). Verizon 3Q2007 Earnings Conference Call, October 29, 2007.

[47] Verizon 2Q2007 Earnings Conference Call, July 30, 2007.

[48] Prior to obtaining authority to offer long distance services, SBC and GTE had been restricted to the revenues associated with carrier access service (although the terms of GTE's restriction were less strict than those imposed on SBC). Once able to offer local and long distance service, however, SBC (now AT&T) was able to receive the full margin provided by retail long distance service, and not merely the margin embedded in originating access charges. In addition, the revenues generated by terminating access charges continue, even for subscribers that have selected a combined local/long distance service and originating access is replaced by retail revenues.

[49] Indeed, in this proceeding, AT&T strenuously objected to discovery that requested AT&T identify the Texas-specific revenues recovered by these affiliates. The Administrative Law Judge sustained AT&T's objections, thus foreclosing intervenors from investigating – and, as a result, the Commission from examining – the affiliate revenues. Because AT&T limits

choose to book such revenues to affiliated legal entities rather than to the Texas ILEC entity, however, does not change the core economic equation that it is the combined profitability of all of these uses of facilities that is relevant to the firm.

Q. Are the major ILECs (AT&T and Verizon) moving beyond long distance and broadband Internet services, integrating even more services into their networks?

A. Yes. Each of these carriers is deploying an *all-media* wireline network, where voice imposes a trivial claim on the capacity of the network.[50] As explained by Verizon and AT&T, each is a leader in this transformation:

> In telecom, we [Verizon] are upgrading our traditional copper network with the most comprehensive high-speed fiber network in the country, which will reach 18 million homes and businesses by the end of the decade.
>
> ***
>
> Together, our broadband, mobile and global IP networks comprise a powerful delivery system for the media-rich, interactive content that is transforming television, the Internet, commerce, medicine and education as we know them today. Verizon is at the heart of this creative, disruptive, market-making shift – delivering high-definition content, helping people and businesses collaborate, and making it all work together for customers, on any screen, wherever they are.[51]

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access to the necessary revenue data, and for other reasons explained more fully below, the Commission should decouple the High Cost Benchmark from revenues.

[50] I use the term "all-media" to refer to a managed-packet network designed to support data, voice and, at least in residential applications, video services as well.

[51] Chairman's Letter, Verizon 2006 Annual Report.

AT&T's letter to its shareholders describes a nearly identical network view:

> AT&T is a leader in transitioning customers to services that rely on Internet Protocol (IP). IP technology lowers costs and allows for integrated platforms and service offerings that transform the way customers use their PCs, wireless devices and wired phones — even televisions.
>
> ***
>
> Our high speed broadband has opened the door to a new opportunity — video. In fact, our IP-based AT&T U-verse[SM] service offers much more than video. AT&T U-verse completes the quadruple play of communications and entertainment services — video, voice, data and wireless.[52]

Q. As AT&T deploys its IP network, what is happening to its traditional local voice service?

A. Initially, AT&T has continued to provide customers that subscribe to U-verse voice service using the circuit-switched network of its ILEC. AT&T recently announced, however, that it intended to move these customers to its U-verse IP network:[53]

> By substituting VoIP for standard phone service, AT&T expects to lower network operating costs, says Ralph de la Vega, AT&T's group president, regional telecommunications and entertainment. In the long run, AT&T plans to shut down its older voice network.

[52] Chairman's Letter, AT&T 2006 Annual Report.

[53] AT&T witness Loehman is apparently unaware that AT&T intends to provide voice services over U-Verse, testifying in deposition that U-verse is used exclusively for video. Loehman Dep. Tr. at 37-38.

> "Customers just want voice to work, whether it's VoIP or not," de la Vega said. "It's a big step forward for us because we're putting all our services -- U-verse TV, broadband, voice -- over the same IP (Internet protocol) infrastructure using the same billing system. It begins a transition to the future where we can dismantle the (older) voice circuits."[54]

Q. Are these new networks and services housed in the traditional incumbent local telephone company (ILEC), or are they being deployed by affiliates?

A. Both AT&T and Verizon use an array of affiliates to provide service in Texas, frequently in combination with the "local exchange carrier" as part of a bundle or package of services. For instance, AT&T provides its DSL service through ASI (Advanced Services, Inc.),[55] and long distance service through SBC Long Distance (d/b/a AT&T Long Distance).[56] Notably, even the intraLATA long distance portion of a bundle offered by "AT&T" is provided by SBC Long Distance (and not AT&T Texas, the ILEC).[57] Only if a customer purchases intraLATA long distance outside a bundled offering does AT&T book the

[54] *AT&T Set To Include Internet Telephony In Product Bundles*, Investor's Business Daily, October 1, 2007.

[55] AT&T Response to URC Second Request for Information, Request 2-14. AT&T's Response to 2-14(a) somewhat clouds the issue of which affiliate provides which services because the answer indicates that AT&T offers residential customers DSL at *four* different speeds, then notes that the "*higher* bandwidth is provided by ASI." (Emphasis added). It is unclear whether this response indicates that only the higher (of the four) bandwidth DSL offerings are provided by ASI, or whether ASI provides the bandwidth higher than that used by the voice service.

[56] AT&T Response to URC Second Request for Information, Request 2-15.

[57] AT&T Response to URC Second Request for Information, Request 2-15(a).

revenue from that service to the ILEC.[58] Moreover, AT&T the ILEC apparently "offers" wireless service, although the plan and phone is actually provided by AT&T Wireless.[59]

For Verizon, long distance service is offered through Bell Atlantic Communications d/b/a Verizon Long Distance (consumer services), or Bell Atlantic Communications d/b/a Verizon Long Distance or NYNEX Long Distance d/b/a Verizon Enterprise Solutions (business).[60] Wireless service is provisioned by Verizon Wireless (a/k/a/ Cellco Partnership).[61] When a customer subscribes to FiOS video service, the "FiOS Video service component" is provided by the LEC, while the FiOS set-top box is provided by Verizon OnLine.[62]

[58] Deposition of AT&T witness Steven E. Turner, Transcript at 72 and 156 (Dec. 21, 2007) (hereinafter, "Turner Dep. Tr."); AT&T Response to URC RFI 2-15(a). Copies of all cited transcript pages are attached as Attachment JPG-6.

[59] AT&T Response to URC Second Request for Information, Request 2-16(a).

[60] Verizon Response to URC Second Request for Information, Request 2-8.

[61] Verizon Response to URC Second Request for Information, Request 2-9.

[62] Verizon Response to URC Second Request for Information, Request 2-10. This description by Verizon is *potentially* significant (but not terribly clear). For instance, the structure could be interpreted to suggest that the costly fiber loop (*i.e.*, the FiOS video service component) is owned by the ILEC, with the less costly – but service enabling – component (the set-top box) owned by Verizon OnLine. If true, such an arrangement would be roughly analogous to Hertz having one affiliate own the cars, while another owns the keys. In such an arrangement, the "key affiliate" would clearly enjoy the higher value-to-cost ratio.

Q. Are these the only affiliates that Verizon and AT&T use to provide services in Texas?

A. No, there would appear to be two notable omissions from the list of affiliates above. First, there was no mention of Verizon Business (the former MCI) in Verizon's discussion of its affiliates. More significant, however, is the following AT&T response to a discovery request concerning video services:

> **RFI 2-17:** Does AT&T Texas offer video service in a package or bundle with local exchange service? If so, is the video service offered through a Texas Affiliate?
>
> **Answer**: For residence, the definition of bundles includes billed at a single price point. AT&T Texas does not provide a bundle with video at a single price point. EchoStar is not a Texas Affiliate. There is a contractual agreement between AT&T and EchoStar.[63]

It is difficult to reconcile this response to other public characterizations concerning AT&T's U-verse offering, including the *Investors Business Daily* story (announcing that AT&T will start providing voice service using VoIP when subscribers choose U-verse, but explaining that such service is today provided using its circuit-switched network) that included the following:

> AT&T has more than 100,000 customers for U-verse, the TV service it launched in late 2006.

[63] AT&T Response to URC Second Request for Information, Request 2-17. Emphasis added.

> But so far, AT&T (NYSE:SBT) (NYSE:T) has sold U-verse TV along with standard, circuit-switched phone service and broadband Internet access via digital subscriber line. Later this year, AT&T plans to install a voice over Internet protocol connection when customers sign up for U-verse TV.
>
> Providing VoIP has advantages for users, but the $99 introductory price for all three services -- voice, data and TV -- will stay the same. AT&T says U-verse's Internet calling will be just as reliable as standard phone service.[64]

I note that AT&T's website promotes AT&T's "Triple Pack with Entertainment" bundle, combing Internet Access, Unlimited Local and Long Distance Calling and Dish Network for $99.98. The offering certainly looks as though AT&T offers video service at a single price point with local exchange service.

Q. Are you implying that AT&T did not fully respond to the URC's Request for Information?

A. No. My point is not to suggest that AT&T did not respond fully, but rather to emphasize how difficult it is (or would be) for the Commission to ever fully track – much less reliably measure – any carrier's full business opportunity in the emerging environment. AT&T and Verizon are no longer defined by narrowband networks focusing on voice service, but by their status as owners of parallel

[64] *AT&T Set To Include Internet Telephony In Product Bundles*, Investor's Business Daily, October 01, 2007.

broadband and wireless networks, over which they offer a variety of voice, data and video services.

Moreover, the corporate structures of these companies – that is, which affiliate "offers" which services – is largely within the control of their management, and virtually impossible to track. Certainly, consumers and businesses only know that they obtain service from "AT&T" or "Verizon," but within these conglomerates, it will become (if it is not already) impossible to determine each individual affiliate's contribution to the enterprises' overall profitability and strategic position. In addition, even if affiliate revenue streams can be understood at a point in time, the companies can change most affiliate relationships based on their internal accounting or marketing needs.

Q. Is AT&T's strategy of housing its newer technologies in other affiliates causing AT&T Texas' investment to decline?

A. Yes. AT&T's investment is directed towards new technologies – wireless and broadband – that are housed in other affiliates.[65] In contrast, AT&T Texas, the

[65] *AT&T Investing Nearly $1.25 Billion in Texas in 2007 - Two-Year Investment Will Total Nearly $3 Billion, Focuses on Enhancing Wireless Network and Expanding Video Service,* AT&T Press Release, October 2, 2007.

ILEC has (in a sense) been "cashing out," with its annual depreciation regularly totaling much more than its reinvestment.

Table 2: Investment Pattern of AT&T Texas[66]
($ thousands)

Year	Total Plant in Service	Change from Prior Year	Annual Depreciation	Net Change
2000	$20,474,327	$985,806	$1,471,945	($486,139)
2001	$22,204,914	$1,730,587	$1,543,561	$187,026
2002	$23,359,345	$1,154,431	$1,604,087	($449,656)
2003	$23,861,882	$502,537	$1,638,906	($1,136,369)
2004	$24,095,439	$233,557	$1,646,806	($1,413,249)
2005	$24,365,929	$270,490	$1,622,459	($1,351,969)
2006	$24,993,010	$627,081	$1,659,852	($1,032,771)
	Totals	$5,504,489	$11,187,616	($5,683,127)

Over the past seven years, AT&T Texas' net investment in its Texas network has declined by more than $5.6 billion dollars. While AT&T as a company has been investing in new technologies that drive new sources of revenue, its ILEC entity – the entity that seeks continued subsidy from the High Cost Fund – is no longer the focus of the company's investments.

C. Changes in Regulatory Oversight

Q. How has the Commission's regulatory oversight of ILECs changed since the High Cost Fund was established?

[66] Source: ARMIS 43-03, Subject to Separations, Total Plant in Service (Row 2001) and Total Depreciation/Amortization Expense (Row 6560). Verizon exhibits a similar pattern of negative net investment in its Texas LEC affiliate.

A. The changes in technology and market structure described above have been matched by changes in the regulatory environment and this Commission's authority. Most significant to the issues in this proceeding are the changes introduced by two significant provisions adopted by the Legislature in 2003 and 2005.

First, Senate Bill 5, passed in 2005, included Chapter 65 (Deregulation Of Certain Incumbent Local Exchange Company Markets), which established unambiguously that the policy of the State of Texas would favor market-based pricing:

> It is the policy of this state to provide for full rate and service competition in the telecommunications market of this state so that customers may benefit from innovations in service quality and market-based pricing.[67]

Second, Section 55.251 was amended in 2003 to add the following paragraph (c), enabling carriers to satisfy their provider of last resort obligations with non-traditional technologies:

> A certificate holder may meet the holder's provider of last resort obligations using any available technology. Notwithstanding any provision of Chapter 56, the commission may adjust disbursements from the universal service fund to companies using technologies other than traditional wireline or landline technologies to meet provider of last resort obligations. As determined by the

[67] PURA § 65.001

> commission, the certificate holder shall meet minimum quality of service standards, including standards for 911 service, comparable to those established for traditional wireline or landline technologies and shall offer services at a price comparable to the monthly service charge for comparable services in that exchange or the provider's nearest exchange.

The introduction of these provisions require reforms in the manner in which subsidy is provided through the High Cost Fund.

Q. What changes were introduced by Chapter 65 (Deregulation Of Certain Incumbent Local Exchange Company Markets)?

A. Chapter 65 adopted a system of regulation in which a variety of markets were either deregulated directly by the statute, or were required to be deregulated by the Commission under specified conditions. With limited exceptions (discussed below), Chapter 65:[68]

* Deregulated the business market statewide, and

* For residential customers:

  * Deregulated any market with a population of 100,000 or more,

  * Deregulated any market with a population of between 30,000 and 100,000 so long as the Commission found there

[68] The actual operation of Chapter 65 is more complicated than that outlined here, and starts (in a sense) with a rebuttable presumption that *all* markets should be deregulated and then provides the Commission with guidance as when the presumption is rebutted.

were three competitors (which could include a wireless provider), and

* Authorized the Commission to adopt by rule a market test to determine whether markets with a population of fewer than 30,000 should be deregulated.

The primary exception to this system of residential rate deregulation is the rate for "stand-alone" residential local exchange voice service, which remains capped until the Commission has had the opportunity to revise the monthly per line support provided by the High Cost Fund.[69]

Q. Has AT&T used the flexibility granted by Chapter 65 to increase its basic local rates?

A. Yes. AT&T used its flexibility to introduce a "new" version of its residential local exchange service, which it calls "Standard Plus." Under the terms of AT&T's "Standard Plus" tariff, a Standard Plus line is, in effect, any residential local exchange line that does *not* qualify as a "stand-alone" local exchange line under Chapter 65.[70] Because most residential subscribers subscribe to *some* additional feature or service (*e.g.*, Call Waiting), AT&T was able to implement a local rate increase through the introduction of a new, higher-priced service that most consumers were automatically subscribed to by virtue of the decision under

[69] PURA § 65.102 (a)(3).

[70] AT&T-Texas Local Exchange Tariff, Section 1, Sheet 3, Revision 5.

the pre-existing rate schedule to add a feature or service to their account.[71] In other words, customers do not affirmatively *select* Standard Plus service, as much as they are converted to it by AT&T through inaction.[72]

As shown in Figure 4 (below), AT&T used the pricing flexibility granted it through Chapter 65 to increase basic local rates to most consumers (through its conversion of customers to Standard Plus) and to generally "flatten" its rate schedule, at least in the initial Standard Plus rate schedule.[73] AT&T introduced Standard Plus in May, 2006, and then (for most exchanges)[74] increased the rates in October, 2007 (by $2.50 per month), and again in December, 2007 (by $2.00 per month). Overall, since May 2006, AT&T has used Standard Plus to increase

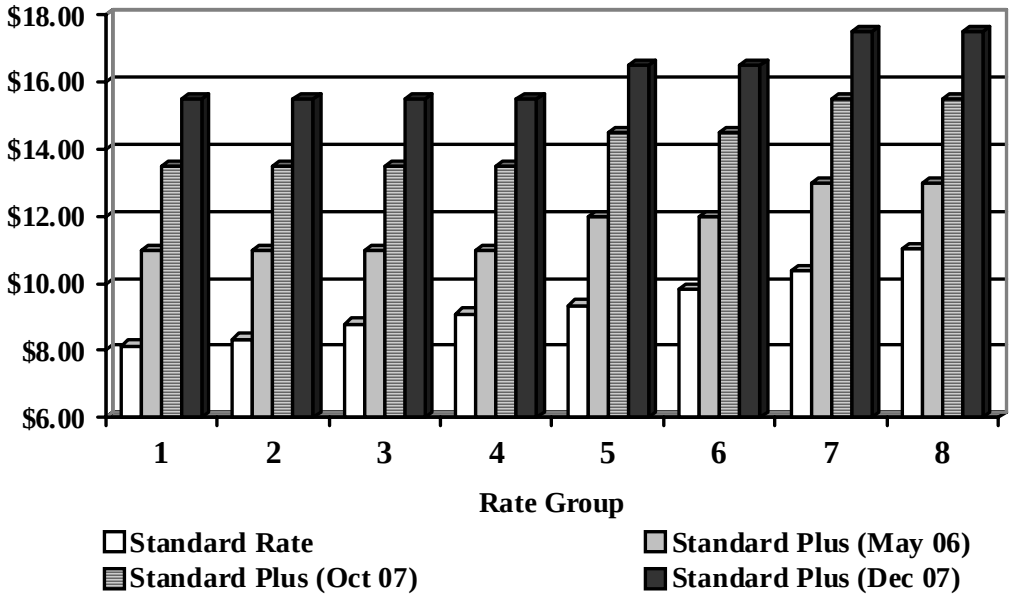
[71] Subscribers to Caller ID remain on the "Standard" line rate schedule. If a customer subscribes to local service, and Call Waiting (or any other feature), the line then qualifies as "Standard Plus" and is subject to the rate increases described herein.

[72] Among the other decisions that would have landed a consumer on AT&T's Standard Plus rate schedule is the decision to have added an additional directory listing under the preexisting Standard Line rates.

[73] AT&T's existing local rate structure charges higher rates in large exchanges than in does in exchanges with fewer customers. AT&T's introduction of Standard Plus eliminated some of the rate disparity between its rural and urban rate schedules, but later increases were applied uniformly and, therefore, did not equalize its rates any further.

[74] When AT&T increased the rates for Standard Plus in October 2007, it also introduced 15 new exchanges to a *separate* Standard Plus rate schedule that had been deregulated at the first of the year. (*See* Order, Docket No. 32977, October 17, 2006). AT&T is taking a different approach in how it prices these exchanges, with lower initial rates in those exchanges in Rate Groups 1 and 2, higher initial rates in Rate Groups 3 and 4, and then a lower initial rate again in Rate Group 5. AT&T's witness was unable to explain why AT&T was following a different pricing strategy in these 15 exchanges, or whether the exchanges would ultimately be integrated into the "standard" Standard Plus rate schedule. Loehman Dep. Tr. at 56-58 and 79. Figure 4 above illustrates the increases implemented in the "standard" Standard Plus rate scheduled that applies to the vast majority of AT&T's lines.

Figure 4: AT&T Pricing Behavior Under Chapter 65



local rates (at least for any customer that subscribes to more than simply stand-alone basic local service) by between 58% (in its largest exchanges) and 90% (in its smallest markets).

Q. Have you estimated the increased revenues that AT&T gained through the conversion of customers to Standard Plus?

A. Yes. Table 3 provides an estimate of the annual revenue increase realized by the introduction of the Standard Plus Rate Schedule and the two subsequent rate

increases.[75] It is reasonable to assume that AT&T will remerge its Standard and Standard Plus rate schedules at the conclusion of this proceeding, when the sole reason for the Standard Plus schedule – *i.e*, Chapter 65's prohibition on increased rates for stand-alone service – will expire. Assuming that AT&T responds by converting the remaining customers to the higher rate schedule, its revenues could increase by another ********** million per year. In other words, the deregulatory freedom granted Chapter 65 has positioned AT&T to increase basic local rates to produce approximately ***$******** million dollars per year, more than ********** its annual draw on the High Cost Fund.

Table 3: Estimated Revenue Gain From Standard Plus Rate Schedule
($ millions)

May-06 Introduction	**********
Oct-07 Rate Increase	*****
Dec-07 Rate Increase	*****
Annual Total	**********

III. IMPLICATIONS FOR TEXAS HIGH COST FUND REFORM

Q. Overall, how should the High Cost Fund be reformed to recognize the significant changes that have occurred since this Fund was first initiated?

A. There are a number of reforms to the High Cost Fund that are needed for its

[75] The revenue estimates in Table 3 associated with the two rate increases in October and December 2007 do not include any adjustment in quantity demanded in response to the higher rate. As a result, AT&T's actual revenue change may be somewhat less.

operation to conform to the industry changes discussed. The reforms recommended by the Coalition are:

* The Commission should reject the ILECs' "POLR Additive," as speculative and fundamentally inconsistent with the state and federal goals of encouraging facilities-based competition;

* The Commission should terminate the provision of subsidy in deregulated markets because the Legislature has determined that market pricing should govern rates in such areas;

* The Benchmark used to define "high cost rural areas" should be decoupled from measures of ILEC revenue and indexed to inflation; and

* HM 5.3 cost estimates should be refined to implement inputs that better track forward-looking cost principles.

These reforms are firmly grounded in the reality of a changing market and business model for the incumbent local exchange carriers operating in Texas and receiving High Cost Fund subsidies. Moreover, each reform is fully consistent with the Commission's High Cost Fund rule and the statutory provisions that guide it. Finally, the reforms will reduce the cost of universal service – a cost that is borne by Texas' working families and businesses – without jeopardizing affordable access or unfairly burdening the ILECs.

Q. Have you estimated the effect of these reforms on the annual High Cost Fund support received by AT&T and Verizon?

A. Yes. Table 4 (below) estimates the annual savings achieved by each of the recommended reforms. The starting point for the analysis is the unadjusted HM 5.3 analysis proposed by the incumbents, not because the URC endorses those analyses, but to reduce the issues requiring resolution to the smallest set possible.[76]

Table 4: Annual Effect of Recommended High Cost Reforms
($ millions)

Category	AT&T	Verizon
Requested Amount	$276.7	$291.5
Reforms		
Reject the ILECs' POLR Additive	($65.4)	($57.2)
Eliminate Subsidy in Deregulated Markets	($65.9)	($27.2)
Retain Uniform Statewide Benchmark	($53.1)	($19.6)
Index Benchmark to Inflation	($39.7)	($38.4)
Limited Refinement to HM 5.3 Inputs	($38.0)	($105.7)
Recommended Annual Subsidy	$14.6	$43.0

Q. Before addressing each of these affirmative reforms, what is the general premise underlying the subsidy demands of the incumbents?

A. By and large, the incumbents' positions are grounded in assumptions derived from another regulatory era, with scarcely any adjustment for the conditions that

[76] As I noted earlier in my testimony, Verizon itself does not endorse calculating subsidy using the HM 5.3 model filed with its testimony (Fulp Direct at 18). As Table 4 demonstrates, Verizon's model inflates its costs by more than even AT&T. Because Verizon's cost model produces a *tripling* of support (as compared to existing levels), the effect of the Coalition's input recommendations is larger for it than for AT&T. In addition, Verizon has had fewer of its exchanges deregulated. These differences between AT&T and Verizon can be seen in the different *relative* effects of the Coalition's recommendations, with the bottom line consistent with the general expectation that Verizon, with fewer competitive exchanges and a generally more rural market, would receive slightly more support than AT&T.

are actually shaping the industry today. There is no recognition that future investment (which, in turn, is the basis for any true forward looking cost model) will be defined by wireless and packet technology. Remarkably, despite the fact that AT&T and Verizon are enjoying growing consumer revenues per line, each is asking that the Commission *lower* the point at which the High Cost Fund will provide support, as though these carriers' need for subsidy is *increasing*.

Most troubling is the unspoken premise underlying the ILEC testimony that the High Cost Fund's basic structure – *i.e.*, a benchmark compared to a cost measure – is a reincarnation of a revenue requirement (without the reality check of an earnings review). In effect, the ILECs portray HM 5.3 as calculating, on a wire-center-by-wire-center basis, a revenue requirement that, if not recovered in basic local rates, produces a real-world "revenue shortfall"[77] that government should offset through a publicly funded subsidy.

Q. What is wrong with the incumbents' view?

A. The ILEC perspective is flawed at each step. First, the cost models sponsored (or at least used) by the incumbents are blind to new technology and its implications for a firm's costs. The models ignore the emergence of packet technology as the

[77] Loehman Direct at 5.

principal architecture for future networks, and make no provision for wireless service at all. As such, the models do not capture the expected cost of future investments because they do not consider the technologies that would actually be deployed (and actually already are being deployed).

Second, the analyses do not measure the actual financial implications of providing service in rural markets. As the incumbents have so frequently explained, forward-looking cost models do not calculate a revenue requirement that reflects actual expense and invested capital. The cost to build a network from scratch can be significantly higher than the financial costs of operation plus the cost to recover undepreciated investment. This is particularly true for investments, such as the copper network of the incumbent, that have been in-place for many years and have largely been recovered.[78] Whether an incumbent actually requires financial assistance to rebuild the network is largely dependent upon whether it intends to rebuild the network in the form being modeled, and in a relevant time frame.[79]

[78] The point is discussed further in the Direct Testimony of Michael Pelcovits at 21.

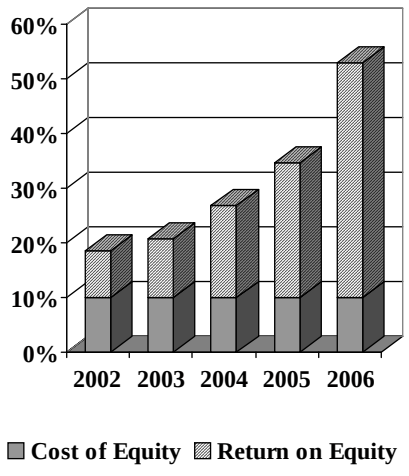
[79] There is a significant difference between using a forward looking cost model to develop the wholesale price for a network element, and how similar information might be used to calculate subsidy. For instance, the purpose of a UNE rate is to signal to an entrant contemplating whether to *build* network facilities, in which case the cost of the incumbent to *build* those same facilities at that same point in time would be relevant.

Third, and even more fundamentally, the basic economic equation of a network that supports multiple services is a comparison between total revenue and total cost, which entails substantially more revenues than received from just basic local service. Most notably absent in the analyses here are revenues associated with Internet access, which relies on the same loop plant as basic local service. For these reasons, the incumbents are flatly wrong to characterize their computations as demonstrating a "revenue shortfall" with the same implication as an unmet "revenue requirement."

Q. Can you place these concerns in context?

A. Yes. Consider the following facts, using AT&T Texas as the example. The facts are that for 2006, AT&T Texas earned (statewide) a return on equity of 52.8%, and this return has been increasing steadily for several years.[80] AT&T Texas developed its ubiquitous copper loop network over an extended period of government protection, during which ********* of its investment

Figure 5: Comparing AT&T's Cost of Equity to its Achieved Return



[80] Source: AT&T's Earnings Monitoring Reports, Schedule II, Row 74: Intrastate Earned Return on Equity.

has already been recovered. Although AT&T Texas' return was earned statewide, AT&T has no ability to determine which – *if any* – of its exchanges failed to achieve profitability.[81]

Moreover, other AT&T affiliates – most obviously, affiliates offering long distance service and Internet access – are extracting *additional* value and profit from the network that are not reported by AT&T Texas.

The bottom line is that AT&T is highly profitable in Texas and, with a shrinking investment base and increasing revenues, is likely to become more profitable in the future.[82] If *all* of AT&T's High Cost support were eliminated (which is not what the Coalition is recommending), AT&T Texas' return on equity would

[81] *See* Loehman Dep. Tr. at 27-32.

[82] As I explained earlier in my testimony, AT&T Texas' net investment is declining each year with annual depreciation significantly exceeding its incremental investment. As such, if revenues remain constant – and AT&T's pattern of increasing rates suggest they will increase – its return on its declining investment base will continue to increase.

decline (to **********),[83] a level still more than three times what AT&T Texas has identified as what its investors require.[84]

Against all these real-world metrics of AT&T's success, AT&T is nevertheless claiming that it requires even *more* – over $100 million per year more – in additional subsidy. AT&T is asking that the Commission increase both its *total* support (by 65%) and the number of *lines* that would qualify for subsidy (by 131%), in contrast with the fact that AT&T Texas' net investment is declining and its profits are increasing. Before the Commission grants any company increased support, it should assure itself that it can confidently answer a simple question: Exactly what benefit would an increase in support provide? In this instance, the answer is none (unless one is an AT&T stockholder).

The section below discusses the key reforms proposed by the Coalition and quantifies their expected effect on AT&T and Verizon. The reforms retain the structure of the Commission's High Cost Fund rule (*i.e.*, support is calculated as

[83] Remarkably, AT&T claims that the amount of subsidy it receives from the High Cost Fund is confidential (AT&T Response to URC RFI 2-1). Unlike a company's revenues, a different standard of openness should apply to programs that provide public support to private corporations. One of the reforms I recommend in the final section of my testimony is that Fund Administrator routinely publish (on the Internet) basic operating statistics of the High Cost Fund, including the amount of support provided to each recipient. This would be consistent with the treatment of the support provided to carriers under the federal USF fund.

[84] This is measured by the cost of equity used by AT&T in its HM 5.3 analysis, which AT&T Texas estimates to be **********.

difference between a Benchmark and a forward-looking cost estimate), recognizing that the cost model available in this proceeding is only able to identify areas of relatively high cost (and is less useful at computing an absolute cost differential). As such, it is important to evaluate any proposal by its end-result, because it is the end-result that will have a direct impact on Texas consumers.

A. The Commission Should Reject the ILECs' "POLR Additive"

Q. Please explain the ILECs' proposed "POLR Additive."

A. The "POLR Additive," proposed by AT&T witnesses Blackler and Turner,[85] and endorsed by the other ILECs, is an ILEC adjustment to its network demand. It involves adding a number of lines that the ILEC claims exist, but for which it does not provide service. In effect, the ILEC begins with a *known* value (working lines and locations), and then compares this known value to an *estimate* of the total demand in a wire center. The difference between Working Lines and Total Lines are described by the ILECs as "POLR lines," under a claim that these are actual locations that the ILEC must build facilities to, even though they are

[85] Direct Testimony of Ellen Blackler at 5, Turner Direct at 14.

not currently requesting service. Algebraically, the POLR Additive can be expressed as:

$$Y_e - Y_a = \text{POLR, } \textit{where}$$

Y_e = Estimated Lines
Y_a = Actual Working Lines

There are two critical issues raised by the ILECs' claimed POLR additive. The first concerns the *quality* of the estimate — that is, have the ILECs provided evidence that these claimed lines are likely to exist?[86] The second issue assumes the estimate is valid (despite compelling evidence to the contrary, as explained below), and addresses whether it is *appropriate* to inflate the High Cost Fund to provide competitive reparations to an incumbent that has lost lines to a facilities-based competitor.

As I explain below, the Commission should reject the so-called POLR Additive because it fails on all counts:

* AT&T has not sponsored any testimony explaining how the POLR lines were estimated. In fact, none of AT&T's witnesses have even reviewed the information necessary to

[86] In statistical terms, the difference between an "estimated value" and an "actual value" is more commonly considered "error," but in this instance the ILECs claim it is the cost of a network obligation that should be turned into actual cash collected through the High Cost Fund.

explain the line estimates. The other ILECs offer even less explanation of the POLR additive in their analyses;[87]

* An analysis of the claimed POLR lines demonstrates that the estimate is completely unreliable;

* The random location of the claimed POLR locations causes random cost increases in HM 5.3;

* Even if accurate, it would be inappropriate to increase the High Cost Fund to compensate an incumbent for competitive share loss, which is the natural and expected consequence of the very facilities-based competition that PURA endorses;

* Finally, the financial advantages conferred by the inheritance of a ubiquitous network constructed over decades with government protection should be considered in any evaluation of whether the POLR obligation imposes any significant financial risk on an ILEC in today's marketplace.

The bottom line is that the POLR Additive asks real Texans to pay real cash to offset the additional cost that HM 5.3 estimates it would take to extend a hypothetical network to serve customers that have not been shown to exist. For these reasons, the POLR Additive should be rejected.

[87] Despite the absence of any explanation as to how the POLR lines were calculated, the number of lines added is significant. For instance, Windstream, which only serves 302 thousand lines, claims that there is an *additional* 65 thousand lines of demand in their territory being served by some other carrier (all locations to which Windstream claims it must build facilities). *See* Windstream Direct Testimony of William F. Kreutz, at 26.

Q. How significant is the POLR Additive to the size of AT&T's requested increase in the High Cost Fund?

A. The effects of the POLR Additive are very significant. AT&T's POLR Additive increases the network modeled by HM 5.3 by over 2 million lines – lines that (under AT&T's view of the world) its Texas customers should pay for, even though neither the lines, nor the customers they pretend to serve, are shown to exist. We estimate that the POLR Additive increases AT&T's High Cost Fund request by over $65 million per year.

Q. Has AT&T explained how the POLR Additive was developed?

A. No. First, AT&T is not sponsoring a witness that has reviewed how these "POLR locations" were actually estimated. Consequently, there is limited information as to how the estimates may have been prepared. Based on the information provided by AT&T, however, it appears that the POLR Additive is the end result of (what appears to be) three separate *estimates*, prepared by different firms and/or agencies, none of which have submitted testimony in support of the ILECs' direct cases.[88] Because nearly all of the POLR Additive is comprised of residential

[88] It would be inappropriate for such crucial testimony regarding the foundation of the ILECs' case to be delayed until the submission of rebuttal testimony when intervenors have no meaningful ability to analyze and refute it. Notably, the ILEC witnesses who incorporated the

lines, I focus on how the residential estimate apparently was developed. (Again, because AT&T itself is unfamiliar with how the estimate is prepared, it is difficult to analyze precisely how the estimate was developed).[89]

The last set of known data used in the estimation of the POLR Additive appears to be the 2000 Census identifying the number of Households in a Census Block. What is not clear is how this 2000 data is used to estimate the number of households lines that "should exist" in 2007, which then forms the basis of AT&T's POLR Additive (*i.e.* the claim that AT&T must construct lines to these households that "should exist," but which are not being served by AT&T).

Q. What data was provided by AT&T to support its claim of how many households "should exist" in a particular Census Block?

POLR Additive into AT&T's recommendations all have stated in deposition that they have no knowledge of the data underlying it. As Mr. Turner admitted (Turner Dep. Tr. 29):

> Q. So who that's sponsoring AT&T's case looked at any of that data [underlying the claimed POLR lines]?
>
> A. I don't know.
>
> Q. Okay. Mr. Lieberman said he didn't yesterday. Right? You were here.
>
> A. I heard that, yes.

See also Lieberman Dep. Tr. at 60-64; Turner Dep. Tr. at 27-34; Loehman Dep. Tr. at 90. It would be disingenuous for the same witnesses to wait until rebuttal to obtain and reveal essential information left out of their direct testimony.

[89] Although the other ILECs have all sponsored HM 5.3 analyses that include a POLR Additive, none have offered any explanation as to how the estimate was prepared.

A. The support provided by AT&T is tied to the following reference source concerning the calculation of the households that "should exist":

> Q (BY MR. MAGNESS) I'm sorry. I direct you to the last page, "Reference data used in preprocessing."
>
> A (BY Mr. Lieberman) Right.
>
> Q Let's start with "residential demographics, 2006 housing unit estimate, Stopwatch Maps, developed using census county estimates released for July 2007." So they weren't using census block estimates from the census. Right?
>
> A. Not Stopwatch Maps, no.[90]

It would appear from a review of the Census Bureau's website that its annual County Estimates (released in July of each year) do not, in fact, provide an estimate of *households*, but rather provide County-level estimates of *population*. If true – that is, that the Census Bureau only projects County population and not households – then creating the Census Block estimates of the "expected households" that is used to calculate the so-called POLR lines requires the following estimation steps:

* County Population must be projected from 2000 to 2007.
* Projected County Population must be converted to Estimated Households.
* Estimated Households must be located in Census Blocks.
* Households must be converted to lines.

[90] *See* Lieberman Dep. Tr. 72.

Obviously each step in this estimation process introduces error (of an unknown magnitude). In addition, it is unclear what entities performed which calculations. Although it appears reasonable to assume that the process starts with County Population estimates provided by the Census Bureau, it is unclear which other steps were performed by Stopwatch Maps,[91] CostQwest or, for that matter, AT&T. All that is known with certainty is that none of AT&T's witnesses know how the projection – a projection that AT&T is using to request $65 million in subsidy each year – was made.

Q. Does the data indicate that this projection of the "lines that should be there but aren't" is unreliable?

A. Yes. Presumably, the lines that should be there, but which are not served by the incumbent, are lines served by another competitor.[92] However, as shown in Table

[91] Stopwatch Maps describes itself on its website, www.stopwatchmaps.com, as follows:

> Stopwatch Maps was established in 1986. We have grown to become the leader in several areas including the development of spatial processes and data preparation for telephone companies needing data for input into costing models; the assignment of property tax jurisdictions to assets for lessors; and providing GIS development, products and services to Fortune 500 and telecommunications companies.

[92] It is important to understand that the POLR lines are not lines serving premises that have been abandoned and now stand empty. As I understand the "theory" behind these lines, these are lines associated with households and active businesses that Stopwatch Maps and Georesults *claim* exist in particular Census Blocks, thereby producing an estimate of the "expected" (at least by Stopwatch Maps and Georesults) number of residential and business lines that would be needed

5 (below), if one accepts the POLR line estimates as accurate, there is a highly unusual and unexpected pattern of CLEC success in Texas.

Table 5: Estimated CLEC Market Share in AT&T Territory Based on POLR Lines as an Estimate of CLEC Activity

Classification of Wire Center	Business Market	Residential Market	Combined
Wire Centers in Regulated Markets	7.4%	24.4%	20.1%
Wire Centers in Deregulated Markets	3.2%	29.9%	21.2%
Statewide	3.7%	29.0%	

As shown Table 5, the POLR Line data suggests that competition for business customers is "upside down," with competition more extensive in exchanges where AT&T has been *unable* to document competition (regulated markets) than in those exchanges where AT&T has documented sufficient competition to be deregulated. On a combined (business and residential) basis, there is virtually no difference between the level of competition between regulated and deregulated markets – in fact, the difference shown above is not statistically different than zero. Moreover, the POLR data implies that CLECs are more than 7.5 times more successful in the residential market than the business market, a circumstance that directly contradicts the most recent FCC Local Competition Report suggesting a CLEC business share in Texas of 21% and residential share of

in a particular area to serve the *projected* number of households and businesses (which, if they exist, either do not have phone service, or receive that service from another provider).

14%.[93] In addition, the combined total number of so-called POLR residential lines claimed by the four ILECs is nearly 2.6 million lines, when the total number of residential lines served by CLECs in Texas (as reported by the FCC) is only 1.2 million lines, less than *half* of the ILECs' claim.

Q. What is the effect of AT&T including these "should be lines" in the HM 5.3 cost model?

A. The addition of the POLR locations increases the level of requested subsidy by $65 million per year.[94] This is because, under AT&T's theory, the lines that actually exist should shoulder the cost of the lines that AT&T claims exist, but to which AT&T is not presently providing service.

A separate question concerns the effect on the per-line *average* cost of modeling a network to build to these assumed lines. That is, what is the effect on the average cost to build to all locations, compared to the average cost of building only to

[93] Local Telephone Competition: Status as of December 31, 2006, Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, Released December 31, 2007. Estimated shares derived from Tables 10, 11, and 12.

[94] The comparable value for Verizon is $57.2 million per year. As noted earlier, however, unlike AT&T, Verizon is not asking that the Commission base support on this theory.

working locations?[95] In theory, if there are consistent economies of scale, then the average cost of building to the greater number of lines should be less.

Q. Does the data support this theory (*i.e.*, that there are economies of scale that lower the average cost the more lines are assumed to exist)?

A. No. Attachment JPG-2 plots the percentage change in average cost between the average cost of a network built to Working Locations and the average cost of a network built to the sum of Working and Assumed (POLR) locations. As Attachment JPG-2 graphically illustrates, the average cost change is essentially random – that is, when the POLR lines are added, they produce no systematic scale economies.

A possible reason for this unexpected result is the increased costs associated with random (i.e., "surrogated") locations that are forced into the model when the assumed POLR lines are added to the analysis. AT&T reports that roughly ********% of AT&T's actual working lines were successfully geocoded. The geographic location of these geocoded lines reflect how people actually tend to

[95] AT&T does not calculate monthly support using an estimate of average cost, but rather calculates support by assuming the network is built to one measure of lines (Working Lines plus assumed POLR Lines), but then divides that total cost by only by one category of lines (Working Lines). The fact that the POLR Additive always causes the number of lines used in the numerator (total cost) to be greater than the number of lines in the denominator, mathematically ensures that the monthly per line support number goes up when the POLR Additive is applied.

live — in towns, neighborhoods and developments that can be served from central nodes. Lines that are not geocoded, however, are randomly distributed along roads. By adding the assumed POLR lines to the analysis, surrogation increases from *********% to nearly *********% of the total locations. The *random* distribution of these assumed lines may explain why the addition of the POLR lines produces the seemingly random pattern of cost effects illustrated in Attachment JPG-2.

Q. Is there any policy justification for increasing the High Cost Fund to offset the cost of the assumed POLR locations (even if the estimate of such locations was reliable)?

A. No. Even if AT&T's estimate of non-served (but actual) locations were accurate, as a matter of public policy it would be inappropriate to increase subsidies in the High Cost Fund to compensate an incumbent for competitive share loss, which is the natural and expected consequence of facilities-based competition. At any given time, *every* facilities-based network passes locations that it does not currently serve. By encouraging facilities-based competition, this result is an unavoidable – indeed, intended – consequence of the State's pro-competitive policies.

Second, AT&T has not shown an inability to win-back POLR locations (if they exist), or provided any evidence that such locations are not profitable once earned back as subscribers. Indeed, if the so-called POLR locations do in fact represent locations that have chosen service from another provider, it is even more likely that they are attractive locations (since competition is always more intense at the top of the market than its bottom). Consequently, AT&T should *desire* to serve these locations, not claim its facilities are deployed as a regulatory obligation.

Table 6: Percentage of Investment Recovered

Category	AT&T	Verizon
Digital Switching	******%	******%
Copper	******%	******%
Fiber	******%	******%

Third, and perhaps most fundamentally, each of these ILECs enjoys substantial market advantages by inheriting (from a different era) a ubiquitous network resource that is still functioning and producing revenue, with the costs of its major components largely recovered. As shown in Table 6, nearly ******% of AT&T's and Verizon's copper investment is already recovered, with much of it installed at costs lower than those the ILECs would incur today.[96] Similarly, between ******% (AT&T) and ******** % of the digital switching investment has been recovered. These metrics are consistent with the analysis in Section II showing these ILECs are drawing more in annual depreciation than they are reinvesting in their networks.

[96] Source: AT&T Response to URC Request RFI 2-12 and Verizon Response to URC Request RFI 3-9.

Q. But aren't the costs as a provider of last resort better measured by HM 5.3?

A. No, they are not. Most of the investment in "high cost rural areas" has already been made. HM 5.3 estimates the cost to rebuild that network (in circuit-switched form), which, even if accurate, would be relevant only if there was a reasonable expectation that the network would need to be rebuilt in that form. This is not to say that HM 5.3 does not provide some useful guidance as to which areas are relatively "high cost," particularly in comparison to other areas. But the identification of high cost rural areas is a different issue than determining whether there is a financial penalty from being held to a POLR obligation. Because most of the facilities required to satisfy the POLR obligation are in-place as a result of the historic application of that obligation, the embedded cost of those facilities is a better measure of that past obligation.

As I noted earlier, AT&T Texas is an extraordinarily profitable company, with a declining investment base and increasing returns. AT&T does not track its investments and expenses in a way that enables the calculation of geographically precise estimates of its profitability. Given that a primary determinant of net investment is time-since-installation, however, and because rural areas (almost by definition) grow less rapidly than urban and suburban locations, it is likely that

AT&T Texas is further down its capital recovery curve in rural markets than its urban and suburban markets. If so, it is possible that the areas identified as high-cost in HM 5.3 (because of the cost to rebuild the network) are, in fact, greater contributors to AT&T Texas' profitability than its urban markets (because of a relatively lower net investment).

Q. Are you saying that the POLR obligation never requires AT&T to extend facilities to a location that it would prefer not to serve?

A. No. However, AT&T Texas, like other ILECs, have Construction Charge Tariffs to address unique circumstances (URC witness Rowland Curry provides additional testimony on these charges). My larger point is that the POLR obligation is *balanced* by AT&T enjoying the ownership of a broad in-place network that is a byproduct of the same regulatory past as some of the pricing decisions discussed by AT&T Texas' witness Loehman.[97] There is simply no evidence that AT&T suffers a net disadvantage. Moreover, this network is also

[97] *See* Loehman Direct at 7-11. I find it interesting to note that Mr. Loehman implies that the Commission is to blame for AT&T Texas' rate structure, despite the fact that the Commission was not formed until 1975. As a practical matter, the "value of service" rate structure attributed to the Commission was effectively developed as a commercial strategy by the Bell System, long before any regulation was applied. Indeed, the practice to charge business customers more than residential customers dates to the late 1870's and was introduced by Alexander Graham Bell himself. Even Mr. Loehman acknowledges that the AT&T Texas' Rate Groups, which charge lower rates in rural exchanges and higher rates in metropolitan exchanges, were proposed by AT&T (more specifically, its predecessor Southwestern Bell). Loehman Dep. Tr. 9-10.

able (with some additional investment) to provide DSL service, and other features.

Q. Has the legislature relaxed the POLR obligation in recent years?

A. Yes. In 2003, Sec. 54.251(c) of PURA was revised to permit a POLR to meet its obligations "using any available technology." Significantly, the provision recognized that new technologies might not be equivalent to traditional technologies in terms of quality and pricing:

> As determined by the commission, the certificate holder shall meet minimum quality of service standards, including standards for 911 service, *comparable* to those established for traditional wireline or landline technologies and shall offer services at a price comparable to the monthly service charge for *comparable* services in that exchange or the provider's nearest exchange.[98]

The legislature's enactment of Sec. 54.251(c) appears directed at making it easier for a carrier to meet its POLR obligation, requiring only that services using non-traditional technologies be "comparable" (and not identical) to those provided by traditional wireline networks. The Commission should consider initiating a rulemaking to revise its quality of service rules to give POLRs greater flexibility to use other technologies to fulfill their POLR obligations, especially in high cost rural areas where the cost of deploying traditional wireline networks is greater.

[98] PURA § 54.251(c). Emphasis added.

B. Lines in Deregulated Markets Should Not Be Eligible for Subsidy

Q. Should the Commission provide subsidy for lines in markets that have been deregulated, either through operation of law, or Commission fact-finding?

A. No. As noted earlier, it is the express policy of the State of Texas that prices should be market-based:

> It is the policy of this state to provide for full rate and service competition in the telecommunications market of this state so that customers may benefit from innovations in service quality and market-based pricing.[99]

To achieve this end, Chapter 65 curtails Commission pricing authority to those portions of the state where three (or more) competitors cannot be documented, and deregulates the prices for business services across the state. As a practical matter, the Legislature has determined that the objective of market-based pricing should supercede the Commission's judgment in these markets. Today, the vast majority of local lines in Texas are now located in areas in which the Commission has no authority to regulate local rates.[100]

[99] PURA § 65.001. Emphasis added.

[100] 2007 Scope of Competition report, pages 4 and 36.

Q. Can the Commission *assure* that distributions from the High Cost Fund are used to provide reasonable rates in markets that have been deregulated?

A. No. In deregulated markets, the Commission has no authority over pricing. Consequently, the Commission's statutory obligation to make distributions from the High Cost Fund in a way that *assures* reasonable rates was deliberately moved beyond the Commission's authority by a statute crafted to achieve market-based prices.[101] The Commission should recognize this directive by eliminating subsidy in markets that have been deregulated.

Q. If subsidy is eliminated in deregulated exchanges, won't prices increase?

A. First, as I explained with respect to AT&T's Standard Plus tariff above, prices for many AT&T Texas customers have already increased dramatically in deregulated markets, but that does not mean that the prices are not market-based (as endorsed by the statute). The fact is that deregulated prices are likely to rise until the existence of alternatives makes further rate increases unprofitable because of

[101] Commission Powers and Duties, PURA §56.023(a)(1).

customers moving to those competitors. This is, however, how markets are *supposed* to work.[102]

Second, as shown in Attachment JPG-3, in markets where AT&T's deregulation required a demonstration of competition, virtually every single competitor referenced by AT&T is competing without any support from the Texas High Cost Fund. In only two of the wire centers was there a competitor that also receives High Cost Fund support, and even in these wire centers, the other two competitors do not. If even one competitor can do without subsidy, then all of the competitors should be weaned from these revenues. Subsidy is, after all, an aberration from the normal operation of markets and it should be made available sparingly.

Q. What is the effect of eliminating subsidy in deregulated markets?

[102] The observation further underscores why the Commission should reject the POLR Additive, which would hold incumbents harmless from competitive loss, including competitive losses that are a consequence of their own pricing decisions.

A. As shown in Table 7, eliminating subsidies in deregulated markets would reduce the AT&T's High Cost Fund draw by almost $66 million per year.[104]

Table 7: Annual Effect of Eliminating Subsidies In Deregulated Markets

Category of Lines	AT&T	Verizon
Eliminate Subsidy for Business Lines Statewide[103]	($9.2)	($23.9)
Eliminate Subsidy for Residential Lines in Deregulated Exchanges	($56.7)	($3.8)
Total Reduction	($65.9)	($27.2)

C. The High Cost Benchmark Should Be Uniform And Indexed to Inflation

Q. What is the role of the High Cost Benchmark?

A. The fundamental role of the High Cost Benchmark is to define which areas qualify as "high cost rural areas." The High Cost Fund has a specific statutory basis, which is:

> [To] assist telecommunications providers in providing basic local telecommunications service at reasonable rates in high cost rural areas.[105]

The fundamental role of the benchmark is to define the point at which an area is considered "high cost" and, therefore, eligible for support. This role is clearly

[103] Business services have been deregulated statewide by statute. As such, the relevant market for business service (under PURA) is statewide.

[104] Estimate assumes a base calculation in which the POLR Additive is not included.

[105] § 56.021(1). Emphasis added.

expressed in the Commission's implementing rule, which includes the following definition and formula:

> Benchmark – The per-line amount above which THCUSP support will be provided.[106]
>
> The monthly per-line support amount available to each ETP shall be determined by comparing the forward-looking economic cost…to the applicable benchmark. [107]

Because the High Cost Fund is intended to provide assistance to high cost rural areas – and the benchmark is nothing more (or less) than the point at which the support will be provided – the benchmark is best understood simply as the point at which cost becomes "high cost," no matter how that threshold is calculated.

Q. In the past, the Commission determined the benchmark by looking at a measure of average revenue.[108] Should the Commission continue to base the benchmark on revenues?

A. No. To begin, basing the benchmark on revenues invites efforts, such as those of the ILECs, to claim that the benchmark is intended as a wire-center-by-wire-center guarantee of minimum revenues. That is not, and has never been, the purpose of the benchmark. Its role is to identify *high cost rural areas*, and then

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106 Subst. R. § 26.403(b)(1).

107 Subst. R. § 26.403(e)(1).

108 *High Cost Order* at 43-52.

provide a measure for determining *assistance*, not a guarantee of revenues and profits. Seen in this light, it is clear that the Commission should (as it has in the past) adopt a single definition of high-cost, so that equitable support is provided using a consistent uniform standard.

One of the many flaws with the ILEC-revenue approach is the temptation to propose a different definition of "high cost" for each and every wire center, based on the fact that prices may vary between wire centers. Of course, market factors and other circumstances may cause prices to vary geographically. For instance, although AT&T's Standard Plus rates are deregulated, AT&T has not eliminated different rates for different rate groups (although it has narrowed the difference). In addition, the second Standard Plus rate filing resulted in different rates applying to various exchanges within the same rate group.[109] The fact that retail prices may vary geographically, however, does not mean that the Commission's definition of high cost should do so as well. The Commission is, after all, establishing the parameters of a publicly-funded subsidy, which should be applied as consistently and openly as possible.

Q. Should the Commission establish its benchmark based on revenues?

[109] As described in footnote 74, AT&T established a separate Standard Plus rate schedule for 15 exchanges that were deregulated on January 1, 2007. AT&T Texas Local Exchange Tariff Section 1, Sheet 5, Revision 7.

A. No. The Commission should decouple the calculation of the High Cost Benchmark from ILEC revenues for (at least) three core reasons. First, as I explained earlier in describing how ILECs use different affiliates to provide different services, the Commission can no longer reasonably measure the value of a customer to the *enterprise* by narrowly focusing on the revenues booked by the Texas ILEC. The revenue-value of a customer is based on a variety of revenues streams that can be booked to any number of affiliates, all based on choices made by management. For instance, AT&T has shifted the revenues for intraLATA toll sold in bundles from the AT&T Texas to SBC Long Distance. The fact that the revenue is booked by one affiliate rather than another, however, does not change the value of the revenue to AT&T (the holding company), which is the real recipient of the subsidies and the only company whose performance is judged by investors.[110]

[110] It is also useful to note that the value of a customer to the enterprise cannot be judged merely by considering revenues associated with services that use the same underlying facilities as local service (such as the access line). For instance, a customer that obtains local service in a package with wireless service may be less likely to "churn" to another wireless provider, even if the wireline portion of its bill is relatively modest. Although these wireline revenues would not be functionally tied to wireless service by virtue of common network facilities, that does not mean the customer is not made more valuable to the enterprise by obtaining the service in a bundle with local service. It is precisely these types of nuanced strategic considerations that PURA opens to market considerations through deregulation and the incentives to structure different pricing and packaging services should not be distorted by subsidy.

Second, and perhaps even more fundamentally, one of the hoped-for benefits from competition is declining prices and revenue. If the Commission bases its definition of "high cost" based on the incumbent's revenues, then competitively driven rate decreases could simply translate to increased demands for subsidy. For example, if AT&T expects competitive entry in a subsidized wire center, it can lower local rates in a wire center and – if its proposal in this case is adopted – be entitled to additional subsidy merely because the "revenue benchmark" for that wire center dropped due to its decision to decrease rates.[111] As I explained earlier (in the context of the POLR Additive), the High Cost Fund is intended to assist carriers where costs are unusually high, not operate as a reparations program to hold incumbents harmless from competitive change.

Moreover, the price schedules in individual exchanges are largely determined by strategic choices of the ILEC. This is obviously true in the case of deregulated exchanges, where the Commission has no authority at all (with the narrow exception of the existing rate cap applicable to stand-alone local exchange service). But is also *largely* true in regulated exchanges where the ILEC enjoys substantial flexibility in how it prices non-basic services, which provide the

[111] It is also important to recognize that current prices are simply at a particular point in time, and not a measure of the expected revenues over the lifetime of an investment. As I explained earlier, the ILECs are reporting growing revenues per customer, with the expectation that revenues will continue to grow additional services are introduced.

building blocks for bundles and packages that are increasingly defining the retail marketplace. How to best manage revenues is a legitimate *private* decision that should reside with the ILEC management; but the availability of subsidy is a *public* choice that should not be tied to these private decisions.

Q. Do you have an example of pricing behavior that is entirely voluntary and which should not be offset through subsidy?

A. Yes. Earlier this testimony discussed AT&T's Standard Plus rate schedule. This rate schedule enables AT&T to increase its local rates in deregulated exchanges by implementing a new rate schedule that falls outside the price protection provided "stand alone" local exchange service by PURA Chapter 65. As I indicated earlier, when AT&T increased the rates for Standard Plus in October 2007, it also introduced 15 new exchanges that it placed them under a separate Standard Plus rate schedule. Under this "15 Exchange" Standard Plus rate schedule, AT&T charged lower initial rates (in comparison to the initial rates it applied to all the other exchanges that were first exposed to the Standard Plus rate increases) in 11 of these 15 markets.

According to AT&T (*i.e.*, based on its HM 5.3 model), the average cost for the 11 markets where AT&T introduced *lower* initial rates is $53.93, while the average

cost for the remaining 256 wire centers where it applied *higher* Standard Plus rates is only $30.50. AT&T's strategy for these other markets is unrelated to its underlying costs (at least that measure of cost alleged by AT&T and HM 5.3) and contrary to AT&T's stated pricing objectives.[112] It is not my purpose to question AT&T's motives for this rate change. Rather, my point is that *whatever* reason AT&T had to implement this rate reduction, those reasons would not justify the Commission offsetting AT&T's lower revenues in these markets with an increase in High Cost Support. Under AT&T's theory that its High Cost Support should be based on its retail revenues, however, its decision to charge less would qualify it for higher support. In deregulated markets, AT&T has the opportunity to choose its prices,[113] and this freedom should include the opportunity to fully experience the consequences of those decisions without the protection of a subsidy paid for by the citizens of Texas.

Q. AT&T witness Aron recommends that the Commission establish wire center specific benchmarks, claiming the policy will encourage entry.[114] Do you agree?

[112] For instance, Mr. Loehman on behalf of AT&T testifies that: "We should stop charging the customers with the highest costs the lowest rates." (Loehman Direct at 15.)

[113] Loehman Dep. Tr. at 85-88.

[114] Direct Testimony of Debra Aron, at 7.

A. No. To begin, the testimony is founded on the false assumption that what is at issue is how to calculate a "*revenue* benchmark," with the testimony uniformly including that adjective whenever the term benchmark is used. As I explained above, however, the Commission rule requires the setting of a *benchmark* (not revenue benchmark as presumed without citation or explanation by Dr. Aron) and, for all the reasons I state above, revenues should play no role establishing that benchmark.

Second, although I agree that support should be portable, the Commission should discount Dr. Aron's theory that it can attract entry through higher subsidies. First, most of the entry that the Commission has seen in Texas (*see* Attachment JPG-3) has been from competitors that do not rely on subsidy at all. This is the result the Commission should strive for, with entry and competition providing the basis to eliminate subsidies, not expand them. Secondly, in the current environment, it is unlikely that an investor would place significant capital at risk – and facilities-based entry to the local market most certainly places significant capital at risk – based on the expectation of long-term subsidy support. Investors are well aware of the debate at the federal level, where the Joint Board has recommended an interim emergency cap on support provided to competitive providers in high cost areas.[115] It is not the purpose of my testimony here to suggest, in any way, that

[115] *See Federal State Joint Board on Universal Service*, CC No. 96-45, Recommended Decision, 22 FCC Rcd. 9023 (June 2007).

action is appropriate, but rather to emphasize that the primary recommendation of the Coalition here – *i.e.*, that entry, competition and deregulation provide a path to the elimination of support – is a better signal to the market than the promise of perpetual subsidy.

Q. How should the Commission establish the benchmark?

A. The Commission should begin its analysis with the benchmark that has been in place for the past decade: $38 per month. (Because the business market is deregulated, there is no need to evaluate whether the legacy business benchmark should be changed). While it is true that the Commission originally grounded the calculation of this benchmark in a revenue analysis, that history is no longer relevant and the Commission's rule no longer ties the benchmark to revenues. The relevant question today is simpler: Should the benchmark that defines "high cost" go up, go down, or stay the same?

AT&T (and others) take the position that the Commission's threshold for "high cost" should go down, not only in real terms (that is, adjusted for inflation), but in absolute terms as well. For instance, on a statewide average basis, AT&T's proposed benchmark ($31.69) is nearly 17% *less* than the benchmark that has been in place since 2000.

There is no reason, however, for the threshold definition of "high cost" to decline over time, which is the practical effect of AT&T's recommendation. As explained earlier, the average revenues per customer for Verizon and AT&T have been increasing for *years*, as customers obtain ever more complete (and expensive) services. Moreover, as AT&T's profitability (in particular) attests, the existing definition of "high cost" is providing revenues far in excess of what the company as a whole requires.

Q. What do you recommend?

A. I recommend that the Commission retain the same definition of "high cost" as it adopted in 2000 ($38), except that the high cost benchmark be indexed to inflation to maintain a constant value in real terms. In real terms, a $38 benchmark in 2000 is only $31.13 today. To maintain a constant definition of high-cost (once inflation is considered), the High Cost Benchmark should be increased to $46.38.[116]

Q. Have you estimated the annual reduction in the High Cost Fund that would result from the Coalition's benchmark recommendations?

[116] Bureau of Labor Statistics, US Department of Labor, http://www.bls.gov/cpi/#tables.

A. Yes. As shown in Table 8, simply keeping the benchmark at its *existing* level (which is equivalent to a reduction in the benchmark in real terms) would reduce the High Cost Fund by $53.1 million (from the levels recommended by AT&T). Moreover, the Commission should further index the benchmark to inflation, which would reduce AT&T's proposed draw on the High Cost Fund by an additional $39.7 million.

Table 8: Annual Reduction in High Cost Fund Reforming the High Cost Benchmark[117] ($ millions)

Reform	AT&T	Verizon[118]
Retain Uniform Statewide Benchmark ($38)	($53.1)	($19.6)
Index Benchmark to Inflation ($46.38)	($39.7)	($38.4)

D. The Infirmities of HM 5.3

Q. Does HM 5.3 model a forward-looking architecture?

[117] Reduction (in millions) is from a base support total calculated assuming each of the reforms previously recommended in this testimony (*i.e.*, rejection of the ILEC POLR Additive and the determining that lines in deregulated markets do not qualify for support).

[118] As noted earlier, the annual reductions estimated for the Verizon region are calculated to be consistent with the methodology recommended by AT&T (*i.e.*, which begins with HM 5.3). Verizon, however, does not recommend this approach, but would instead freeze support at current levels. Our analysis indicates, however, that compared to the full implementation of the Coalition's recommendations, Verizon's "freeze" would lock-in support that should be eliminated.

A. No, it does not. HM 5.3 is effectively frozen-in-time, providing estimates of the cost to rebuild a circuit-switched network at a time when that basic architecture has been superceded by packet technology. Moreover, HM 5.3 does not consider wireless service as a substitute for wireline service (although AT&T's witnesses do not necessarily agree that wireless is not substitutable for wireline service).[119] As a result, HM 5.3 always assumes that a wireline network must be built, even where public policy might conclude that the additional costs of wireline service do not justify that expenditure (if wireless service is already available).

Q. Does that mean that the Commission cannot use HM 5.3 to determine monthly support levels as contemplated by its rules?

A. No, it does not. The principal purpose of the High Cost Fund is to identify "high cost rural areas" and then provide a reasonable level of "assistance." These tasks can still be accomplished by HM 5.3, so long as the Commission recognizes the limitations in HM 5.3 (*i.e.*, that it does not consider the full range of new technology), and matches its cost analysis with an appropriate benchmark. Even in its prime, when circuit-switched technology was the appropriate cost-object to model, HM 5.3 only provided estimates of cost. A new and significant error is introduced by relying on it today when it does not model forward looking

[119] Loehman Dep. Tr. at 82.

technologies, but that problem is better addressed by compensating for the error, rather than attempting to create a new model with limited use.

In this regard, I agree with Verizon witnesses that "redesigning a circuit-switched network into an IP network and identifying its capital investment and operating expenses is much beyond the capabilities of a cost-proxy model such as HM," or at least the capabilities of this cost-proxy model.[120] Moreover, because the ILECs are using affiliates to deploy their IP networks,[121] and the intervenors were not permitted to obtain discovery from those affiliates,[122] it has not been possible to gather data to use even the limited model changes that were possible. As a result, the Commission is required to make its decisions here with information that is decidedly imperfect. The key is not so much achieving perfection in either the forward-looking cost model or the benchmark, but rather have each tool work in tandem to produce a reasonable result.

[120] Matthews/Zhang Direct at 20. Although I agree that HM 5.3 is not easily modified to correctly model IP technology, I do not agree with the second reason they state (*i.e.*, that IP technology necessarily requires a broadband connection to every customer). IP technology is being introduced into networks in ways where the analog/IP conversion occurs at points other than the customer premise. This disagreement, however, goes to *how* one would best model an IP network, which is a different issue than concluding that the project is beyond this docket.

[121] *See* Verizon Confidential Response to URC RFI 3-13(e) and (f); AT&T Confidential Response to URC RFI 2-22f.

[122] PUC Docket No. 34723, SOAH Discovery Order No. 1.

Q. What is the likely consequence regarding High Cost Fund support of HM 5.3 being limited to a circuit-switched architecture?

A. By calculating the cost to rebuild the network using an obsolete network architecture, HM 5.3 will overstate cost and the need for support. To illustrate, consider the cost of local switching. HM 5.3 estimates the cost to install all new circuit switches. However, as far back as 2000, Verizon has testified that it did not foresee a need to *ever* deploy another circuit switch, going so far as to suggest that manufacturers were no longer seriously pricing circuit switches because the demand for such facilities had evaporated:

> Because the [switch] suppliers know that BA-NY [Bell Atlantic – New York] has no need to purchase new digital switches now or in the future, the supplier has every incentive to provide unrealistically high discounts to create goodwill with the buyer.[123]

Moreover, as discussed earlier, the actual investment in digital local switching has largely been recovered through depreciation, with AT&T and Verizon reporting that approximately **********% of the existing investment in circuit switching already recovered.[124] Consequently, even if HM 5.3 *perfectly* modeled the cost to replace circuit switches, the practical value of that information would be limited

[123] Panel Testimony of Bell Atlantic-New York, New York Public Service Commission, Case No. 98-C-1357, page 225. Emphasis added.

[124] As explained in more detail by Ms. Murray, the HM 5.3 analysis filed by the ILECs is hardly perfect, with AT&T basing its analysis on *expired* switch contracts. Murray Direct at 33-34.

as it would neither tell the Commission anything about the cost of investments that will be made, or the recovery of investment that has been made.

Q. Embarq claims that circuit-switched technology is the appropriate technology for rural areas.[125] Do you agree?

A. No, although I believe that a closer reading of Embarq's claim suggests the dispute is more centered on what forward-looking cost modeling requires than a dispute about the viability of new technology in less dense markets. Specifically, Embarq claims:

> Additionally, while Embarq constantly evaluates the economic drivers for adopting new technologies into its network, no analyses to date have concluded that the emerging VoIP switching technologies are as yet cost justified for replacing the existing time division multiplexing ("TDM") switch network. This is particularly the case in the rural high cost areas that Embarq serves in Texas. Thus the least cost technology choice for the high cost support subject matter at hand remains the TDM switch technology reflected in Embarq's cost estimates.[126]

I am not surprised that Embarq has not concluded that VoIP switching technology justifies replacing its existing switches. Having an investment in-place, operating, and partially (if not substantially) depreciated, is an advantage that is difficult to overcome. Indeed, that is precisely my point that the incumbents enjoy a

[125] Direct Testimony of Ken Dickerson, at 12.

[126] *Ibid*.

substantial advantage by inheriting extensive network resources that they had the chance to deploy under regulatory protection that provide an offset to other obligations (such as being a POLR) that they may face. But a forward-looking cost model does not make a technology choice based on whether it makes economic sense to replace an existing facility, it models what technology makes sense assuming no facility is yet in place.

Q. Given the concerns you express, how should the Commission use HM 5.3?

A. As a practical matter, HM 5.3 remains useful as a tool to identify areas of *relative* high cost, so long as inputs are reasonable. URC witness Terry Murray recommends a limited number of input changes to HM 5.3 to more closely align its results with forward-looking principles, given the basic limitations in its architectural design. The Coalition has proposed input changes and other reforms that produce significant reform in the level of support provided to AT&T and Verizon. We believe similar reforms are appropriate for the other large ILECs, but acknowledge that the Commission should review the level of subsidy against other real world metrics to determine whether the system overall produces reasonable results.[127]

[127] Certainly none of the companies has demonstrated that an increase in support from what they are receiving today is appropriate. In our view, such proposed increases represent the ultimate abuse of HM 5.3 – using it in isolation to claim a public subsidy without additional context that explains exactly what benefit the public would receive by providing these funds.

E. Verizon's Reverse Auction Proposal is Unnecessary

Q. Verizon suggests that the Commission conduct a "reverse auction" to determine support levels.[128] Do you agree?

A. No, at least not to the extent that Verizon is suggesting that such an approach take the place of needed reforms now. There are two principal problems with the reverse auction model. One problem is theoretical; the other is practical.

The theoretical problem is the "reverse auction paradox." The paradox is that a precondition for a successful reverse auction is multiple bidders. However, where multiple facilities-based networks are in a position to bid, it is also likely that the market-test requirements of Chapter 65 and/or the Commission's rules are satisfied and the market is deregulated (in which case all support should cease). Because a reverse auction is only viable under (essentially) the same conditions that support should be eliminated, there is a very narrow range of circumstances where the approach would be useful.

[128] Fulp Direct at 18.

The second concern is more practical. There are a large number of institutional and regulatory processes that would have to be addressed in order to conduct a reverse auction. The California Public Utilities Commission has initiated workshops in the hopes of conducting an auction, and it would be more efficient to allow that process to develop further before determining whether any of its lessons should be exported to Texas. Given the administrative complexities of a reverse auction – and the fact that it is most likely to be viable only under the same set of conditions that make it unnecessary — the Commission should not devote any resources to it at this time.

IV. SUMMARY ANSWERS TO PRELIMINARY ORDER QUESTIONS

Q. What is the purpose of this section of your testimony?

A. The purpose of this section of the testimony is to specifically respond to the listed questions in the *Preliminary Order*.[129] The rationale for the Coalition's positions is fully developed elsewhere and is not repeated in this summary.

[129] *Preliminary Order*, at 2-3.

Q. What monthly per-line support amount should be available to eligible telecommunications providers (ETPs) pursuant to P.U.C. Subst. R. 403(e)(1) (Listed Issue 1)?

A. The monthly per-line support amounts recommended by the Coalition for wire centers located in the territories of AT&T Texas and Verizon are set forth in Attachments JPG-4 and JPG-5.[130] As explained earlier, the Coalition has not quantified the monthly per-line support amounts for wire centers located in the territories of Embarq and Windstream.

Q. What is the monthly cost per-line of providing basic local telecommunications services and other services included in the benchmark using a forward-looking economic cost methodology (Issue 1a)?

A. The Coalition's recommended monthly cost per-line in wire centers located in the territories served by AT&T Texas and Verizon are set forth in Attachments RLC-2 and RLC-3 attached to the testimony of Coalition witness Rowland Curry.

[130] Attachment JPG-5 sets forth for Verizon monthly support levels reflecting input assumptions recommended by the Coalition and the other policies discussed above. Even so, there are three wire centers (shaded in the attachment) that would receive monthly support levels in excess of $200 per month. We draw the Commission's attention to these wire centers to illustrate the benefit of the Commission's considering a cap on monthly support, recognizing the potential availability of alternatives. For instance, if Verizon Wireless has acceptable coverage in these wire centers and is offering retail service for far less than the support calculated by HM 5.3, the Commission should consider capping the actual support at the price of the wireless alternative.

Q. What are the appropriate benchmark or benchmarks to be used in determining the monthly per-line support amount under P.U.C. Subst. R. 26.403(e)(1) (Issue 1b)?

A. The appropriate benchmark to be used in determining the monthly per-line support is a uniform, statewide benchmark of $46.38. This value is determined by adjusting the Commission's previous uniform residential statewide benchmark of $38 per month for inflation. Because business services have been deregulated statewide, there is no need or policy justification for the Commission adopt a benchmark applicable to business lines (see Issue 2 below).

Q. Pursuant to PURA § 56.03, has the adequacy of basic rates to support universal service been considered in calculating the appropriate monthly per-line support amounts under P.U.C Subst. R. 26.403(e)(1) (Issue 1d)?

A. The Coalition is recommending monthly per-line support amounts calculated under the assumption that basic local rates in regulated exchanges are not being changed in this proceeding. At the conclusion of this proceeding, and after the monthly per-line support levels recommended here are implemented, the Commission may choose to conduct company-specific proceedings addressing

rate levels in regulated exchanges. If the Commission chooses to increase rates in those proceedings, the increased revenues from those higher rates should be used to reduce the support recommended here, unless the affected local exchange carrier can demonstrate that those increased revenues are needed for its financial viability.

Q. Should provider of last resort (POLR) obligations be taken into account in determining the monthly per-line support amounts? If so, how (Issue 1d)?

A. The Coalition's analysis and recommendations assume that the ILECs retain current provider of last resort ("POLR") obligations, and take the POLR into account. The facts demonstrate that it is unnecessary to adjust the monthly per-line support amounts available from the High Cost Fund based on the POLR obligation. The so-called "POLR Additive" proposed by the incumbent local exchange carriers is unjustified and anti-competitive and should be rejected. Moreover, the Commission cannot ignore that one consequence of the incumbents having the role of the POLR in the past is that these incumbents today own and operate ubiquitous loop networks, whose costs have largely been recovered in prior periods. If the provider of last resort obligation produces a circumstance-specific need to extend service to an area that an incumbent believes cannot be profitably served, even after the application of the ILEC's special construction

charges, the Commission should address that individual circumstance separately. Although the monthly per-line support amounts recommended in this proceeding do not reflect the cost savings possible by meeting a provider of last resort obligation using wireless technology, the Coalition recommends that the Commission, in a separate rulemaking, remove any obstacles to the use of that technology.

Q. Which eligible lines should receive support under P.U.C Subst. R. 26.403(e)(1)(C) (Issue 2)?

A. High Cost Fund support should be limited to primary residential lines in regulated exchanges. Lines in deregulated exchanges, which include business lines on a statewide basis, should not be eligible for support.

Q. Pursuant to P.U.C Subst. R. 26.403(e)(1), what total monthly base support amount should be available for ETPs (Issue 3)?

A. The total monthly base support amount should be calculated by multiplying the monthly per-line support amounts set forth in Attachments JPG-4 (wire centers in AT&T's territory) and JPG-5 (wire centers in Verizon's territory) times an ETP's reported primary residential lines. (Attachments JPG-4 and JPG-5 eliminate

monthly per-line support for any wire center that is part of a deregulated exchange).

Q. How, if at all, should the Commission's determinations in this docket regarding the adequacy of basic local rates to support universal service be treated in a subsequent proceeding brought by an electing company, under PURA § 58.060, to increase rates for a basic network service? If so used, should the determinations made in this docket be given an effective date subsequent to the issuance of a final order in this docket (Issue 4)?

A. The Coalition is not recommending any statewide minimum rate level for basic local service in this proceeding. As indicated above, after the monthly per-line support levels recommended here are implemented, the Commission may choose to approve company-specific rate increases for customers located in regulated exchanges. If the Commission chooses to increase any ILEC rates in this or subsequent proceedings, the increased revenues from those higher rates should be used to reduce monthly support approved in this proceeding, unless the affected local exchange carrier can demonstrate that those increased revenues are needed for its financial viability. In no event should the Commission postpone implementation of changes to the USF support amounts approved in this proceeding until ILEC rates are increased.

Q. Should the Commission require any additional reporting from ETPs, as provided by P.U.C. Subst. R. 26.403(f)(3), to facilitate the assessment of the contributions to and disbursements from the Texas Universal Service Fund (Issue 5)?

A. The Commission should substantially open the operation of the High Cost Fund to public review. The High Cost Fund administrator should report (and the Commission should post on its website) the number of lines and monthly support received by each ETP, by wire center, quarterly (i.e., for the months of March, June, September and December). This information is posted by USAC for each recipient of federal USF support and there is no reason for the Texas Fund to be less transparent and open to public review than the federal fund.[131]

Q. Does this conclude your testimony?

A. Yes, but I reserve the right to correct and/or supplement my testimony as necessary.

[131] *See* HC25 at http://www.universalservice.org/about/governance/fcc-filings.

APPENDIX C

JANUARY 11, 2008

PUC DOCKET NO. 34723
SOAH DOCKET NO. 473-08-0288

PETITION FOR REVIEW OF MONTHLY PER LINE SUPPORT AMOUNTS FROM THE TEXAS HIGH COST UNIVERSAL SERVICE PLAN PURSUANT TO PURA § 56.031 AND P.U.C. SUBST. R. 26.403	§ § § § § § §	**PUBLIC UTILITY COMMISSION OF TEXAS**

DIRECT TESTIMONY OF DR. MICHAEL D. PELCOVITS

ON BEHALF OF THE UNIVERSAL SERVICE FUND REFORM COALITION

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I. INTRODUCTION AND SUMMARY

Q. Please state your name, occupation, and business address.

A. My name is Michael D. Pelcovits. I am a principal with the economic consulting firm of Microeconomic Consulting and Research Associates (MiCRA). My business address is 1155 Connecticut Avenue, N.W. Suite 900, Washington, D.C. 20036.

Q. Would you please summarize your experience and educational qualifications?

A. I received my Ph.D. in Economics from the Massachusetts Institute of Technology in 1976. Since serving on the economics faculty of the University of Maryland and as a Senior Economist at the Civil Aeronautics Board, I have spent my entire career specializing in the economics of regulation and competition in the telecommunications industry.

From 1979 to 1981, I was a Senior Economist at the Federal Communications Commission, Office of Plans and Policy. From 1981 to 1988, I was a founding member and principal of the consulting firm Cornell, Pelcovits and Brenner. In 1988 I joined MCI Communications Corporation and remained with the Company following its merger with WorldCom, until 2002. I held positions of increased responsibility at MCI, and was appointed Vice President and Chief Economist of the corporation. In this position I was responsible for the economic analyses of policy and regulatory matters provided and presented by the

Corporation before federal, state, foreign, and international government agencies, legislative bodies and courts.

Q. What is your prior experience in developing economic approaches and cost models for universal service funding?

A. As Chief Economist of MCI, I was responsible for economic analysis and cost modeling provided by the company to Federal and State policymakers. In the early 1990s, I was responsible for conceiving and commissioning the first version of the Hatfield (now HAI) Model.[1] This model provided, for the first time, an estimate of the size of the universal service subsidy without reference to the ILECs' regulated revenue requirements, but rather from a transparent cost model of the local exchange. My department continued for many years working with Hatfield Associates (later HAI) to develop newer versions of the model that were used in many proceedings at the FCC and state commissions, including the Texas PUC.

Q. What are your professional responsibilities at MiCRA?

A. I joined MiCRA in October 2002, immediately after leaving MCI, and am one of six principals of the firm. MiCRA is an economic consulting firm based in Washington, DC. The firm was founded in 1991 by a group of economists who served in senior positions at the Antitrust Division of the U.S. Department of Justice. MiCRA provides economic analysis, expert testimony, and economic

[1] Hatfield Associates, Inc. July 1994. *The Cost of Basic Universal Service.*

research to clients in a wide range of antitrust, regulatory, and other legal and public policy settings. Since joining MiCRA, I have testified before several state regulatory commissions on telecommunications policy and ratemaking issues. These testimonies have focused on the importance of establishing the proper foundation to facilitate competition in telecommunications markets. I have also filed several declarations before the Federal Communications Commission on a wide range of common carrier, wireless, and international telecommunications policy issues. I have also consulted and provided testimony on telecommunications, intellectual property and competition matters before several other Courts and administrative bodies, including: Federal District Court; U.S. Copyright Royalty Judges; and London Court of International Arbitration. My curriculum vita, which is appended as Attachment MDP-1 to this testimony, provides more detail concerning my qualifications and experience.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Sprint Communications Company, L.P., SprintCom, Inc., Sprint Spectrum L.P., Nextel of Texas, Inc., NPCR, Inc., Time Warner Telecom of Texas, L.P., Time Warner Cable Information Services, LLC, and TXC Digital Phone LLC, collectively, the "Universal Service Reform Coalition" ("URC" or "Coalition").

Q. What is the purpose of your testimony?

A. My testimony addresses the economic framework or paradigm that underlies use of a forward looking economic cost (FLEC) model to estimate universal service

subsidies and whether that paradigm applies in today's market. I also discuss whether the ILECs' use of a FLEC model (i.e. the HAI model) to revise the monthly per-line support amount for the Texas High Cost Universal Service Plan (THCUSP) conforms to the goals established by Statute and the Commission.

Q. Would you please summarize the main findings of your testimony?

A. Yes. I find that the policy goals of the Commission can best be achieved by looking beyond the narrow confines of the cost and revenue analysis presented by the ILECs. The models and data provided by the ILECs do not match their actual forward-looking behavior and therefore estimates of the required "subsidy" derived from their approach would almost certainly overstate the actual financial assistance needed to maintain basic local telecommunications services ("BLTS") at reasonable rates.

My testimony is organized as follows. In the next section, I discuss the policy objectives of a well-designed universal service subsidy plan and explain the economic thinking behind the development of forward looking economic cost models. In the following section, I discuss the deficiencies of the ILECs' proposals to conform to these economic guidelines. In the final section, I discuss whether the Commission should review other types of evidence to help determine the size of the Fund needed to achieve its objectives.

II. UNIVERSAL SERVICE FUND POLICY GOALS

Q. What are the policy goals and method of implementation adopted by the Commission for the THCUSP?

A. As explained by the Commission in the Final Order in PUC Docket No. 18515, the Texas High Cost Universal Service Plan ("THCUSP") was created to provide "assistance to eligible telecommunications providers (ETPs) that serve the high cost rural areas of the state...so that basic local telecommunications service may be provided at reasonable rates in a competitively neutral manner."[2] The fund was established to implement PURA § 56.021(1) which requires the Commission to establish a fund to "assist local exchange companies in providing basic local telecommunications service at reasonable rates in high cost rural areas."[3]

The Commission determined in its prior order that the best way to achieve these objectives was to provide a subsidy to the eligible telecommunications provider (ETP) that provides the service to a customer in a high cost rural area. The subsidy (set forth as a monthly per-line support (MPLS) for each wire center) was then calculated as the difference between a revenue benchmark (calculated on a statewide average basis separately for business and residential customers) and an estimate of the forward looking economic cost of providing basic local service in that wire center.

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2 Docket 18515 Final Order, p. 1, footnote omitted.

3 Public Utility Regulatory Act, TEX. CODE ANN. §56.021 (PURA)

Whether the same approach to modeling and the determination of support levels should be adopted in this proceeding is a different matter. The telecommunications industry has evolved significantly since the prior decision, and this calls into question whether the same cost methodology and subsidy calculations should be used going forward. Moreover, even if it is not possible to apply forward looking models properly to today's and tomorrow's industry technology and structure, it is important to understand the reasons for and possible size of any bias in the results derived using the existing forward-looking cost model.

Q. What was the original rationale used to justify using a forward-looking economic cost model to determine the monthly per-line support amount?

A. The theoretical and policy foundation for using a FLEC model is that it would capture the real forward-looking investment choices that would be faced by a carrier considering entering into and serving customers in a particular geographic market. As the FCC explained, "use of forward-looking economic cost as the basis for determining support will send correct signals for entry, investment and innovation."[4] I note that at the time the FCC adopted its universal service order, the most likely expected form of entry to the local market was though the lease of

[4] In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report and Order (rel. May 8, 1997), ¶224 The FCC also adopted criteria that a FLEC model should meet in order to meet its overall objectives. In Docket No. 18515 (p. 9), this Commission adopted the FCC criteria as appropriate for its selection of a cost model.

the incumbent's network to provide service in the form of UNEs. Because UNE prices were also to be established using forward looking economic costs, forward-looking economic costing principles provided a common footing to both the FCC's universal service and local entry policies.

Q. Would you explain the relationship between use of a FLEC model and the established goal at the time of sending correct signals to the marketplace?

A. Yes. The FLEC model cost was based on the long run cost incurred by any carrier starting from scratch to build the local network. The model was intended to apply to all carriers, including the ILEC and new entrants, because all embedded plant was "wiped clean" and replaced by a brand new network. Theoretically, if a subsidy were based on the FLEC cost estimate and made portable, the most efficient carrier would prevail in the marketplace over the long run, because it would be the only carrier that could recover its long run costs from the sum of revenues from customers plus the subsidy.

As I will explain at greater length below, use of a FLEC model to estimate the size of subsidies only makes sense if it captures the actual forward-looking decision that would be made by a carrier newly-investing in this market. That decision would be based on whether the long run costs (including a reasonable return on capital) will be covered by the revenues received from the services using this newly-built network. The failure to model the costs and revenues pertaining to this decision properly would undermine the very foundation that underlies the use of FLEC models to determine universal service support.

Further, if the old paradigm cannot (and perhaps should not) apply to the present situation, the Commission will need to look at other evidence to ensure that the subsidies meet its public policy objectives.

III. CONCEPTUAL FLAWS IN THE ILECS' FLEC METHODOLOGY

Q. What approach have the ILECs used for computing the monthly per-line support (MPLS) for each wire center?

A. The basic approach adopted by the ILECs is to estimate the cost of basic local service and what they claim are the revenues "associated with residential and single-line business lines" in each wire center. Costs are estimated using the HAI Model Version 5.3 (HM 5.3). The revenue benchmarks are estimated from company data and include revenues from local service, the end user common line (EUCL) charge, feature revenues, intraLATA toll revenue and interstate and intrastate switched access revenues.

My testimony will address conceptual problems with the ILECs' approach. The other witnesses testifying for the URC, Joe Gillan, Terry Murray, and Rowland Curry, will expand on these issues and discuss numerous flaws in the ILECs' implementation of their approach to measurement of the monthly support amounts.

Q. What are the conceptual problems with the ILECs' approach?

A. The main problem is that it does not conform to the economic principles upon which the entire forward-looking approach to estimating and paying universal

service subsidies is based. As I explained above, the economic reasoning and policy foundation for using a FLEC model is to test whether expected long run revenues from customers will cover all forward-looking costs, including a reasonable return on forward-looking investment. The ILECs' approach, however, fails to model the actual forward-looking network being placed in service right now and also fails to model the actual business decision comparing total revenues and total costs associated with an investment project.

Q. How does the ILECs' approach to forward-looking economic analysis fail to model the actual business decision made by a carrier?

A. A decision to enter a market or expand service in a market will be based on the total revenues and the total costs of entry or expansion. For example, a carrier deciding whether to enter a new market by running fiber optic cable to each customer premise will compare the revenues from all services, including voice, data, and video, to the costs of the entire project. And if the expected return from the investment is above a threshold level, the carrier will make the investment. Of course, the decision will be much more complicated than that, particularly if there is choice of technology to be made and a lot of uncertainty due to marketplace or technology factors. But the basic decision will be based on the expected revenue and cost effects of making a decision to go ahead with the investment or the market entry.

Q. Do you have reason to believe that the exercise carried out by the ILECs is far removed from the actual decisions being made in the market?

A. Yes. The actual investments being made today are not captured by the HM 5.3 cost model. Also, the revenues generated by these investments are not captured by the ILECs' benchmark calculations.

Q. What evidence do you have the ILECs are building a different and more advanced network than has been modeled by HM 5.3?

A. AT&T is installing its IP-based U-verse network throughout much of its footprint. This network upgrade gives AT&T the capability to provision to each customer premises the following capabilities: four simultaneous HDTV streams; 10 Mbps high speed Internet service and two VoIP lines.[5] AT&T expects to pass over 30 million living units in all of its service territory with U-verse by 2010, compared to about 8 million in 2007.[6]

According to AT&T, their plan is to invest for the long term and lead the "convergence to IP." Its networks are evolving, converging and becoming more efficient and capable, which will allow "cost reductions to continue indefinitely," thereby "capturing growth opportunities in our SMB [small market business]

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[5] Presentation by John Stankey, Group President-Telecom Operations, AT&T Inc., delivered to 2007 Analyst Conference, December 11, 2007, at p. 38, ("Stankey presentation"), provided in Attachment MDP-2 and at http://www.att.com/Common/merger/files/pdf/Stankey_bw.pdf.

[6] Id., at 37.

consumer markets.[7] None of these trends is captured in the "forward-looking" cost model that AT&T relies on to estimate its "need" for universal service funding.

Q. How closely does HM 5.3 conform to the local network now being built by AT&T to serve new residential developments?

A. In new residential construction areas, AT&T is building fiber to the customer premises in new developments.[8] AT&T is using equipment from Alcatel-Lucent and Ericsson to provide the equipment for the planned deployment of its Gigabit Passive Optical Network (G-PON).[9] By contrast, HM 5.3 presented by AT&T and the other ILECs in this case "constructs" distribution cable entirely using copper wire and feeder cable with a combination of copper and fiber cable. In a forward-looking exercise that presumes a green-field approach, one would expect the model to more closely correspond to the actual behavior of the ILECs. That it does not do so implies either that the ILECs are not efficient or the model has serious deficiencies.

Q. What are the different sources of revenue that the ILECs receive as a direct result of owning and operating local telecommunications facilities?

A. The ILECs collect revenue from at least four sources: (1) revenues from the regulated services included in their estimates of the benchmark, e.g. local service

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7 Id., at 54.

8 AT&T Press Release, June 15, 2007. http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=23962

9 Id.

and EUCL; (2) revenues from unregulated telecommunication services provided to their local exchange customers, e.g. voice mail, DSL; (3) revenues from regulated services provided to large business customers, e.g. special access and private line; (4) revenues from video services. Also, the ILECs offer bundles that include services from more than one of these categories, e.g. AT&T Double Pack, AT&T Triple Pack with Entertainment.

Revenues from several categories of these services are growing in importance. For example, video services are being offered to more and more customers. Revenues from special access services have increased over the last several years, even as other revenues have fallen, as shown in the table below. These revenues enter into the ILECs' decision whether to invest in a particular market and are clearly relevant to whether a subsidy is needed to continue to provide incentives to ILECs and competitors to invest and serve high cost rural areas.

Revenues AT&T/Southwestern Bell

Row Title	**Y2006 Amount (b)**	**Y2005 Amount (b)**	**Y2004 Amount (b)**
Basic area revenue	3,039,724	3,106,459	3,284,268
Private line revenues	162,164	132,105	114,956
Other basic area revenue	1,349,076	1,350,172	1,377,405
Local Network Services Revenues	4,550,964	4,588,736	4,776,629
End user revenue	854,465	846,570	877,608
Switched access revenue	687,451	772,986	885,524
Special access revenue	**1,740,988**	**1,576,453**	**1,478,671**

Source: FCC Report 43-02: ARMIS USOA Report Table I-1

Q. Do you have reason to believe that these factors will lead to an increase in the ILECs' revenues over the next few years?

A. Yes. The large ILECs are putting greater emphasis on video and broadband services and AT&T, for example, predicts that revenue per residential customer will grow from the upper $50s today to more than $70 by 2010.[10]

Q. Does the estimation of per-line support amounts using the HM 5.3 provide useful information to the Commission?

A. Yes. If the corrections to the benchmark and cost model recommended by Mr. Gillan and Ms. Murray are made, the calculations of the per-line support amounts provide an upper-bound estimate of the economic subsidy needed for the supported services. The reason to treat these estimates as an upper bound is that HM 5.3 is more in the nature of a "stand-alone" cost model of local exchange service rather than a cost model of a forward looking local telecommunications company.[11]

The term "stand-alone" cost means the cost of building and operating a network that provides only a subset of the services that the actual forward-looking network is capable of providing. According to well-established economic theory, any service, or set of services, whose revenues exceed their stand-alone cost

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[10] Stankey Presentation, at 12.

[11] The network modeled by HM 5.3 includes high-capacity business lines (DS1s, DS3s) and allocates a portion of the total costs to these lines. It fails, however, to test whether the stand-alone costs of the entire network are recovered from the revenues from all the services. Hence, the model is conforms closely to, but not exactly, to a stand-alone cost study of local telephone service.

would be subsidizing other services, and therefore could not be subsidized by other services[12]

Q. Please explain what you mean by "subsidizing" and "subsidized" services in this context?

A. Consider any firm that provides multiple products or services using common facilities. In a competitive market setting, the firm's prices must satisfy the following conditions. First, prices must be high enough to allow the firm to recover its total costs from revenues received from all services. Second, the price of any single service (or subset of services) must be above the incremental cost of the service. Third, the price of any single service (or subset of services) must not exceed its stand-alone cost. The first condition means that the firm must be self-sustaining in the long run. The second condition means that no service is subsidized by any other service. The third condition means that no service is subsidizing any other service.[13]

These pricing conditions establish wide bounds on the price level of each service that would prevail in the market. The market price of any service would be above incremental cost and below stand-alone cost. Any service priced within that range will neither be subsidizing nor subsidized.

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[12] William J. Baumol, *Superfairness*, The MIT Press, 1986, at 120-124.

[13] It can be shown that if all prices satisfy either the second or third condition then they will also satisfy the other condition.

Q. Does HM 5.3 model the incremental cost of providing basic local telephone service?

A. No, it does not. As I indicated earlier, HM 5.3 conforms much more closely to a stand-alone cost study, not an incremental cost study.

Q. How does use of a stand-alone cost test such as HM 5.3 affect the estimate of the size of the required universal service subsidies?

A. This will lead to a significant overstatement of the size of the subsidy needed to maintain local rates at current levels. The "required" subsidy will be computed as stand-alone cost minus revenue, rather than the correct measure which would be incremental cost minus revenue. As shown in the equations below, the overstatement of the subsidy will be equal to the difference between stand-alone cost and incremental cost.

Computed Subsidy = SA Cost – Revenue
Correct Subsidy = Incremental Cost – Revenue
Overstatement of Subsidy = Computed Subsidy – Correct Subsidy =
SA Cost – Incremental Cost

In the case of an industry such as local telecommunications, there is a substantial gap between incremental and stand-alone costs, because of the large economies of scale that make it much cheaper to supply multiple services on a single network rather than building separate networks for each service. Therefore, the subsidy calculation based on a stand-alone model will overstate the subsidy needed by a very wide margin.

In conclusion, if the monthly per-line support is based on a stand-alone cost study, such as the corrected HM 5.3, the policy objective of maintaining affordable local rates will be achieved, but at a greater cost than required.

IV. OTHER EVIDENCE ON THE NEEDED SIZE OF SUBSIDIES

Q. Do you recommend to the Commission that it should require the ILECs to perform a corrected forward looking analysis of the total revenue and total cost of a local telecommunications network?

A. No. I recommend against this for a number of reasons, practical and theoretical. First, it would take years of work to design and implement such a study. The industry's experience with the modeling done of "yesterday's" network shows the difficulty of estimating disaggregated costs of a complex network using real-world data on customer locations and wire center boundaries. The HM 5.3 evolved over thirteen years and required a large team of experts to develop the model. The process also benefited from numerous reviews and critiques of each version of the model. That process, however, is in the past and served to refine a model that is still firmly grounded in the circuit-switched architecture of the past. I believe that an accurate model of the forward looking network *now* being installed by the ILECs would be even more difficult, because it would require technical and economic analysis of many possible network arrangements and service capabilities. Furthermore, because there is a benefit to the ILEC of offering services throughout its footprint, it is hard to tell whether the ILEC 's decision whether to provide all of these services in a small geographic area would

be based solely on the direct costs and revenues estimated from a disaggregated model.

Even if a true forward-looking model were available, the definition of the universal service subsidy would have to be reexamined. The reason is that any shortfall between expected revenues and costs estimated by the model would represent the outcome from all services provided by the local network. This would raise many difficult policy and legal issues that the Commission would need to resolve. For example, it would be necessary to determine how great a portion of the shortfall should be the responsibility of the general ratepayer funding the Plan. Also, the Commission would have to determine how it could penetrate the corporate veil, behind which lie a large and growing share of the ILECs' revenues and costs. Without access to good data on the ILECs' operations, it would be difficult to estimate whether a subsidy (based on the old paradigm comparing forward looking costs and revenues) can be determined.

Q. Your discussion of the costs and revenues of a multi-product local telecommunications network does not address the costs and revenues specifically attributable to the basic local services. Shouldn't the universal service subsidy calculation only look at the costs and revenues of the supported local services?

A. No. I am well aware of the conventional approach, which treats the supported local services as a distinct and separate service package. It is virtually impossible, however, to give any economic meaning to an estimate of the subsidy needed for

these services based on allocated costs and revenues. As local networks provide an ever-increasing number of non-supported services, the assignment of certain costs and revenues to a subset of these services has become arbitrary and has little to do with how firms operate or make investment decisions. For example, if a customer buys a bundle of local service, voice mail, DSL, and video, the assignment of revenue to supported and non-supported services will be arbitrary. The a la carte prices of the individual services may give a clue as to their respective "shares" of the value of the bundle. But any derivation of the "prices" of the individual components of a bundled service would involve many judgment calls and become increasingly difficult as the bundled services become more popular. This issue has taken on greater importance as bundled offerings have become more popular.

Cost allocations across the different services also will require numerous arbitrary "judgment" calls. For example, the allocation of loop plant costs between high-capacity dedicated circuits and residential loops can be done in many different, and perhaps equally defensible, ways, depending on how the utilized capacity of the loop plant is treated.

It is most important to realize that <u>any</u> estimate of the subsidy needed for a subset of services will not correspond to the type of analysis used in business decisions made by the carriers. Rather, the decision to deploy facilities will be made on a system-wide or area-wide basis

Q. Is there a danger that the ILECs will not receive a "fair return" on their investment if the revenues received from each customer for providing basic local services do not recover all costs associated with providing these services?

A. No. The presumption that rates (plus a subsidy) must cover average per-line costs for each and every customer is wrong. A carrier's decision – absent regulatory compulsion -- whether or not to provide an individual customer with telephone service will be based on the margin earned from the individual customer. In other words, even if a customer will pay only $30.00 for telephone service and the average FLEC cost per-subscriber in that wire center is $40.00, the ILEC will find it profitable to offer telephone service to that customer, so long as it receives any "contribution" above the incremental cost of maintaining service to that customer. The incremental cost of serving one additional subscriber will be very low, and consist mostly of the cost of billing, customer service, and maintenance of the drop wire and network interface at the customer premise.

Q. Is there a benefit to looking at the ILECs' accounting costs?

A. Yes. Since the FLEC modeling falls so short of the underlying economic paradigm, a comparison between the model results and the ILECs' accounting cost may provide a rationality check on the model and help resolve concerns about the fairness of the subsidy.

One useful benchmark would be to compare the investment cost of the loop plant from the model to the embedded (net book) cost of the same category

of plant on the ILECs' books. Although the data available to me does not permit a perfect apples-to-apples comparison, I suspect based on the data available to me, that the FLEC modeled cost of copper plant is substantially greater than the embedded cost. The reason for this is the ILECs were allowed to shorten depreciation lives a number of years ago and have built up a large depreciation reserve.[14] This means that if the FLEC model is right, the ILECs are now sitting on an asset that is worth much more than is stated on the books.

Q. How would this phenomenon of an undervalued asset affect the sizing of the subsidy?

A. If the Commission were to treat the FLEC as though it calculated a revenue requirement, and then guaranteed revenues to that level – which is effectively what the ILECs have requested – that would provide the ILECs with a windfall equal to the difference between the market value and net book cost of the copper loop plant. The ILECs would receive an annual stream of profits (plus depreciation) on these undervalued assets funded by their customers plus the "taxpayers" funding the universal service subsidies. I see no reason why the ILECs should receive this windfall, which results from their historic monopoly ownership of the local exchange and past regulatory decisions that required ratepayers to fund these investments. Certainly, there is no basis for forcing taxpayers to guarantee the ILECs profits on these assets.

[14] See, Direct Testimony of Joseph Gillan, which presents confidential information on the percentage of AT&T's copper loop plant that has already been depreciated. Table 6.

Q. Does this conclude your direct testimony?

A. Yes.

ATTACHMENT MDP-1

CURRICULUM VITAE OF MICHAEL D. PELCOVITS

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CURRICULUM VITÆ

(January 2008)

EDUCATION

Massachusetts Institute of Technology, Ph.D. (Economics), 1976
University of Rochester, B.A. (Economics), *summa cum laude,* 1972

EMPLOYMENT

MiCRA
Principal: October 2002 – Present

MCI Communications (WorldCom, subsequent to its acquisition of MCI)
Vice President and Chief Economist: 1998 - 2002
Executive Director: 1996 – 1998
Director: 1992 – 1996
Senior Policy Adviser: 1988 – 1992

Cornell, Pelcovits & Brenner Economists Inc
Vice President and Treasurer: 1982 – 1988

Owen, Cornell, Greenhalgh & Myslinski Economists Inc.
Senior Economist: 1981 – 1982

Federal Communications Commission, Office of Plans and Policy
Senior Economist: 1979 – 1981

Civil Aeronautics Board, Bureau of International Aviation
Industry Economist: 1978 – 1979

University of Maryland, College Park, Department of Economics
Assistant Professor: 1976 – 1978

ACADEMIC AWARDS

National Science Foundation Graduate Fellowship, 1972 – 1975
Phi Beta Kappa, 1972
Isaac Sherman Graduate Fellowship, 1972 (University of Rochester)
John Dows Mairs Prize in Economics, 1971 (University of Rochester)

PUBLICATIONS

"Long Distance Telecommunications" in Diana L. Moss, editor, Network Access, Regulation and Antitrust, (Routledge), 2005.

"The WorldCom-Sprint Merger" in John Kwoka, Jr. and Lawrence J. White, editors, The Antitrust Revolution, The Role of Economics, 4th Edition (Oxford University Press), 2003.

"Economics of the Internet," (with Vinton Cerf), in Gary Madden and Scott Savage, editors, The International Handbook On Emerging Telecommunications Networks (Edward Elgar), 2003.

"Application of Real Options Theory to TELRIC Models: Real Trouble or Red Herring" in James Alleman and Eli Noam, editors, The New Investment Theory of Real Options and its Implications for Telecommunications Economics, (The Netherlands, Kluwer Academic Publishers, 1999).

"The Promise of Internet Access over Cable TV: Should the government force open access requirements?" (with Richard Whitt), CCH Power and Telecom Law, Vol. 2, No. 7, November/December 1999.

"Toward Competition in Phone Service: A Legacy of Regulatory Failure," (with Nina W. Cornell and Steven R. Brenner), Regulation, July/August 1983.

"Access Charges, Costs, and Subsidies: The Effect of Long Distance Competition on Local Rates," (with Nina W. Cornell), in Eli Noam, editor, Telecommunications Regulation Today and Tomorrow, (New York: Harcourt Brace Jovanovich, 1983).

"The Equivalence of Quotas and Buffer Stocks as Alternative Stabilization Policies," Journal of International Economics, May 1979.

"Revised Estimates U.S. Tax Revenue (with Jagdish Bhagwati), in Bhagwati and Partington editors, Taxing the Brain Drain, (North Holland, 1976).

"Quotas Versus Tariffs," Journal of International Economics, November, 1976.

OTHER PROFESSIONAL ACTIVITIES

Speaker and Panelist (selected examples):

Advanced Workshop in Regulation and Competition, Center for Research in Regulated Industries, Rutgers Business School, "Open Access Policies, Net Neutrality and Incentives for Innovation in the Telecommunications," June 29, 2006

National Association of State Utility Consumer Advocates, "Telco Structural Separations, Costs & Benefits," June 19, 2001

LeBoeuf, Lamb, Greene & MacRae, "Telecom Restructuring: The Road to Profitability -- Is there a Map?" June 11, 2001

Columbia University, Graduate School of Business, Institute for Tele-Information, "European Lessons in Liberalization: The German Experience in Telecommunications & Internet Applications," February 16, 1999

Massachusetts Institute of Technology, "Economics of the Internet: Lessons from Regulation of Telephony," April 30, 1998

National Association of State Utility Consumer Advocates, "The Telecommunications Act Two Years Later," February 10, 1998

Columbia University, Graduate School of Business, Institute for Tele-Information, "From the Blueprint to Reality: A Look Into the Second Year of the Telecommunications Act of 1996," April 10, 1997

Federal Communications Commission, Federal State Joint Board on Separations, February 26, 1997

Alliance for Public Technology, "Technologies of Freedom: Linking the Home to the Highway," February 21, 1997

Federal Communications Commission, Federal-State Joint Board on Universal Service, June 5, 1996

Columbia University, Graduate School of Business, Institute for Tele-Information, "Telecommunications Act of 1996: The Morning After," February 6, 1996

New York Law School, Communications Media Center, "Universal Service in Context: A Multidisciplinary Perspective," December 6, 1995

Kansas University, "Stakeholders Symposium on Telecommunications," November 2, 1995

Guest lecturer in graduate and undergraduate courses at:

Columbia University, Graduate School of Business
New York University, Stern School of Business
Georgetown University, McDonnough School of Business
George Washington University
Johns Hopkins University
University of Maryland
American University
Northeastern University

RECENT TESTIMONIES (2003 to present)

U.S. DISTRICT COURT

In The United States District Court for The District of Colorado, Civil Action No. 03-F-2084 (CBS), QWEST CORPORATION, Plaintiff, v. AT&T CORP, Defendant. (Deposition taken; case settled)

LONDON COURT OF INTERNATIONAL ARBITRATION

In the Matter of an Arbitration Between: France Mobile Telecom Mobile Satellite SA, Stratos Wireless Inc, Telenor Satellite Services AS Claimants - and – Inmarsat Global Limited Respondents, LCIA Arbitrations No. 6767, 6768, and 6769.

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In the Matter of Digital Performance Right in Sound Recordings and Ephemeral Records, Docket No. 2005-1 CRB DTRA

In the Matter of Digital Performance Right in Sound Recordings and Ephemeral Recordings for a New Subscription Service, Docket No. 2005-5 CRB DTNSRA

In the Matter of Adjustment of Rates and Terms for Preexisting Subscription Service and Satellite Digital Audio Radio Services, Docket No. 2006-1 CRB DSTRA

STATE UTILITY COMMISSIONS

State of New Hampshire, Public Utility Commission, Joint Petition of Verizon New England Inc., and FairPoint Communications, Inc. Transfer of New Hampshire Assts of Verizon New England, Inc. et. al., Docket No. DT 07-011

State of Vermont, Public Service Board, Joint Petition of Verizon New England, Inc., d/b/a Verizon Vermont, Certain Affiliates Thereof and FairPoint Communications, Inc. for approval of asset transfer, acquisition of control by merger and associated transactions, Docket No. 7270

State of Connecticut, Department of Public Utility Control, DPUC Investigation of Intrastate Access Charges, Docket No. 02-05-17.

State of Connecticut, Department of Public Utility Control, Application of Southern New England Telephone Company for Approval to Reclassify Certain Private Line Services from Noncompetitive to Competitive Category, Docket No. 03-02-17.

Pennsylvania Public Utility Commission, AT&T Communications of Pennsylvania, Inc. v. Verizon North, Inc. Docket Number C-20027195.

Pennsylvania Public Utility Commission, Investigation into the Obligations of Incumbent Local Exchange Carriers to Unbundle Network Elements, Docket No. I-00030099.

Pennsylvania Public Utility Commission, Generic Investigation in re: Impact On Local Carrier Compensation if A Competitive Local Exchange Carrier Defines Local Calling Areas Differently Than the Incumbent Local Exchange Carrier's Local Calling Areas but Consistent With Established Commission Precedent, Docket No. I - 00030096.

Pennsylvania Public Utility Commission v. Verizon Pennsylvania Inc. Tariff No. 216 Revisions Regarding Four Line Carve Out, Docket No. R – 00049524; Pennsylvania Public Utility Commission v. Verizon Pennsylvania Tariff No. 216 Revisions Regarding Switching, Transport and Platform for High Capacity Loop, Docket No. R – 00049525.

FCC DECLARATIONS

In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123

In the Matter of Amendments of Parts 1, 21, 73, and 101 of The Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, WT Docket No. 03-66

In the Matter of Tyco Telecommunications, VSNL Telecommunications, et al, Application for Transfer of Control of Cable Landing Licenses, Petition to Deny of Crest Communications Corporation

In the Matter of Review of the Commission's Rule Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers

In the Matter of AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services

In the Matter of Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers

In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities

Center for Communications Management Information, Econobill Corporation, and On Line Marketing, Inc., Complainants, v. AT&T Corporation, Defendant

RECENT CONSULTING ASSIGNMENTS

Telecommunications Industry

Prepared FCC declaration for Sorenson Communications concerning the rate methodology for reimbursing Video Relay Service providers

Prepared FCC declaration for the Wireless Communications Association International analyzing the impact of limits on spectrum leases in the Educational Broadcasting Service bands on investment in wireless infrastructure

Prepared expert reports for the Infocomm Development Authority of Singapore on access to submarine cable landing stations and regulation of local leased line circuits