BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20054

In the Matter of	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
IP-Enabled Services	)	WC Docket No. 04-36
Intercarrier Compensation for ISP-Bound Traffic	)	CC Docket No. 99-68
Implementation of the Local Competition Provisions in the 1996 Act	)	CC Docket No. 96-98

THE INTERCARRIER COMPENSATION REFORM PLAN OF THE ALLIANCE FOR RATIONAL INTERCARRIER COMPENSATION

Filed: October 25, 2004

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I. EXECUTIVE SUMMARY

The Alliance for Rational Intercarrier Compensation ("ARIC")[1] is a group of small telecommunications companies providing service in the rural, high-cost areas of the nation. ARIC organized earlier this year to construct a reasoned, comprehensive framework for intercarrier telecommunications compensation to inject stability into a reeling industry. The result of the extensive work effort is the Fair Affordable Comprehensive Telecom Solution, known as the FACTS Plan ("Plan"). This Plan, described in various industry forums and ex parte presentations at the Commission over the last several months, is added to the Federal Communication Commission's ("Commission") record in CC Docket 01-92 and other relevant dockets through this filing.

The FACTS Plan proposes to reform intercarrier compensation by establishing unified intercarrier compensation for all traffic (intrastate access, interstate access and reciprocal compensation). Intercarrier compensation reform will be accomplished through local rate rebalancing, unification of federal subscriber line charges ("SLCs") and the creation of a supplemental universal service support mechanism administered by the states. A "hold-harmless" provision will provide cost recovery stability for companies while the Plan components transition into effect over a time period not to exceed five years. The Plan also proposes rational compensation and regulatory frameworks for the Internet Protocol ("IP") environment. The Plan would function as follows for all companies – rural and non-rural:

[1] *See* Appendix D – Glossary of Terms.

- *Compensation and Interconnection Obligations* – The Plan continues today's Retail Service Provider Pays compensation framework, maintaining current retail-wholesale relationships and interconnection compensation obligations among carriers. These interconnection obligations also are consistent with federal law and continue to be appropriate in a converged network environment.

- *Unified Intercarrier Compensation Rates* – Traffic-sensitive, switched intercarrier rates will be unified immediately under the Plan. Rates initially will be based on unseparated, interoffice, embedded costs and will continue to be billed on a per-minute basis, reflecting the manner in which costs are incurred. Additionally, special access rates initially will be unified at interstate levels until demand and cost information can be obtained in order to set cost-based, unified rates. If the Commission decides to calculate rural companies' universal service support on a basis other than embedded costs, then a Notice of Proposed Rulemaking ("NPRM") should be opened to address further changes necessary for intercarrier compensation.

- *Local Rate Rebalancing* – To create comparable local rates for customers across the nation, companies will rebalance their local service rates, over a period not to exceed five years, to benchmark levels established by state commissions. State commissions may consider differences in calling scope and affordability between exchanges when setting benchmarks. To ensure that Section 254 affordability and comparability obligations are met, the Plan will require state benchmarks to be set between a national benchmark floor and a ceiling established by a Joint Board of federal and state regulators. A company may choose not to raise its local rate to the benchmark, but the benchmark rate will be imputed for the purpose of state supplemental support calculations.

- *Unified Subscriber Line Charges* – To further ensure rate comparability between rural and urban customers, the existing federal SLC caps will remain in place; however, under the Plan, SLC levels will be unified among all companies within each state. Price cap carriers may be able to increase their SLCs to include some traffic-sensitive costs as a means of lowering their intercarrier compensation rates. Rural companies then will set their SLCs at the weighted-average single-line and multi-line SLCs for the price cap companies in their state. Rural SLC levels are expected to decrease as existing differentials between urban and rural SLCs are eliminated.

- *State Universal Service Support* – The State Equalization Fund will be established to provide residual revenues not recovered by local rates, SLCs, intercarrier compensation and existing universal service funds. The State Equalization Fund, administered by state commissions, will have a shared funding obligation between federal and state sources. Rural states will receive a higher federal funding contribution than less-rural states. For states that do not establish a fund, a new federal Access Equalization Charge will be collected on each working number within the state and redistributed to compensate for companies' revenue shortfalls. Most states are expected to establish a State Equalization Fund because federal contributions are foregone if such a fund is not created.

- *Necessary Compensation and Market Conditions for the IP Environment* – Circuit-switched compensation, in the form of access charges and reciprocal compensation, should be paid for minutes traversing the Public Switched Telephone Network ("PSTN"). For IP, a new compensation regime must be developed that reflects the appropriate cost drivers in a packet-switched network. Since today's "best-effort" IP services do not reflect the costs of tomorrow's "connection-oriented" IP services, additional quality-of-

service Digital Subscriber Line ("DSL") rate elements must be introduced to recognize the network resources consumed by Internet Service Providers' ("ISP") customers. A new infrastructure-based universal service system also will be necessary to recover costs associated with rural broadband deployment.

Finally, the Plan recognizes the importance of targeted regulation to constrain market power in the evolving IP environment. Retail ISPs affiliated with large, vertically integrated carriers that control both IP backbones and local distribution facilities can employ strategies to force independent ISPs from a market where the vertically integrated company provides ISP service. Market power regulation will protect independent ISPs that need reasonable and affordable access to the IP backbone and fair, equitable and open access to distribution facilities. This access can be maintained only through proper open network safeguards that are specified in Title II Common Carrier interconnection requirements.

II. THE ALLIANCE FOR RATIONAL INTERCARRIER COMPENSATION WAS FORMED TO CRAFT A BALANCED SOLUTION TO INTERCARRIER COMPENSATION.

The Alliance for Rational Intercarrier Compensation is a group of small rural, high-cost telecommunications companies from across the country organized during the last year with the express purpose of designing fair and balanced solutions to the current intercarrier compensation problems facing the telecommunications industry. ARIC members believe that the industry needs strong injections of stability in the form of a sustainable and fair intercarrier compensation system to ensure that universal service continues for customers throughout the vast rural areas of this nation, and that carriers in all segments of the industry have fair opportunities to compete and to survive. ARIC's membership includes companies that were previously involved with other intercarrier compensation working groups, including the Intercarrier Compensation Forum ("ICF") and the Expanded Portland Group ("EPG"). ARIC is filing this Plan, the Fair Affordable Comprehensive Telecom Solution ("FACTS") Plan, and describing it in detail as a follow-up to previous ex parte presentations the group has made to Commission staff and Commissioners' offices.

III. PROBLEMS IN THE TELECOMMUNICATIONS INDUSTRY HAVE LARGELY RESULTED FROM A FLAWED INTERCARRIER COMPENSATION SYSTEM THAT UNFAIRLY ADVANTAGES NEWER TECHNOLOGIES.

The telecommunications industry is in a state of flux. Companies in all sectors of the industry recognize it. Financial markets recognize it. State and federal policymakers recognize it. But most importantly, customers are beginning to recognize it. Service providers large and small, in all segments of the industry, are encountering pressures on revenues resulting in curtailed investments and reduced service.[2] Given the complicated rules and structures governing telecommunications cost-recovery methods, there is little consensus on what should be done – other than something must be done.

Despite this foreboding environment, ARIC believes that viable and reasoned solutions to the industry's intercarrier compensation problems do exist. The solutions may not be those advocated by the dominant carriers, or those favored by carriers advantaged by today's system. These solutions need not be complicated, nor do they require changes in federal law for implementation. If reforms are to be fair to all customers and companies, both rural and urban, regardless of technologies utilized or services provided, several basic principles must be embraced by the Commission and state commissions. These principles are enumerated below:

- *Intercarrier compensation is inextricably linked to universal service*. The resolution of the intercarrier compensation issue will make or break universal service, as the nation has known it. Improper intercarrier compensation decisions will lead to uncontrolled growth

[2] *See, e.g.*, "Phone Industry Faces Upheaval as Ways of Calling Change Fast," The Wall Street Journal, August 25, 2004, p.1.

in an already ballooning universal service fund and may eventually result in insufficient funding for rural areas should more-stringent caps become necessary to limit fund growth.

- *Intercarrier compensation solutions must be balanced*. Balance requires cooperation between the jurisdictions and resolution of the cost-recovery inequities existing among states. The solution should be equitable for consumers, retail service providers and network facility providers.
- *Intercarrier compensation solutions must incorporate proper decisions for the IP environment*. Both in the short term and long term, intercarrier compensation reforms must recognize that IP will slowly replace circuit-switched technology. The advent of this new technology does not eliminate the need for sufficient intercarrier compensation, stable universal service systems and consumer protection. In fact, quite the opposite is true. Specifically, infrastructure-based universal service support, cost-based IP intercarrier compensation, constraints on dominant carriers' market power and regulatory consistency for *all* entities providing the same functionality are imperative.

If the Commission adopts a solution such as the FACTS Plan comporting with these principles, the renewed stability in intercarrier compensation will help ensure the provision of quality services, both basic and advanced, to all customers. Prior to describing the FACTS Plan, an in-depth assessment of the problems besetting the current intercarrier compensation system is appropriate to properly frame the issues.

A. The Current Intercarrier Compensation System Encourages Arbitrage and Bypass.

New competitors and technologies have transformed the long-distance market and disrupted traditional compensation regimes for some time. In retrospect, this disruption should have been quite predictable. Traditional long-distance companies have faced fierce price competition from wireless service providers for several years, and now they face similar competition from Voice over Internet Protocol ("VoIP") providers. This pricing pressure has resulted in the deteriorating financial position of interexchange carriers ("IXCs") and tariff violations to avoid higher-priced access charges.

Unfortunately, competition has not occurred on a level playing field. IXCs, who pay originating and terminating access charges at higher rates, are being economically disadvantaged. This situation developed because past regulatory decisions failed to maintain competitive neutrality by not subjecting wireless and IP carriers to the same compensation structures. These past regulatory decisions not only disadvantaged IXCs relative to competing providers, but also harmed the incumbent local exchange carriers ("ILECs"), which have struggled to maintain reasonable compensation for use of their networks.

The differing compensation rates and regulatory obligations of IXCs versus wireless carriers place IXCs at a competitive disadvantage. These differences are neither technologically nor competitively neutral. Wireless carriers are obligated to pay reciprocal compensation[3] for terminating traffic within the Major Trading Area ("MTA"), which is the wireless carrier's local calling area. In many cases, state arbitration outcomes resulted in reciprocal compensation rates

[3] 47 C.F.R. § 51.701.

based on forward-looking costs, which are frequently lower than access charges.[4] These lower rates paid by wireless carriers are further offset by reciprocal compensation received from carriers with whom wireless carriers exchange traffic. In addition, the time required to arbitrate a decision often left significant periods of time when no compensation was paid. As a result, wireless carriers pay for transport and termination at markedly lower rates than existing access charges for the very same network functionality.

VoIP providers, such as Vonage, have even greater cost advantages, since they incur no intercarrier compensation cost to initiate a call, even though they use and benefit from the LEC's network. Depending on termination arrangements, VoIP providers may or may not pay access or reciprocal compensation to terminate their calls. VoIP providers also use ISPs' routing functionality at no cost to originate and terminate calls. By pursuing a strategy focused on avoiding contribution to network infrastructure costs, VoIP providers have gained a significant cost advantage over both wireless and traditional IXCs. If IP continues to be exempted from intercarrier compensation or universal service obligations, the existing rate inequities among service providers will only increase in magnitude and will further destabilize the industry.

The crux of the problem is that different carriers pay different intercarrier compensation rates to the LEC, or no compensation at all, for the same interconnection services – origination, transport and termination of calls on the PSTN. Reciprocal compensation rates associated with these transport and termination services vary significantly from LEC to LEC and are generally lower than access rates. Even access rates vary significantly because interstate access rates have

[4] *See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, and *Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, CC Docket No. 95-185, First Report and Order, FCC 96-325 (*"Local Competition Order"*) (rel. Aug. 8, 1996) at ¶ 1056.

fallen dramatically over the years. The most-recent reductions came in the Commission's separate orders reforming access for price cap and rate-of-return carriers.[5] Over the same period of time, there has been relatively little downward movement of intrastate access rates in most states. For example, a recent survey by the National Telecommunications Cooperative Association ("NTCA") compared interstate and intrastate access rates among rural carriers in 25 states. In the majority of states, intrastate rates were higher than interstate rates – often significantly so. Among responding companies, the average intrastate rate was almost seven cents per minute, while interstate rates averaged approximately three cents.[6]

The IXCs, experiencing increased pressure on their bottom lines, have been motivated to seek the lowest termination rates through any means possible. To avoid higher intrastate access rates, some of these companies have routed traffic across state or international borders, even though the end-user customers are located within the same state. Also, IXCs intentionally have overstated the percent interstate usage factors for terminating traffic in an attempt to lower cost. Some offending companies have been caught, but many others go undetected. Absent stringent enforcement of tariff provisions, such "least-cost routing" methods, as they have generously been

[5] *See Access Charge Reform*, CC Docket No. 96-262; *Price Cap Performance Review for Local Exchange Carriers*, CC Docket No. 94-1; *Low-Volume Long Distance Users*, CC Docket No. 99-249; and *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45; Six Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, Eleventh Report and Order in CC Docket No. 96-45, FCC 00-193 ("*CALLS Order*") (rel. May 31,2000) and Multi-Association Group ("*MAG*") Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, CC Docket No. 00-256, *(State Joint Board on Universal Service)*, CC Docket No. 96-45, *(Access Charge Reform for Incumbent Local Exchange Carriers Subject to Rate-of-Return Regulation)*, CC Docket No. 98-77, and *(Prescribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers)*, CC Docket No. 98-166, Second Report and Order and Further Notice of Proposed Rulemaking in CC Docket No. 00-256, Fifteenth Report and Order in CC Docket No. 96-45, and Report and Order in CC Docket Nos. 98-77 and 98-166, FCC 01-304 ("*MAG Order*") (rel. Nov. 8, 2001).

[6] *See* NTCA ex parte presentation to the Commission, "Intercarrier Compensation and Rural Local Exchange Carriers," CC Docket 01-92, January 6, 2004, pp. 45-46.

described, will likely continue.[7] ARIC members believe it is more productive in the long run to focus on the root cause – elimination of the rate disparity that "entices" arbitrage – than it is to chase the perpetrators.

B. The Evolution of IP Services Is Clouding Future Intercarrier Compensation.

IP-based services are the next frontier for the transmission of information, as companies around the world seek to use IP technology to replace today's circuit-switching platforms. Given the industry's relentless drive to avoid costs through regulatory advantages, IP has become the vehicle of choice for carriers seeking a free ride on ILECs' networks. With traffic delivered to ISPs having been previously declared to be interstate traffic,[8] carriers have attempted to use that declaration to push for further advantages – namely forbearance from any intercarrier compensation charges, particularly access charges. Several filings before the Commission have sought such exemptions.[9]

The most-noteworthy attempt to avoid intercarrier compensation by using IP technology was AT&T's petition, which sought outright exemption from access charges for its purported

[7] Kevin Maney, Andrew Backover and Elliot Blair Smith, "Straightening Out the Story on Telecom's Routing Game," USA Today, August 26, 2003.

[8] *See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*; Intercarrier Compensation for ISP-Bound Traffic, Declaratory Ruling in CC Docket No. 96-98 and *Notice of Proposed Rulemaking* in CC Docket No. 99-68, 14 FCC Rcd 3689 (1999).

[9] *See Level 3 Communications, LLC, Petition for Forbearance Under 47 U.S.C. § 160(c) from Enforcement of 47 U.S.C. § 251(g), Rule 51.701(b)(1), and Rule 69.5(b)*, WC Docket No. 03-266, Petition for Forbearance Under 47 U.S.C. § 160(c) from Enforcement of 47 U.S.C. § 251(g), Rule 51.701(b)(1), and Rule 69.5(b) (filed Dec. 23, 2003) at pp. 5-6: *Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges*, WC Docket No. 02-361, Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges ("*AT&T Petition*") (filed Oct. 18, 2002) at pp. 1-2; and *Petition for Declaratory Ruling that Inflexion Communications' ExtendIP VoIP Service is Exempt from Access Charges*, WC Docket No. 04-52, Petition for Declaratory Ruling that Inflexion Communications' ExtendIP VoIP Service is Exempt from Access Charges (filed Feb. 27, 2004).

"VoIP" offering for calls that originate and/or terminate on the PSTN.[10] The petition was precedent-setting not only because of the carrier's prominence, but also because AT&T attempted to achieve a competitive advantage by completely avoiding access charges for traffic that was clearly fee-based interexchange telecommunications. The Commission's denial of the AT&T petition[11] should put an end to this type of "protocol manipulation" to avoid payment of legitimate access fees. The Commission stated:

> We clarify that AT&T's specific service is subject to interstate access charges. End users place calls using the same method 1+ dialing that they use for calls on AT&T's circuit-switched long-distance network. Customers of AT&T's specific service receive no enhanced functionality by using the service. AT&T obtains the same circuit-switched interstate access for its specific service as obtained by other interexchange carriers, and, therefore, AT&T's specific service imposes the same burdens on the local exchange as do circuit-switched interexchange calls. It is reasonable that AT&T pay the same interstate access charges as other interexchange carriers for the same termination of calls over the PSTN.[12]

Although the Commission has ruled on AT&T's "phone-to-phone" VoIP service and thus closed one arbitrage opportunity, it has yet to close other opportunities presented in "computer-to-phone" cases where the services and their providers clearly use the PSTN for either originating or terminating VoIP services but are attempting to avoid paying for that use.

In addition to cost avoidance tactics through arbitrage, some carriers have attempted to game the compensation system in order to exact reciprocal compensation for ISP-bound traffic. Clearly, payment of reciprocal compensation is wrong because this traffic is exchange access; however, because of the lack of clarity on the classification of ISPs and ISP-bound traffic, this

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[10] *See AT&T Petition* at pp. 1-2.

[11] *See Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges*, WC Docket No. 02-361, Order , FCC 04-97 (*"AT&T VoIP Order"*) (rel. Apr. 21, 2004).

[12] *Id*. at ¶ 15.

gaming continues. If this issue is resolved properly, the arbitrage opportunity will be eliminated and there will be equivalent treatment for all telecommunications traffic, including dial-up and broadband Internet traffic.

Meanwhile, the circuit-switched network inevitably will evolve to a packet-based IP network, which will cause a fundamental change in the telecommunications market and its cost structure. As the IP market evolves, IXCs will purchase fewer switched-access services from Local Exchange Carriers ("LECs"), while ISPs will purchase more wholesale broadband and IP network services from the LECs. This evolution means that the LEC must recover network costs from the ISP, which then in turn will recover its costs, including Internet backbone costs, from end users. Unfortunately, the charges that can reasonably be recovered from ISPs or other IP retail service providers will likely be insufficient to sustain broadband network infrastructure, particularly in high-cost rural areas.

Given this fundamental structural evolution in the market, the access charge payments comprising a large portion of a rural ILEC's revenue stream today ultimately must be replaced with a compensation structure more appropriate for the IP environment. Intercarrier compensation must evolve to reflect IP network utilization, and universal service support must be drastically modified. Since wireline infrastructure is essential to the development of broadband IP in rural areas, a support system based on infrastructure costs must be instituted. This system must secure adequate support revenue streams so wireline carriers can justify the investment to build and maintain the network necessary to support broadband. Yet current changes to universal service support have been aimed at limiting existing support, not addressing universal service needs in an IP environment.

IV. A NEAR "ZERO-COMPENSATION" MECHANISM SENDS INAPPROPRIATE MARKET SIGNALS FOR USE OF AND INVESTMENT IN THE PUBLIC SWITCHED TELEPHONE NETWORK.

Some industry participants and policymakers have advocated a "zero-compensation" scheme, more commonly known as bill-and-keep, as a means of fixing the intercarrier compensation quagmire. In fact, the plan recently announced by the ICF – the industry group that lost a majority of its members, both rural and non-rural, over the months preceding its announcement – proposes bill-and-keep for non-rural carriers serving most of the nation's consumers and a terminating transport rate of only $0.0095 per minute for rural carriers.[13] While bill-and-keep is perhaps appealing because of its simplicity (billing nothing for network utilization admittedly is less complicated), such a result is fundamentally flawed, legally unjustifiable and ultimately devastating to the nation's universal service goals.

A. <u>The Bill-and-Keep Rationale in the Commission's Initial Notice Is Dangerously Flawed.</u>

In its initial Notice of Proposed Rulemaking, the Commission introduced a concept known as Central Office Bill-and-Keep ("COBAK") as a basis for its proposed recommendation to address the industry's intercarrier compensation problems.[14] Under COBAK, companies would recover network costs primarily from their end-user customers, rather than from other carriers. Companies "bill" customers directly to recover costs, and "keep" the revenues — thus

[13] The ICF plan also allows the connecting carrier to buy dedicated transport from rural carriers instead of switched transport. *See* ICF's ex parte presentation to the Commission, "Intercarrier Compensation and Universal Service Reform Plan," CC Docket 01-92, August 13, 2004, p. 11.

[14] *See Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, Notice of Proposed Rulemaking, FCC 01-132 (*"ICC NPRM"*) (rel. Apr. 7, 2001) at ¶¶ 23-24.

the name "bill-and-keep." Interested parties filed wide-ranging comments on the COBAK proposal, with extensive criticism of the plan's impact on rural customers and carriers. No consensus emerged from the industry and the Commission has not acted on the Rulemaking. During the time since the Commission's notice on unified intercarrier compensation was issued, intercarrier compensation problems have worsened, prompting industry groups to devise their own solutions.

Following this flawed bill-and-keep concept, the original ICF group – primarily consisting of the Regional Bell Operating Companies ("RBOCs"), wireless carriers and IXCs – commenced meeting in 2003 with the stated goal of re-pricing intercarrier compensation at zero, or as close to zero, as possible. The IXCs and now the RBOCs, to an increasing degree, are major payers of access; therefore, the lowering of access charges would directly improve these companies' cash flows. As payers of both access and reciprocal compensation, wireless companies would also be beneficiaries of bill-and-keep and thus were motivated by the ICF's agenda. Not only would wireless carriers avoid charges for LEC network use, but also they could potentially receive additional universal service funding from the conversion of intercarrier compensation-related costs into portable support. The pro bill-and-keep motivation of several major industry segments is undeniably self-serving.

Although a majority of ICF companies ultimately departed the group this year, the nine remaining members produced their "edge-based"[15] bill-and-keep plan in late summer. Their plan primarily relies on bill-and-keep, but includes a significant departure from "pure" bill-and-keep in that companies providing "transiting" services would be able to extract tariffed fees from

[15] Under the ICF Plan, carriers would be responsible for delivering traffic to defined network boundaries or "edges." *See* ICF's ex parte presentation to the Commission, "Intercarrier Compensation and Universal Service Reform Plan," CC Docket 01-92, August 13, 2004, p. 24.

carriers who use these services.[16] Since this newly defined "transiting" service is simply a reincarnation of the existing access service known as "tandem switching" provided by tandem owners (usually RBOCs), this transiting scheme represents a confusing and inconsistent departure from bill-and-keep. The inclusion of such transiting charges in the plan is itself recognition by the ICF that intercarrier compensation is necessary to provide sufficient cost recovery for carriers that operate tandem switches. Yet these transiting intercarrier payments are not characterized in the ICF plan as intercarrier compensation, even though the services are exactly the same as those provided and paid for by carriers today.

B. Bill-and-Keep Approaches Are Fundamentally Wrong and Based on Unsound Policy.

In addition to the ICF, other industry groups, including ARIC, have been working to develop new intercarrier compensation plans. These other groups intend to cure the industry's intercarrier compensation problems without moving to the extreme of a COBAK-type solution. ARIC believes that not only would COBAK be a significant financial hardship for rural ILECs, and more importantly their end-user customers, but also it is fundamentally flawed from an economic standpoint for the following reasons:

- The presumption of "mutual and equal benefit" to both parties to a call, which is the theoretical basis for COBAK,[17] is inaccurate. The unequal benefit between call participants is particularly evident with telemarketing calls and human-to-computer connections, where the calling party clearly has a greater benefit than the call recipient.

[16] *Id*. at p. 16.

[17] *See ICC NPRM* at ¶ 23.

- Bill-and-keep is inefficient economically because it would eliminate an entire class of mutually beneficial transactions between IXCs and wholesale LECs. For instance, the IXC would be displaced in its market role of providing end-to-end long-distance service, as LECs are forced to provide retail long-distance service for segments of the call. Certainly bill-and-keep also would require significant changes in federal and state laws, as well as cause massive industry chaos. Another even-more-destructive and unsound economic result of this proposal is that the IXC, or its customer, receives the benefit of the LEC's network without payment to the local carrier for the use of that network. Under bill-and-keep, an IXC or other carrier could force a LEC to incur unbounded and inefficient network service costs without reimbursement, while the financial gain goes solely to the IXC or other carrier.
- A bill-and-keep solution purportedly attempts to correct current arbitrage problems, but in fact creates new ones. Bill-and-keep will provide economic incentives for end-users to masquerade as carriers to avoid paying legitimate local charges. In addition, customers will likely substitute free switched access for special access service.

In addition to the unsound economic reasoning behind bill-and-keep, a foundation upon which rural LECs are required to design and build their networks – to provide sufficient facilities to transport and terminate other carriers' traffic – will crumble, if cost-based intercarrier compensation is replaced by unsustainable universal service support or excessive end-user rates.

C. Bill-and-Keep Legally Cannot Be Mandated by the Commission.

Beyond bill-and-keep's lack of economic rationale, under existing law the Commission cannot mandate such a program.

1. Mandatory Bill-and-Keep is Inapplicable to Reciprocal Compensation Arrangements.

Section 252(d) of the Communications Act of 1934, as amended[18] (the "Act"), establishes pricing standards for local interconnection arrangements, and provides:

> (2) Charges for transport and termination of traffic:
>
> (A) In [GENERAL] – For the purposes of compliance by an incumbent local exchange carrier with section 251(b)(5), a State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless –
>
> (i) such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier; and
>
> (ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.[19]

The statutory framework is clear: (1) acceptable reciprocal compensation arrangements must provide for "mutual and reciprocal recovery of costs" that are based upon a "reasonable approximation" of the additional costs of termination; and (2) state commissions are vested with the authority to approve reciprocal compensation arrangements.[20]

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[18] 47 U.S.C. § 151 et seq.

[19] 47 U.S.C. § 252(d)(2)(A).

[20] *See also* 47 U.S.C. §§ 252(a) – (c) (establishing the state approval and arbitration process) and § 252(e)(5) (precluding Commission action unless the state fails to act).

The Commission's proposed mandate of a bill-and-keep compensation mechanism for reciprocal compensation[21] is inconsistent with the requirements of the Act. By definition, bill-and-keep can only provide for the "mutual and reciprocal recovery" of costs as required by Section 252(d)(2)(A)(i) in specific instances where traffic flowing between carriers is roughly balanced. There is no basis for a finding that traffic between and among all carriers exchanging traffic is balanced. The arbitrary imposition of a bill-and-keep compensation mechanism under such circumstances precludes cost recovery for transport and termination services provided to the originating carrier by the terminating carrier. Mandated bill-and-keep cannot be deemed "just and reasonable," and, accordingly, is contrary to the Act.

Advocates of bill-and-keep also incorrectly assert that the Act's allowance of a bill-and-keep mechanism[22] constitutes sufficient authority upon which to base mandatory imposition of bill-and-keep by the Commission. This reading is contrary to the plain language of the statute, which preserves the primary role of the states in approving reciprocal compensation arrangements, including, where appropriate, offsets or bill-and-keep arrangements. The statutory reference to bill-and-keep is merely permission to the states to accept mutually agreed-upon carrier arrangements as just and reasonable, not an invitation to the Commission to mandate that arrangement.

2. Bill-and-Keep Is Inapplicable to Interexchange Traffic.

Application of a bill-and-keep regime perhaps is even more problematic when applied to

[21] *See ICC NPRM* at ¶¶ 37-96.

[22] 47 U.S.C. § 252(d)(2)(B). "This paragraph shall not be construed—(i) to preclude arrangements that afford the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep arrangements)."

interexchange traffic. With local competition, there is, under most circumstances, at least some exchange of traffic between local carriers, even if that exchange traffic is unbalanced. In the context of IXCs utilizing the facilities of local exchange providers, however, there is no offsetting utilization of the interexchange carriers' networks by LECs. Adoption of a bill-and-keep compensation mechanism for interexchange traffic would not only send uneconomic and inefficient market signals, it also would, in the context of interstate interexchange traffic, be directly contrary to *Smith v. Illinois Bell Telephone Co.*[23] Where facilities are utilized to provide both intrastate and interstate services, the court stated that costs must be allocated between the federal and state jurisdiction:

> The separation of the intrastate and interstate property, revenues and expenses . . . is important not simply as a theoretical allocation . . . It is essential to the appropriate recognition of the competent governmental authority in each field of regulation.[24]

Mandating bill-and-keep for interoffice traffic effectively establishes a cost allocation of zero for both the federal and state jurisdictions, contrary to both fact and precedent. The Commission may not ignore its statutory boundaries, as highlighted in *Crocket Telephone Co. v. FCC*: "*Smith v. Illinois Bell* recognized a constitutional necessity for distinguishing between the jurisdiction of interstate and intrastate regulators."[25]

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[23] *Smith v. Illinois Bell Telephone Co.*, 282 U.S. 133 (1930).

[24] *Id*. at 149.

[25] *Crockett Telephone Co. v. FCC*, 963 F.2d 1564, 1571 (D.C. Cir. 1992).

3. Bill-and-Keep Compromises Universal Service.

Failure to allocate joint and common costs in an appropriate manner is in direct violation of the Act's universal service provisions. Section 254(k) of the Act provides, in pertinent part:

> The Commission, with respect to interstate services, and the States, with respect to intrastate services, shall establish any necessary cost allocation rules, accounting safeguards, and guidelines to ensure that services included in the definition of universal service bear no more than a reasonable share of the joint and common costs of facilities used to provide those services.[26]

All rational cost-based service-pricing algorithms allow for a reasonable allocation of common costs. In the case of intercarrier compensation this would include allocation of costs shared by multiple services, but would not include any assignment of loop costs. If such a vehicle for assignment of common costs to intercarrier compensation is not present, then the safeguards to protect over-allocation to universal service implicitly are violated. As noted above, establishment of a bill-and-keep regime artificially establishes an effective cost allocation of zero for network facilities utilized by intercarrier services.

If recovery of joint and common costs from interstate and intrastate intercarrier compensation is foreclosed, the universal service fund supporting local ratepayers will be overburdened with an unreasonable share of joint and common costs because intercarrier costs will be assigned to support funds. Consequently, customer surcharges to fund universal service would artificially and illegally subsidize the competitive services of the IXCs, wireless carriers and Competitive Local Exchange Carriers ("CLEC") by shielding them from responsibility for their own costs. In answer to the Commission's question of whether intercarrier compensation

[26] 47 U.S.C. § 254(k).

mechanisms can effectively serve multiple goals,[27] ARIC submits that the Commission cannot abandon its explicit statutory duty to allocate costs in a manner designed to preserve and promote universal service.

D. Balanced Compensation Is Necessary to Not Overburden End-Users or Universal Service.

Any solution to the intercarrier compensation rate arbitrage problem must level the playing field between IXCs and other service providers, if indeed there is to be a future for IXCs. That solution, however, cannot be accomplished through over-burdening local ratepayers or over-burdening existing or new universal service mechanisms.

1. Intercarrier Compensation Rates Should Be Equalized.

It is wrong and overly simplistic to attribute the destabilization of the telecommunications industry solely to higher-than-sustainable intercarrier compensation rates. What actually caused the mounting problems, as discussed earlier, is the unlevel playing field caused by the differing intercarrier compensation rates paid by the various providers of long-distance services – IXCs, wireless carriers and VoIP providers. While small rate differentials can be sustained in the short term, over the long term the rates among these carriers and between jurisdictions must be equalized. The *same* rate for all traffic, however, should not mean a *zero* rate, or even close to it, in high-cost areas. Additionally, a too-low, arbitrary rate is especially problematic in rural areas with few end-user customers from whom to recover high network costs.

IXCs, wireless carriers and VoIP providers all utilize LEC facilities to successfully originate and/or terminate their customer calls. These carriers would not be able to serve their

[27] *See ICC NPRM* at ¶¶ 31-33.

retail customers were it not for the LECs' facilities. Service providers that use LEC facilities to serve their customers should pay a fair, but equalized rate that recognizes the cost differences in LEC facilities. Establishing an equalized rate generally means that access rates, particularly intrastate rates, will be decreasing and that the revenue shortfall must be made up elsewhere.

2. Raising SLC Caps Will Worsen the Differential between Rural and Non-rural Rates.

One idea posed by some industry segments, such as the ICF, is to increase the current caps on the federal SLC. The SLC caps are currently $6.50 for residential and single-line business customers and $9.20 for multi-line business customers. The sampling of non-rural SLC rates in the Appendix shows that these rates are below the caps.[28] Since rural companies are the only ILECs charging SLCs at the current caps, any increase in the existing SLC caps would only raise rural SLCs to even higher capped levels for those companies and would mean that rural customers would often pay much higher SLCs than their urban neighbors. Obviously the current tension between varying SLC levels and the statutory goal of comparable rates would only be exacerbated.[29]

Even at current SLC caps, a significant difference exists between rural and non-rural SLCs that needs to be addressed if meaningful comparability is to be achieved. The SLC rates charged by non-rural ILECs, shown in Figures 1 and 3, are much higher than the SLC rates charged by rural ILECs, shown in Figures 2 and 4. One way to equalize SLCs, while contributing to recovery of the revenue shortfall created by moving to a unitary intercarrier compensation rate, would be to increase the SLCs charged by non-rural ILECs. Because

[28] *See* Appendix A – 2004 Price Cap SLC Rates by State.

[29] *See* 47 U.S.C. § 254 (b)(3).

non-rural ILECs already bill SLCs at the maximum level allowed under the Coalition for Affordable Local and Long-Distance Service ("CALLS") plan, SLC cost recovery would need to be redefined. Rather than limiting SLCs to recovery of only non-traffic sensitive costs, it would be desirable if SLC rules were redefined to allow recovery of both non-traffic-sensitive and traffic-sensitive costs.

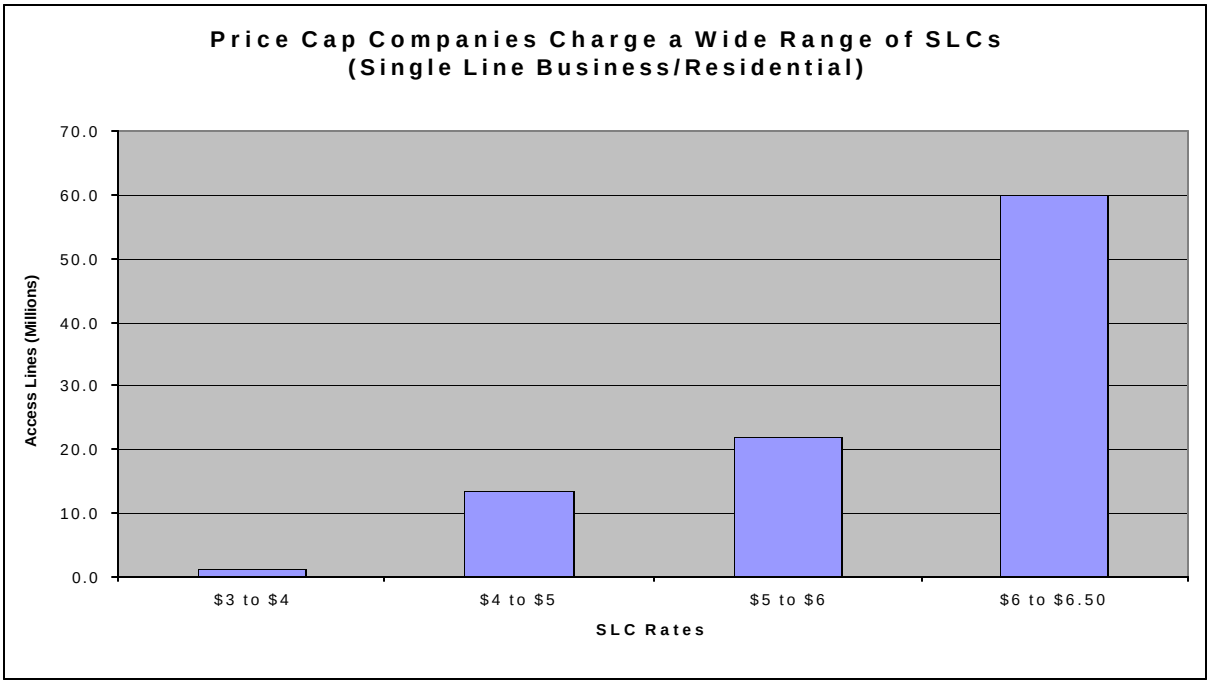

Fig. 1. Number of Non-rural Access Lines at Various Single Line Business/Residential SLC Rates

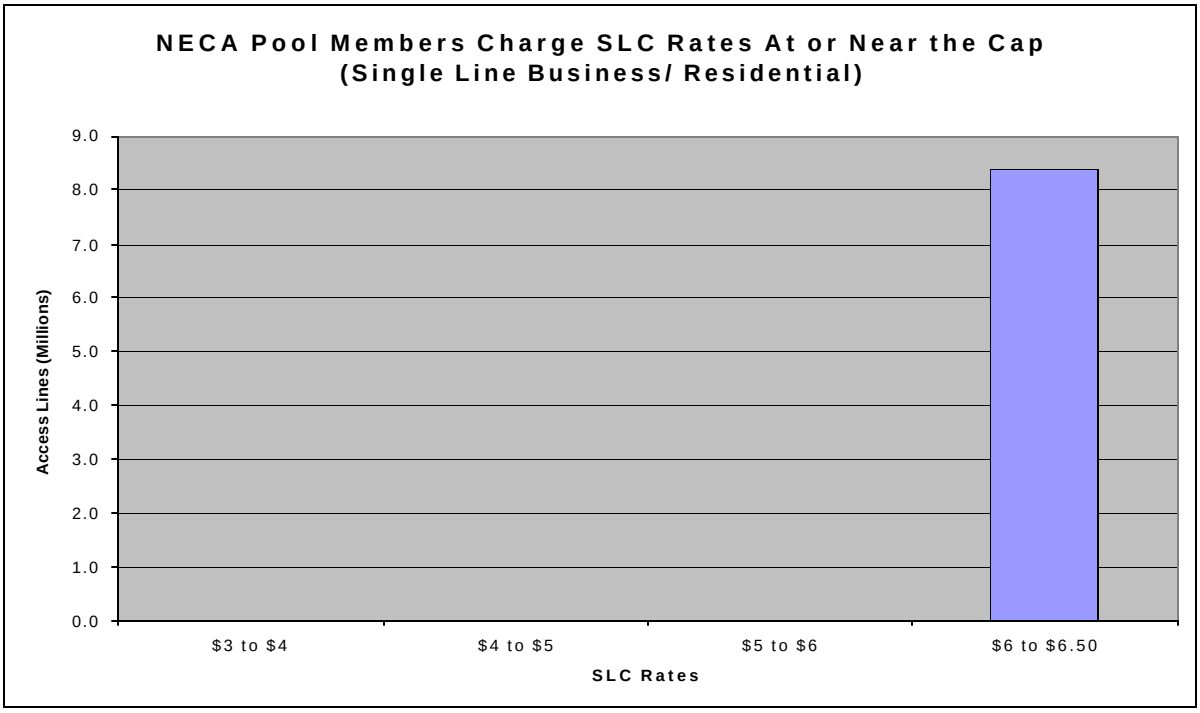

Fig. 2. Number of NECA Pool Access Lines at Various Single Line Business/Residential SLC Rates

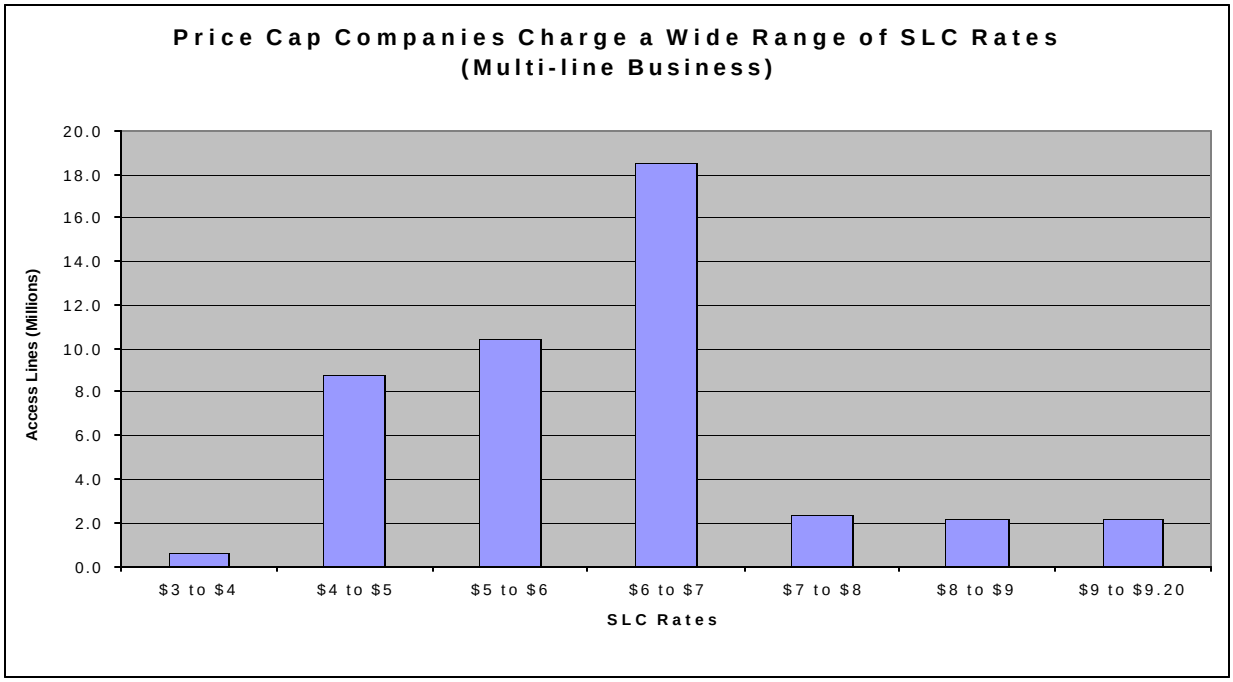

Fig. 3. Number of Non-Rural Access Lines at Various Multi-line Business SLC Rates

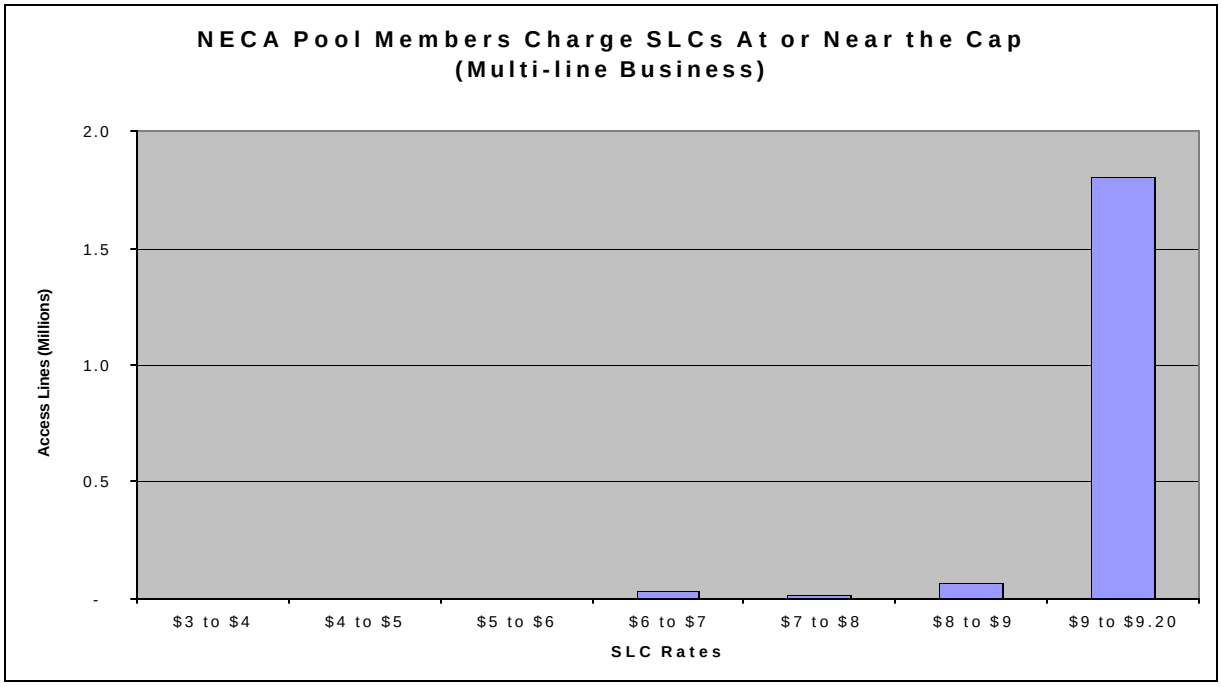

Fig. 4. Number of NECA Pool Access Lines at Various Multi-line Business SLC Rates

By changing the basis of SLC recovery, non-rural carriers then could recover traffic-sensitive costs in SLCs, instead of through intercarrier compensation rates or universal service funding. For the lowest-cost ILECs, SLC rates that allow traffic-sensitive cost recovery would offset a portion of those ILECs' remaining intercarrier compensation costs, therefore providing a mechanism for these ILECs to reduce intercarrier compensation rates. Coincident with this change, rural ILEC SLCs could be set at the same level as the redefined SLCs for non-rural ILECs, thus achieving real comparability between rural and urban rate levels, as the Act requires.

Two additional parts of a balanced intercarrier compensation solution must be to ensure that rural local rate levels are reasonably comparable across states and that rural rates are reasonably comparable to urban rates. For some companies that have already rebalanced local rates, there may not be much more revenue to be derived from local rate increases, if comparable rates between rural and urban customers are to be maintained. For many companies (most of them rural but including some non-rural), local rates have remained low while intrastate access rates have remained high. Increasing local rates that are substantially below the national average would reduce universal support funding requirements and would ensure that customers paying high local rates are not subsidizing those who pay low local rates.

Because of low customer density in rural areas, it is unlikely that local rate increases will offset the intercarrier compensation reductions that will occur through movement to a unitary rate level. Consequently, another revenue source is required – universal service. Because this revenue shortfall largely will be associated with state access reductions, oversight by state regulators of the resultant universal service mechanism is appropriate. This approach would balance all revenue sources – intercarrier compensation, universal service funding, SLCs and

local rates – rather than creating an unrealistic burden on existing universal service funding mechanisms.

An unbalanced approach to intercarrier compensation reform, such as moving significant cost recovery to only universal service support, is unsustainable. Over-reliance on the federal Universal Service Fund ("USF") will increase a rural ILEC's risk associated with new investment, because revenues related to wireline investments are portable to wireless carriers. Consequently, wireline companies will curtail investments, which eventually will jeopardize national security and public safety in many high-cost areas. And yet additional USF is the sole source most widely identified by the ICF and other reform efforts for recovering revenue shortfall due to intercarrier compensation reductions.[30] The ICF's proposed plan, for instance, moves the shortfall from large reductions in non-rural and rural LEC intercarrier compensation rates into separate funds, with the non-rural fund being portable and the rural fund being temporarily non-portable.[31]

Over-reliance on USF for cost recovery is incompatible with the growing demands on the existing fund. Fund growth has been significant due to large increases in support requirements resulting from access charge reductions in the CALLS[32] and Multi-Association Group ("MAG") Orders,[33] combined with demands of additional wireless carriers receiving Eligible

[30] *See, e.g.*, Expanded Portland Group's ex parte presentation to the Commission, "Capacity-based Plan for Intercarrier Compensation," CC Docket 01-92, July 22, 2004, p. 8.

[31] *See* ICF's ex parte presentation to the Commission, "Intercarrier Compensation and Universal Service Reform Plan," CC Docket 01-92, August 13, 2004, p. 16.

[32] *See CALLS Order* at ¶¶ 195-232.

[33] *See MAG Order* at ¶¶ 128-141.

Telecommunications Carrier ("ETC") status.[34] Indeed, to curb the fund's growth, the Joint Board on Universal Service proposed three methods for limiting USF support to a primary line per customer,[35] and the Commission has received more wide-ranging comments and reply comments on those recommendations.

Beyond expanding the federal USF beyond its current levels, there is the fundamental question of fairness in labeling traffic-sensitive costs – which are clearly associated with providing carriers with originating, terminating and transport service – as subsidy and then shifting these costs into USF. Whether portable or not, these costs are not appropriately recovered in USF and will only serve to further grow a fund already considered by many to be unacceptably large. Any ploy to utilize USF as the primary recovery mechanism to replace all, or nearly all, intercarrier compensation revenues must be rejected. If not, it will jeopardize the nation's universal service policies and run afoul of the Commission's long-standing principle of recovering costs in the manner incurred.[36]

E. Intercarrier Compensation Rates Should Be Usage-Based.

Beyond the controversy over bill-and-keep as a rational intercarrier compensation resolution, another disagreement exists over the appropriate structure for switched-service rates. Consistent with long-held cost-causation principles, ARIC members strongly recommend that

[34] *See Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Recommended Decision, FCC 04J-1 (*"Recommended Decision"*) (rel. Feb. 27, 2004) at ¶ 67.

[35] *Id.* at ¶¶ 73-76.

[36] *See Access Charge Reform*, CC Docket No. 96-262, *Price Cap Performance Review for Local Exchange Carriers*, CC Docket No. 94-1, *Transport Rate Structure and Pricing*, CC Docket No. 91-213, and *End User Common Line Charges*, CC Docket No. 95-72, First Report and Order, FCC 97-158 (rel. May 16, 1997) at ¶¶ 36-42, and *MAG Order* at ¶ 17.

the intercarrier compensation rate structure be usage-based. There is no plausible rationale for ceasing to utilize minutes of use as the standard for setting intercarrier compensation rates.

1. The Proclaimed Decline in Minutes of Use Is Not Accurate.

Recently, some in the industry have asserted that a decline in switched-access traffic is, in and of itself, a reason to move to another charging structure, such as capacity. Yet no rate structure can stop the migration from circuit-switching to packet-switching. Even if a capacity-based method were adopted, circuit-switched demand will decrease and rates will change accordingly.

Nevertheless, there is no evidence that total network minutes are in decline. In fact for many LECs, overall *network* minutes are actually remaining fairly steady or are increasing. While originating access minutes have been shifting to wireless carriers and may slowly start moving to VoIP providers (in part because of the artificial cost advantages those services have over traditional long-distance), total terminating minutes are still increasing for many rural companies. When an intercarrier compensation regime is adopted that requires all service providers to pay the same rate for network facilities utilized, and if *all* minutes that utilize the LEC's networks are accounted for and billed, revenues for such services will recover an appropriate portion of the overall cost.

2. Minutes Are the Appropriate Reflection of Cost Causation.

Another issue to be decided is how costs are properly recovered to reflect cost causation. Despite arguments to the contrary, the Commission has long held, and correctly so, that local

switching and transport services are traffic-sensitive.[37] Therefore, the Commission's own cost-causation conclusions support continuation of minutes as the methodology for cost recovery. There are several other reasons for maintaining per-minute rates. First, from a network-engineering standpoint, peak traffic load drives costs in both a circuit-switched and a packet-switched network. Regardless of the technology used, switching and transport facilities must be capable of handling the total volume of minutes during the busiest time of overall network usage for *all* carriers utilizing a company's network. Second, usage-based structures are the most accurate and rational way of allocating costs among network users, in that a carrier pays the LEC for only those minutes that its customers utilize, so carriers do not pay for underutilized capacity. Third, a usage-based structure is efficient, since carriers are discouraged from requiring or requesting unneeded or underutilized facilities from LECs. Finally, usage-based rates remain prevalent in many retail rate structures, most notably those of IXCs and wireless carriers. Wireless carriers offer bundles of minutes for a fixed price, but frequently minutes over the initial bundle are charged on a per-minute basis.

An ill-conceived alternative to usage-sensitive charges is to bill carriers on a flat-rate capacity basis. While seemingly simple, such a capacity-based structure is flawed for the following reasons:

- Capacity-based rates fail to accommodate the use of common trunks, which are widespread in rural ILEC intercarrier networks.
- Under a capacity-based regime, the common trunks' network capacity will be billed to the connecting provider, which is usually an RBOC. As a consequence, the connecting provider will be forced into an aggregator role for all carriers utilizing the common trunk

[37] *See Local Competition Order* at ¶ 810 and ¶ 822.

groups. To recover its costs, the connecting provider will likely bill carriers utilizing the common trunks on a per-minute basis. For the services provided on the rural LEC's network, the connecting provider would thereby acquire pricing control from the LEC.

- The "additional cost" standard in the Telecommunications Act is on a per-call basis, which necessarily converts to per-minute charges.[38] Charging reciprocal compensation rates on any other basis, such as capacity, would violate the Act.
- Capacity structures fail to recognize varying network configurations in existence today, such as centralized equal access.
- Capacity structures confuse the compensation obligations between retail and wholesale providers. Under a capacity structure, retail providers are not necessarily responsible for purchasing the underlying wholesale services in order to serve the retail customer. Instead, compensation responsibilities are assigned to the aggregator, which may not serve the retail customer.

In summary, the most-efficient, cost-causative and equitable way to continue intercarrier cost recovery is to do so on a usage-sensitive, per-minute basis. Even the ICF membership has recognized the merit of usage-based cost recovery by maintaining per-minute charges for transiting and rural terminating transport.[39] Usage-sensitive, cost-based intercarrier compensation rates should remain an integral part of the ultimate intercarrier compensation solution adopted by federal and state regulators.

[38] *See* 47 U.S.C. § 252(d)(2)(A).

[39] *See* ICF's ex parte presentation to the Commission, "Intercarrier Compensation and Universal Service Reform Plan." CC Docket 01-92, August 13, 2004, pp. 21-23.

V. THE FACTS PLAN REPRESENTS A FAIR AND BALANCED SOLUTION FOR ALL SEGMENTS OF THE TELECOMMUNICATIONS INDUSTRY AND, MORE IMPORTANTLY, FOR ALL CONSUMERS.

The FACTS Plan is a straightforward, comprehensive attempt to reform intercarrier compensation, benefiting the industry, policymakers and, most importantly, consumers. The Plan proposes to accomplish this objective by addressing all aspects of the telecommunications industry's current cost recovery, while reducing the existing inequities between companies, so that customers in all parts of the country – rural and urban – receive comparable, affordable service. The Plan introduces nationwide rebalancing of local service rates, unified SLCs between urban and rural customers, unified intercarrier compensation rates for all services and a supplemental, state-established support fund jointly funded by federal and state sources. Companies would continue to recover their interstate revenue requirement and intrastate revenues for a transitional period of five years. This "hold-harmless" period will provide stability as Plan components are transitioned into place. The following sections describe in detail how the Plan would function for all companies – both rate of return and price cap.

A. Compensation Obligations Are Governed by the Principle of Retail Service Provider Pays.

Carrier-to-carrier compensation obligations under the Plan remain unchanged from today's system of Calling Party's Network Pays. ARIC has defined a more understandable term for this system – Retail Service Provider Pays ("RSPP") – which maintains and clarifies the relationships between retail and wholesale providers. By doing so, the Plan is logical,

economically sound, consistent with federal law, and continues compensation arrangements that will be appropriate after migration to a converged IP world.

1. RSPP Is Consistent with Existing Compensation Structures.

The Plan's intercarrier compensation structure adheres to an elementary tenet: When the network functionality of another carrier is used by the Retail Service Provider to provide retail service to its customers, the Retail Service Provider is obligated to pay appropriate compensation to the network carrier. RSPP is consistent with today's existing intercarrier compensation obligations for both access charges and reciprocal compensation. The following examples illustrate RSPP:

- An IXC must pay access to the LEC when the IXC's customer makes a long-distance call.
- An ISP must pay access to the LEC when the ISP purchases DSL service to create its retail IP transmission service.
- A wireless carrier must pay the LEC reciprocal compensation when its wireless customer calls a LEC's wireline customer.
- When a customer connected to the LEC's network calls a wireless phone, the intercarrier compensation obligations depend on how the call is routed. In some instances these calls are routed over direct local trunks to the wireless carrier. In this case, the LEC is the Retail Service Provider of the local call and the LEC owes the wireless carrier reciprocal compensation. In other instances, a wireline customer calls a wireless customer with a foreign exchange prefix using 1+ dialing. Such calls are routed to the wireline customer's presubscribed IXC, the Retail Service Provider for

the call. Thus, the IXC should owe the LEC and the wireless carrier[40] intercarrier compensation for this call.

In each of the aforementioned examples, the Retail Service Provider pays the underlying network provider for the functionality used. Similarly, under RSPP, costs for tandem services (known as "transiting services" in the ICF plan) are paid by the Retail Service Providers that utilize these services. Depending on the nature of the call, the Retail Service Provider could be an IXC, a wireless carrier or a LEC. Since the Plan unifies all intercarrier compensation rates, any traffic-sensitive costs associated with transiting would be incorporated into the rates paid by all Retail Service Providers using access services, as is done today.

Finally, the RSPP principle accommodates retail-wholesale relationships, both in today's circuit-switched environment as well as in the converged IP world. Just as there are Retail Service Providers and underlying wholesale network carriers in the circuit-switched world, such relationships will continue to exist in the IP world. In a converged broadband IP environment, the ISP, as the Retail Service Provider, will provide VoIP and other multimedia applications using transmission services purchased from wholesale network carriers.

2. The RSPP Structure Provides Numerous Benefits that Can Help Stabilize the Industry.

As well as retaining today's wholesale and retail relationships, the RSPP structure assures numerous other benefits to carriers. It is flexible – RSPP applies to both circuit-switched and packed-switched compensation relationships between the Retail Service Provider and the wholesale carrier. It also is rational – RSPP maintains a market structure between carriers that

[40] In most cases today, wireless carriers are billing their end users rather than IXCs for terminating traffic from IXCs.

has successfully worked for decades in the telecommunications industry. RSPP also is consistent with how non-regulated markets operate – providers of retail services purchase raw inputs from suppliers and incorporate those costs into the price of their retail services. Finally, RSPP is economically efficient – retail providers pay for only the network functionality required to serve their customers, while wholesale providers recover their costs via rates established through the processes in the Plan. The resulting cost-recovery predictability will send proper pricing signals, an attribute overwhelmingly lacking in today's marketplace.

A shift to a compensation framework other than RSPP would not only be legally and economically suspect, but also would send the entire industry into chaos and confusion. Certainly, any compensation system that proposes adoption of a structure other than RSPP will fail to provide predictability to either the retailer or the wholesaler. Ultimately, this instability hurts customers, particularly those in rural areas.

3. Billing Access to Long-Distance Retail Service Providers Is Appropriate.

IXCs and wireless providers provide retail long-distance service to their customers using the LEC's network; thus under RSPP, these carriers are responsible for compensating the LEC for that use. Compensation to the LEC is both necessary and appropriate because the LEC has no retail customer relationship for these services. IXCs must purchase wholesale service from the LEC to both terminate and originate its customers' calls. On the other hand, a wireless carrier only requires the LEC's network for termination of its customer's calls, since the wireless carrier's own network is used for originating calls. Thus, IXCs must pay the LEC for both originating and terminating usage, while the wireless carrier only needs to pay the LEC for terminating usage.

B. Unified Intercarrier Compensation Rates Provide Immediate Rate Relief.

The Plan proposes adoption of one intercarrier compensation rate per study area for all services and all jurisdictions – both access and reciprocal compensation. As a result, no matter which Retail Service Provider utilizes and benefits from a LEC's network, the same rate will be paid. Modified Part 69 Rules will specify how these unified rates will be determined. While each LEC's rates for these services will be unified, exchange access and reciprocal compensation will remain distinct services to conform to current law.

The unified rates will apply to traffic-sensitive elements, namely switching and transport, and will be established through two separate procedures. First, each rate-of-return company's per-minute rates initially will be set on a basis of traffic-sensitive, unseparated, embedded costs, rather than on costs separated between interstate and intrastate jurisdictions. Thus, while rates will be unified for all carriers using a particular LEC's network, cost differences between LECs necessitate different LEC rate levels. Second, the timeline, as well as the decision to potentially create another cost basis for intercarrier compensation, should be coordinated with the Joint Board's public notice requesting comments on how rural universal service costs should be determined in succession to the Rural Task Force's ("RTF") five-year plan.

1. State and Federal Regulators Both Review and Approve Unified Rate Tariffs.

The FACTS Plan proposes a structured process for establishing intercarrier compensation rate-setting rules that includes both the Commission and state commissions, consistent with the jurisdictional responsibilities of those bodies. To initiate the process of defining and developing unified rates, the Commission would request the Federal-State Joint Board on Separations to recommend a framework and rules for unified rate development. A critical informational

component to be considered by the Joint Board would be a submission of information and recommendations developed by a Joint Conference of state commission representatives.[41] The Joint Conference, which will gather and distill information on a state-by-state basis, will present this data to the Joint Board. The Commission would then act upon the entire record presented by the Joint Board.

The purpose of opening the process in this manner is to provide a unified, fact-finding forum, giving the states significant input to a record upon which they individually can make a reasoned determination to adopt the unified rate approach developed at the federal level. By way of the Joint Conference, states are incorporated into the process and become stakeholders at an early stage; therefore, they are invested in both the process and the outcome.

Once these rules are established through a Commission order, an individual LEC or the National Exchange Carrier Association ("NECA"), which will continue its ongoing rate-setting and pooling role for smaller ILECs, would annually[42] file tariffs with the Commission and state commission(s), as appropriate,[43] consistent with existing statute. To accommodate various cost levels, these tariffs will be banded, as is done today by NECA. After 15 days, the rates will go into effect as filed, unless the Commission or state commission acts to suspend the rates. If suspended, the rates would go into effect without a determination of legality, comparable to

[41] Organized pursuant to § 410(b) of the Act, this conference would operate much like the Joint Conference on Advanced Services.

[42] Alternately, LECs can file tariffs every other year, as available today under 47 C.F.R. § 61.39.

[43] A tariff would be filed for each state or territory in which the LEC does business.

today's tariff process at the Commission. The Commission and state commission(s) must then investigate rate issues and reach final decisions within 60 days of the filing.[44]

With the generally applicable facts having been determined in this unified process, the individual state and federal tariff reviews can be significantly streamlined, based on the record already established in the initial proceeding. By incorporating the findings through official notice procedures, individualized review can be focused on those state-specific issues that require additional consideration. Thus, both the initial proceedings and future proceedings, which may be required at either the federal or state level to review this cost-recovery mechanism, will benefit from the efficiencies derived from such an "umbrella" fact-finding framework.

2. Rate-of-Return Carriers Calculate Interoffice, Traffic-Sensitive, Unseparated, Embedded Cost Rates.

Initial intercarrier compensation rates for rate-of-return carriers will be calculated by dividing the appropriate interoffice, traffic-sensitive, unseparated, embedded costs by minutes that utilize a company's interoffice facilities, including both access and reciprocal compensation minutes.[45] The rate elements thus calculated will be consistent in structure with current interstate rate elements.

Transport rates for facilities and termination must be versatile enough to reflect the various interconnection arrangements a company has in effect. Specifically, transport rate elements will reflect Local Transport Restructure ("LTR") after the *MAG Order* and utilize all transport costs, including those represented by the Transport Interconnection Charge ("TIC")

[44] The joint resolution of discrepancies would be similar to the method used to resolve differences in depreciation rates.

[45] *See* Appendix B – Example Calculation of Interoffice Switching and Transport Rates.

prior to the *MAG Order*.[46] Since the TIC is properly classified as a traffic-sensitive cost, it should be allocated to other tandem-switched transport elements based on the revenue generated by those elements and removed from Interstate Common Line Support ("ICLS"). The size of the ICLS will be appropriately reduced, as these costs are recovered where they rightly should be – in traffic-sensitive rates.

Switching rates will be developed by first apportioning unseparated switching costs between traffic-sensitive and non-traffic sensitive. The traffic-sensitive, unseparated switching costs are then allocated between intraoffice and interoffice using frozen Dial Equipment Minute ("DEM") factors. The resulting interoffice costs are then divided by interoffice minutes of use to calculate the switching rate.

A more precise method of calculating the switching rate would be to first classify the switch assets as trunking, matrix, or line ports. Once classified, each of these assets would then be allocated between interoffice and intraoffice categories, according to the minutes attributed to each function.[47] This allocation method would require factors to divide switch costs into each function. Unfortunately, such data is not readily available. The Commission, as part of a NPRM on the proper cost basis for intercarrier compensation, could investigate obtaining such factors or individual companies can provide such factors in their calculation of traffic-sensitive, unseparated, embedded costs. With the advent of new technologies such as GR303, the Commission also may need to initiate an investigation into future switch architecture to

[46] *See Petition for Reconsideration of Plains Rural Independent Companies*, CC Dockets No. 00-256, 96-45, 98-77 and 98-166, filed Dec. 31, 2001.

[47] Line ports are non-traffic sensitive because there is one port per customer; thus line port costs would not be recovered in traffic-sensitive rates. Trunking would be assigned to interoffice since that part of the switch is dedicated to interoffice activity. The remaining switch function, the matrix, would then be apportioned using DEM minutes.

determine the proper apportionment procedures for switches without line ports. Other components of the Plan's proposed rate-setting methodology in this initial phase include the following:

- Costs associated with Local Switching Support ("LSS") that a company receives in USF support will be assigned to intraoffice, and thus will be removed from the costs utilized in establishing unified intercarrier compensation rates.
- Formulas based upon cost-companies' data are necessary in order to compute traffic-sensitive, unseparated, embedded rates for average schedule companies.
- Since rate-of-return carriers set SLC rates at the average price cap SLC rates, it is feasible that some traffic-sensitive costs for a low-cost, rate-of-return carrier could be recovered in its SLC rates. Should this occur, traffic-sensitive costs recovered through SLCs would be deducted from the costs used to calculate intercarrier compensation rates.

Rates developed under the Plan's methodology would apply both to access and reciprocal compensation and serve as a compliant methodology for the "additional cost" standard for reciprocal compensation pricing in the Telecommunications Act.[48] Since the denominator in the calculation of these initial intercarrier compensation rates will be interoffice minutes, the unified rate resulting from this methodology will provide immediate reductions to the highest rates, which usually are intrastate access rates. While achieving the goal of rate unification to greatly reduce arbitrage opportunities, this process will also achieve the goal of reducing rates that have long disadvantaged IXCs' competitive position relative to other retail providers.

[48] *See* 47 U.S.C. § 252(d)(2)(A).

3. Rate Structures also Will Be Unified under the FACTS Plan.

The Plan would eliminate jurisdictional discrepancies by setting unified rates and would simplify carrier access billing as well. Not only will interstate and intrastate rates be unified under the Plan, but also the structures will be unified to reflect the post-LTR access structure. For states not currently using LTR, direct trunks are billed by applying per-minute charges to the minutes that traverse these direct trunks. Once structures are unified, these direct-trunk transport per-minute charges would convert to flat-rated charges.

Consistent with the current interstate switched-access structure, the Plan's rate elements will be developed separately for both switching and transport. As noted previously, intercarrier compensation rates will be banded and rate elements will be designed to recover costs associated with various interconnection configurations. LTR transport rate elements will be broken down to include post-MAG mileage-sensitive and termination rates for both direct-trunked and tandem-switched transport.

4. Price Cap Rates Will Be Reset at the Lower of Current Price Cap or Embedded Rates.

Recognizing that price cap ILECs have not been utilizing embedded costs to establish their intercarrier compensation rates, the Plan would institute an alternate, similarly principled pricing mechanism for these ILECs' initial rate-setting. Each price cap ILEC would first calculate reinitiated price cap rates on an unseparated basis to be applied to all network minutes.[49] If the existing price cap rates are *higher* than the reinitiated rates, the unified intercarrier rates would be reset to the reinitiated price cap rates. If, however, the existing price

[49] This re-initiation of price cap rates should yield a result equivalent to a traffic-sensitive, unseparated, embedded cost rate.

cap rates are *lower*, then existing price cap rates would remain in place. The resulting rates under this approach will be applied to all intercarrier services, as is proposed for rate-of-return ILECs. Once rates are reset at new levels, the price cap indices will continue to be applied to the revised rates.

This uncomplicated process has distinct advantages. First, unified rates would be driven to the lowest cost-based rate possible to the benefit of Retail Service Providers. Second, since price cap ILECs perform cost studies for new services as required under Part 61.38(b)(2) of the current rules, this process is easily accomplished with a tested methodology. Finally, traffic-sensitive costs would be recovered from either intercarrier compensation rates or SLCs, not through additional universal service support.[50]

5. Intercarrier Compensation Decisions Should Be Coordinated with Universal Service Decisions.

The RTF's five-year recommendation for utilizing embedded costs for rural companies' USF calculations is slated to expire at the end of 2006.[51] Given the expiration of the RTF's recommendation, the Joint Board on Universal Service is now evaluating whether embedded costs should still be used for calculation of rural companies' high-cost support. Since it is appropriate that the cost basis for rural universal service be the same as for rural intercarrier compensation, conclusions on the cost basis for each should be coordinated. If the Commission approves a shift from embedded costs to another basis for establishing rural ILECs' universal

[50] In the unlikely instance that a price cap carrier's traffic-sensitive, unseparated embedded costs (or reinitiated price cap revenues) exceeded the amount that could be recovered under existing SLC caps, then the price cap carrier would receive residual support.

[51] *See* Public Notice, Federal-State Joint Board on Universal Service Seeks Comment on Certain of the Commission's Rules Relating to High-Cost Universal Service Support, CC Docket No. 96-45, FCC 04J-2 (rel. Aug. 16, 2004) at ¶ 20.

service funding, the Plan proposes that the Commission should open an NPRM to determine if a corresponding change needs to be made to the basis for intercarrier compensation. The decision to move to another intercarrier compensation cost basis, as well as the timeline for such a move, should be consistent with the timeline and the decision to move to another universal service cost basis.

6. Special Access Rates and Structures Will Be Unified.

Consistent with the rationale for eliminating disparities in switched-access rates, unification of special access rates also will aid in eliminating arbitrage abuses. Utilizing the interstate rate structure, the Plan recommends that intrastate special access rates be initially set at interstate rate levels. The shift to interstate special access rates is only an interim measure implemented to expediently unify rates while cost and demand information is collected through a special study. After special access rates have been unified at interstate levels, individual ILECs or NECA will have the opportunity to revise and file appropriate unified cost-based rates for both jurisdictions. This special access rate setting will not apply to deregulated rates or special government contracts.

7. Unified Rates Will Apply to Interoffice Traffic for all LECs.

The Plan provides a mechanism enabling both ILECs and CLECs to bill for all traffic traversing their networks, both access and reciprocal compensation. To accomplish this, the Plan would extend current Commission rules for determining CLEC interstate access rates[52] to the setting of reciprocal compensation rates for CLECs. Consistent with current rules, the Plan

[52] *See Access Charge Reform*, CC Docket No. 96-262, *Reform of Access Charges Imposed by Competitive Local Exchange Carriers*, Seventh Report and Order and Further Notice of Proposed Rulemaking, FCC 01-146 (rel. Apr. 27, 2001).

would cap CLEC rates at the levels of the ILEC competing in the same market, unless the CLEC is competing in an area for which the rural exemption applies. The Commission provides a rural exemption for CLECs competing with a non-rural LEC in cases where no portion of the CLEC's service area is either within an incorporated city of more than 50,000 inhabitants or within an urbanized area as defined by the U.S. Census Bureau.[53] In areas where such a rural exemption applies, CLECs are permitted to set access charges at NECA rates.

Intercarrier compensation rates for price cap LECs and other low-cost LECs will stay the same or decrease under the Plan. Such an outcome would thereby limit CLECs' access or reciprocal compensation revenues in larger metropolitan areas served by these low-cost ILECs. Notwithstanding that result, CLECs would still benefit under the Plan because they would have an increased ability to gain market share relative to their ILEC competitor, which likely must increase local rates and/or SLCs under the Plan.

8. The FACTS Plan's Cost-Based Rates Are Reasonable and Justifiable for Reciprocal Compensation.

Critical to competitive neutrality is the application of unified cost-based rates to all Retail Service Providers that use a LEC's network. Since Retail Service Providers use the same LEC network functionality – switching and transport services – to originate or terminate calls, the Plan eliminates the disparities between rates paid by these retail carriers. To preserve and enhance universal service under Section 254 of the Act, companies must receive adequate compensation for use of their networks and the competitively neutral way of accomplishing this objective is to unify rates. The requirement that all Retail Service Providers pay a cost-based

[53] *Id*. at ¶ 76.

rate for traffic transported and terminated on another carrier's network is a long-overdue, balanced outcome.

The Plan's rate unification and tariff filing process described herein should significantly reduce the burden on state regulators by eliminating many costly arbitration cases. Yet, as required by law, states retain jurisdiction over local interconnection and state access through the tariff approval process. Under the Plan, Part 51 of the Commission's rules pertaining to reciprocal compensation would no longer be required and rate-setting provisions would be incorporated into Part 69. Tariffs would be filed in each jurisdiction consistent with the promulgated rules. The filed rates will conform to the additional cost standard set forth in Section 252(d)(2) of the Act. With respect to tariffs filed by NECA, sufficient rate banding will be necessary to minimize the differences between an individual rural ILEC's rates for interconnection and its appropriate unit cost. Since parties can intervene in the tariff approval process, all parties, including those with Section 251 obligations, retain due process rights. Furthermore, as required by the Act, carriers still will be able to negotiate or arbitrate these rate levels if they determine negotiations or arbitrations to be beneficial; however, modifications of the approved tariff rates should be the exception, not the norm. Thus, the process outlined in the Plan creates rates that are consistent with the additional cost standard, provides due process for all parties, and utilizes regulatory resources efficiently by eliminating costly arbitrations.

9. ISPs Are Telecommunications Carriers and Must Be Classified as Such.

The Commission has devoted significant attention to the appropriate designation of ISPs and the treatment of Internet-bound traffic from LECs to ISPs. The Commission's access

charge exemption for enhanced service providers' ("ESP") originating dial-up traffic[54] was followed by the Commission's *ISP Declaratory Ruling* and *ISP Remand Order*[55] that limited LECs' financial harm resulting from this traffic. Given that these orders continue to create uncertainty and inequities in the marketplace, determination of the appropriate classification of ISPs and the proper application of intercarrier compensation responsibilities must be addressed if reforms are to be fairly applied to all Retail Service Providers and all services. The Plan presents sound legal arguments and clearly defined intercarrier obligations resulting from the long-overdue, proper classification of ISPs.

The statutory definition of telecommunications[56] makes it clear that ISPs indeed provide telecommunications. ISPs create end-to-end IP transmission services by purchasing transmission from IP backbone providers and end-user access service through a combination of special access, dial-up trunks and DSL purchased from the LEC.[57] The ISP packages these services with its own routing functions, thereby providing transmission and meeting one portion of the statutory test for telecommunications. The next part of the statutory test for telecommunications is to determine that "no net change in form" occurs in the transmission of the service – a test that is again certainly met. The transmission of information through the network may involve a change in form to facilitate transmission, but the information must be converted at the termination point

[54] *See Amendments of Part 69 of the Commission's Rules Relating to Enhanced Service Providers,* CC Docket No. 87-215, Order, 3 FCC Rcd 2631 and 2633 (1988).

[55] *See, respectively,* Declaratory Ruling in CC Docket No. 96-98 and Notice of Proposed Rulemaking in CC Docket No. 99-68, February 26, 1999, and Order on Remand and Report and Order, April 27, 2001.

[56] Telecommunications is defined as the "transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received." 47 U.S.C. § 153(43).

[57] Alternately, ARIC argues that cable modem end-user access should be available on a wholesale basis from the cable television provider.

back to its original form in order to be useful to the customer. This temporary change in form is evident even for the transmission of voice calls in a circuit-switched network where analog voice signals must be digitized for switching and transmission and then converted back to analog at the far end of the call. From an engineering perspective, the purpose of the transmission is to accurately reproduce the originating signal at the terminating end of the network; therefore, transmission functions *inherently* do not involve a net change in form.

ISP's bundling of transmission services with information service applications has sometimes led to the incorrect conclusion that transmission provided by an ISP results in a change in form of the information being transmitted. This is, in fact, not the case. The Open System Interconnection ("OSI") model[58] illustrates the separability of transmission and applications, as each layer describes a different functionality. As shown in Figure 5, the transmission functions utilizing layers one through five of the OSI model are distinguishable from the applications support functions in layers six and seven. Applications support functions reside in general-purpose computers where the content can change form for purposes of presentation or to meet the needs of various end-user applications. These applications support functions are not present in the transmission-related network components – routers and transport links. Despite the attempts by those who benefit from the ESP exemption to cloud the definitions, transmission and applications are separate, identifiable functions, and no net change in protocol occurs through transmission.

[58] Developed by the International Organization for Standardization ("ISO"). www.ISO.org.

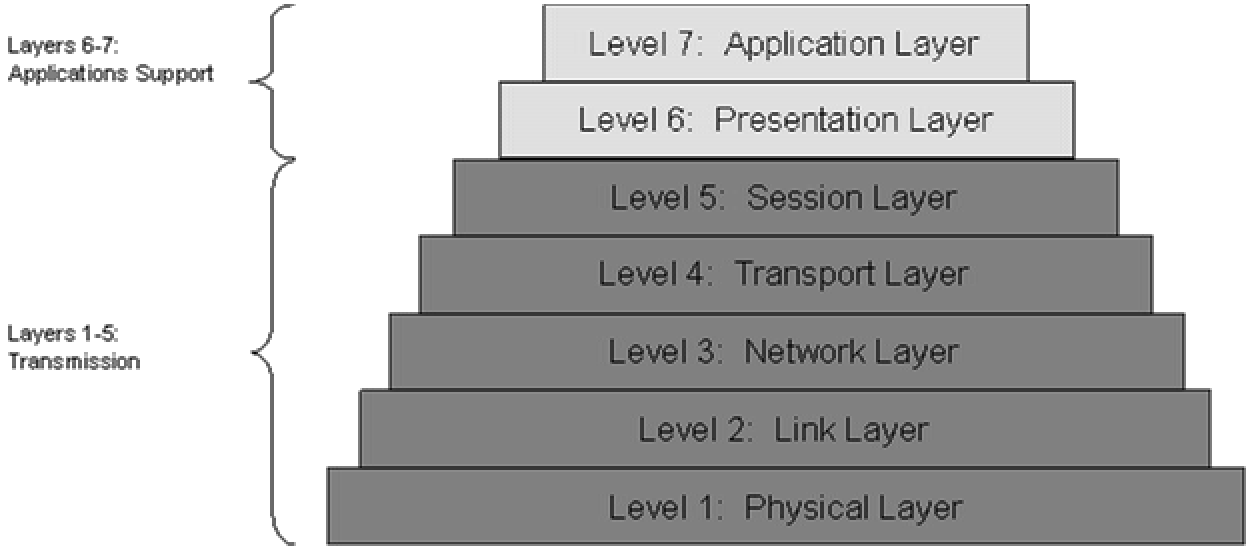

Fig. 5. OSI Reference Model – Stack Diagram

Since ISPs provide transmission without a net change in form, it has been demonstrated that ISPs are providers of telecommunications. The next step is to determine whether ISPs are providers of telecommunications services.[59] Clearly, this definitional test also is met, as ISPs offer broadband or dial-up transmission services to the public for a fee, although the fee for transmission may be bundled with the fee for providing information service.

Given that ISPs are providers of telecommunications service, they are telecommunications carriers[60] by definition, and thus subject to Title II Common Carrier regulation under the Act. ISPs have evolved into service providers that are more than just "communications intensive business end user[s]" such as "pizza delivery firms," as they were

[59] Telecommunications services are defined as "the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used." 47 U.S.C. § 153(46).

[60] Telecommunications carriers are "any provider of telecommunications service, except that such term does not include aggregators of telecommunication service (as defined in Section 226 of this title)." 47 U.S.C. § 153(44).

once erroneously described.[61] Obviously, ISPs have much more in common with interexchange carriers than with pizza delivery firms. In providing services ranging from VoIP to virtual private networks ("VPN"), ISPs are now capable of delivering all retail telecommunications services required by an end user. ISPs meet every criteria of being a telecommunications carrier, and must finally be designated as such, or the future of rational intercarrier compensation and universal service will be in grave peril.

The previous determination that ISPs indeed are common carriers and should purchase exchange access leaves open the question: What is the appropriate compensation relationship between the ISP and the CLEC or ILEC? The answer follows logically after analyzing the question of who is the Retail Service Provider and who is the customer for that retail service. Since the Internet end-user is the "final" customer of the ISP's Internet retail service, the ISP is the Retail Service Provider to the end-user who physically connects to either the ILEC's or CLEC's network, as demonstrated in Figure 6 below:

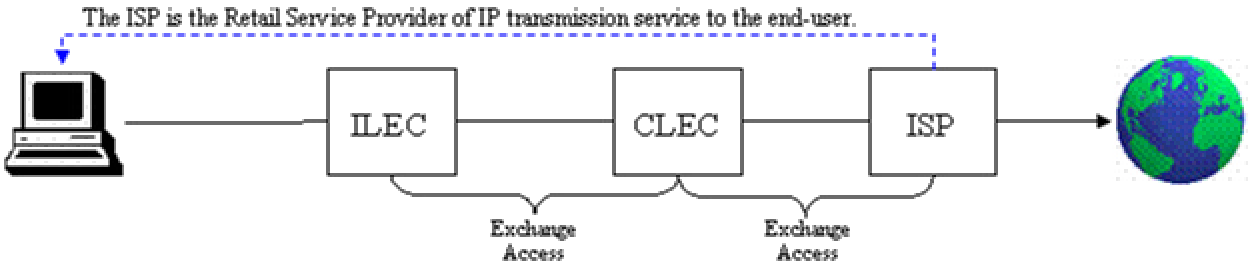

Fig. 6. ISP-Bound Traffic Diagram

Without the ILEC's or CLEC's network, the ISP would be unable to gain access to the ISP's end-user customers. To complete this service, the ISP must add its own routing functions and contract with an Internet backbone provider or uses its own facilities for transport.

[61] *See Bell Atlantic Tel. Co. v. F.C.C.*, 206 F.3d 1 at 7 (D.C. Cir. 2000).

In this retail capacity, the ISP functions much like an IXC, where the IXC is the Retail Service Provider for long-distance calls. In this instance, both the caller and called party are the "final" consumers of the call. By purchasing wholesale service from LECs on both ends of the call, in addition to providing interexchange transmission service through its own facilities or those owned by another carrier, the IXC is able to provide retail service to end-users. The comparability of ISPs and IXCs in their roles as Retail Service Providers illustrates the logic of declaring ISPs to be telecommunications carriers.

As telecommunications carriers, ISPs utilize exchange access service, not local service, from ILECs and CLECs. In accordance with Section 201 of the Act, the ISP must therefore pay exchange access to the ILEC, CLEC or both for the wholesale network functionality provided – either dial-up or broadband. Furthermore, since the ISP is not a local service customer, reciprocal compensation under Section 251(b)(5) does not apply for traffic between ILECs and CLECs that terminates to or originates from an ISP. Based on the classifications described previously, the following determinations can be made:

- *ISP-bound Dial-up Traffic Compensation*—When an ISP's customer uses dial-up Internet service, the ISP owes the underlying network carriers exchange access. If the ISP were served by a CLEC instead of directly by the ILEC, as shown in Figure 6, the ISP owes both the ILEC and the CLEC exchange access for the network functionality provided. In this instance, the CLEC serves as an intermediary carrier. No compensation obligation, in the form of reciprocal compensation, would exist between the ILEC and CLEC since neither is the Retail Service Provider for transmission services. This approach would render the classification of traffic

between an ILEC and CLEC based on the 3-to-1 terminating-to-originating ratio irrelevant.[62] This ratio was established by the Commission in order to discriminate between traffic that is subject to reciprocal compensation and traffic that is not subject to reciprocal compensation.

- *Terminating Dial Compensation*—ISPs now are terminating long-distance traffic through their interconnection with LECs. The Commission's ESP exemption never was intended to allow an ESP to terminate intercarrier traffic for free over local lines to the LEC's network. This situation has arisen because IXCs, the Retail Service Providers for long distance, are contracting with ISPs to provide termination services, thus allowing the IXCs to avoid access charges and allowing the ISPs to stay under the 3-to-1 terminating to originating ratio. The fact that termination services are contracted through an ISP does not negate the obligation of the IXC terminating traffic to pay the wholesale local provider, the LEC, to terminate traffic. This conclusion is entirely consistent with the Commission's determination in the *AT&T VoIP Order*.[63]

- *Broadband Compensation*—DSL access service exists primarily for the purpose of enabling ISPs to provide broadband Internet access. In those cases where the ISP is the Retail Service Provider of broadband access to end-users, the ISP has an obligation to compensate the LEC for use of the underlying network functionality. ISPs appropriately purchase exchange access for broadband in the form of DSL from

[62] *See* Order on Remand and Report and Order, CC Docket No. 96-99 and CC Docket No. 99-68, (rel. April 27, 2001) at ¶ 79.

[63] *See AT&T VoIP Order* at p. 11 n. 10.

the LECs' access tariffs. The classifications of entities and traffic in the dial-up environment should be consistent. ISPs serving cable modem end-users also have an obligation to compensate the cable provider, but since the ISP and the cable provider are nearly always affiliated companies operating under a closed network environment, the intercarrier compensation payments are not readily apparent.

The Plan's legally sound and technically appropriate conclusions need to be incorporated into the existing ESP dial-up exemption. Under the Commission's ESP exemption, the ISP has no obligation to pay access for traffic originating on a LEC's network and sent to the ISP over local exchange service lines.[64] The Plan calls for continuation of the dial-up ESP exemption with the following exceptions:

- For the duration of the dial-up exemption, ISPs should be allowed to purchase local exchange service in lieu of paying access charges. When a CLEC provides the local exchange service to the ISP and a customer physically connected to the ILEC's network uses the ISP's dial-up Internet service, the CLEC receives payment for local service but the ILEC receives no compensation. To be properly compensated under the ESP exemption for ISP-bound traffic that traverses the ILEC's network, the ISP must either pay the ILEC exchange access charges or connect directly to the ILEC and pay local service charges.
- The ESP exemption, created specifically for dial-up Internet traffic, was never intended to allow an ISP to terminate intercarrier compensation traffic over local lines

[64] *See Amendments to Part 69 of the Commission's Rules Relating to Enhanced Service Providers*, CC Docket No. 87-275, Order (*"ESP Order"*), 3 FCC R 2631, 2635 n.8 and 2637 n.53 (1988).

to the LEC's network. ISPs that carry voice traffic must pay exchange access to LECs for traffic terminated on LECs' networks.

10. Other FACTS Plan Provisions Will Further Minimize Intercarrier Compensation Abuses.

While unifying intercarrier compensation rates and structures will greatly reduce abuses caused by rate differentiation among services, there remain other ways in which carriers improperly avoid compensation responsibilities, including wrongly routing or misidentifying traffic, as well as terminating traffic without compensation. The Plan proposes two readily implementable, industry-wide rules that, if adopted, would largely eliminate other types of abuses existing today. Together with the Plan's rate unification, these measures protect companies whose networks have been abused by other carriers' traffic.

One growing "phenomenon" in the arbitrage game is the growth in traffic terminated without the call detail information necessary to enable the terminating carrier to identify and bill the responsible party, so-called "phantom traffic."[65] This type of traffic has increasingly occurred as originating carriers (usually wireless companies or IXCs) route traffic over direct trunk groups to access tandems. The traffic then is forwarded over common trunk groups to the appropriate terminating carrier. Either the information necessary to identify the originating carrier, such as the Carrier Identification Code, was never included in the call detail, or that information was stripped somewhere along the route. The terminating LEC completes the call for free, since traffic lacking necessary billing information is indistinguishable from other traffic on the common trunk group.

[65] John L. Guerra, "Carriers Cheating Other Carriers," Billing World and OSS Today, August 2003.

The Plan's proposed remedy for such misconduct is to hold tandem owners responsible for intercarrier compensation payments to the terminating LEC for unidentified or wrongly identified traffic forwarded by these tandem operators. Such a rule is appropriate because tandem operators are in the best position to know which carriers are routing improperly or incompletely identified traffic. By matching improperly or incompletely identified traffic to the direct trunk groups on which the traffic arrives, the tandem operator then would be in a position to cease switching and routing of this traffic if the abusing carrier does not rectify the situation. Tandem operators would thus be able to thwart such abuses. Greater accountability on the part of all network service providers should improve traffic identification problems dramatically. Once the tandem owner identifies the carrier that is improperly delivering traffic, it may bill the carrier for the terminating charges paid to the terminating LEC.

In addition to traffic being misidentified, some companies are routing access and reciprocal compensation traffic improperly over trunks designed for Extended Area Service ("EAS") traffic only.[66] Although the Plan calls for charging per-minute rates when access or reciprocal compensation traffic is found to traverse EAS trunks, ARIC recommends existing EAS compensation arrangements remain in place, with per-minute billing only done on an exception basis. Recording would only take place when traffic volumes on EAS trunks change in unexplained ways. If the records show that traffic being terminated over EAS trunks was not EAS traffic, then the company sending the offending traffic would be billed. This provision will minimize disruptions to existing EAS arrangements that are otherwise working smoothly.

[66] The same concept applies to any mandatory flat-rate calling plan.

Should improper use of EAS trunks become widespread, the Commission and the states may consider permitting companies to apply RSPP to EAS traffic, whereby an originating company must pay for traffic it terminates over EAS trunks. As a result, a reciprocal compensation arrangement would ensue, with both companies billing each other. Again, the Plan anticipates no disruption to existing EAS arrangements because such abuse is not thought to be pervasive.

11. The FACTS Plan's Rate Unification Is Achievable under Existing Federal Law.

The current compensation regime is the product of multiple layers of policy objectives, superimposed onto a rate-design platform fragmented along jurisdictional lines. Revisiting this tapestry within a cooperative and comprehensive framework (such as that proposed in this Plan) allows recognition that local exchange network utilization for transport and switching functions is identical, regardless of the originating Retail Service Provider's identity or the jurisdictional nature of that traffic. The Act provides a forum for the development of a uniform, intercarrier compensation approach through the Section 410(c) Joint Board mechanism. Further, the Commission's authority to guide the establishment and implementation of a unified rate is derived from the Congressional plan embodied in the Act.[67]

Consistent with the directives of Section 410 of the Act, a Joint Board proceeding may appropriately provide for factual inquiry leading to both the establishment of uniform, cost-based compensation rates for transport and switching services and the creation of a methodology for revision of those rates as appropriate. The existing Joint Board on Separations would serve as the appropriate fact-finding forum inasmuch as the subject matter certainly implicates facilities

[67] Pub. L. 104-104, 110 Stat. 143.

used for multiple purposes; thus costs must be allocated. Additional formal consultation mechanisms between the Commission and state commissions are available under Section 410(a) (the establishment of a Joint Board composed of representatives from each state) and Section 410(b) (Joint Conference allows for formal consultation with state commissions).

Under the Plan, the Joint Board fact-finding proceeding will determine the network utilization costs to be appropriately included in the cost recovery calculations, consistent with both Section 252(d)(2) guidelines[68] and established cost-causation principles. This *factual* determination would establish a process to determine the *de facto* reasonable rate for the transport and termination of all traffic. Given that these functions are identical for all traffic that traverses the LEC's network, the *de facto* reasonable rate is equally applicable to interstate interexchange traffic, intrastate interexchange traffic and reciprocal compensation traffic.

With the factual predicate determined through a Joint Board process, state commission adoption of the single-rate methodology and calculation is justified and appropriate. The establishment of a unified rate and appropriate rate banding, subject to such state-specific modifications as may be required, will obviate harmful geographic and technological arbitrage and will promote universal service objectives by helping to ensure rural investment recovery. This mechanism is wholly consistent with the Act and the specific grant of authority to the Commission to implement the local competition provisions of the Act,[69] including reciprocal compensation provisions.

[68] Just and reasonable charges provide for (1) mutual and reciprocal recovery of transport and termination costs; and (2) that such costs represent a reasonable approximation of additional costs associated with such calls.

[69] *See generally, AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366 (1999).

Application of a consistent methodology and rate design to recover the costs of transport and termination associated with intrastate interexchange traffic is similarly consistent with the purpose and intent of the Act, by insulating enforcement of the methodology and rate design from Commission preemption or contravention. Congress specified that the preservation of state access charge mechanisms was appropriate to the extent that a state commission order or regulation:

> (A) establishes access and interconnection obligations of local exchange carriers;
> (B) is consistent with the requirements of this section [251]; and
> (C) does not substantially prevent implementation of the requirements of this section and the purposes of this part [Part II – Development of Competitive Markets].[70]

12. The FACTS Plan Sets a Market-Clearing Price to Encourage Efficient Use of the Network.

In the past, access charges included public policy-driven, implicit revenue support to aid in maintaining affordable local service rates. After the Plan's rate provisions are put into place, the costs recovered by the proposed intercarrier compensation rates will all be explicit. That is, *all* implicit subsidies previously incorporated in access rates will have been removed. There will be no rational, economic reason or legal requirement to further reduce these rates below the cost of providing service. The switching and transport costs that would be recovered through rates exclude *all* common line costs and LSS[71] formerly embedded in rates. The remaining costs and associated rates reflect the explicit cost for the services provided using frozen allocation factors that represented actual relative use of the network.

[70] 47 U.S.C. § 251(d)(3).

[71] Local Switching Support was created to remove implicit support, in the form of weighted DEM, from access charges.

Rates for use of the underlying network must be cost-based to cause neither over-consumption nor under-consumption. Under a bill-and-keep regime, where the zero-based prices are clearly set below cost, Retail Service Providers would have little or no incentive to request network facilities and services consistent with actual demand, but rather would have an incentive to request transport facilities and terminating ports in excess of demand since there would be no incremental cost for these providers to do otherwise. Those costs associated with excess capacity would then be borne by local ratepayers, either directly through local rates or indirectly through the operation of the SEF. If wholesale network services were instead priced above cost, Retail Service Providers would be encouraged to build duplicate facilities simply to avoid excessive charges or, more likely, would argue in contested proceedings before the Commission or state commissions that rate levels are too high.

Rather than establishing a price either above or below cost, the Plan sets a market-clearing price to encourage efficient use of the network by all Retail Service Providers on a non-discriminatory basis. By encouraging maximum use of existing networks at a fair and just price, the SEF funding requirement can be minimized, especially when compared to the support that would be required under a bill-and-keep approach.

13. Unified Intercarrier Compensation Rates Level the Long-Distance Playing Field.

Included with their basic service plans, wireless customers typically enjoy large calling scopes, sometimes encompassing nationwide long-distance. These low-priced calling plans are made possible because the Commission's reciprocal compensation pricing rules produce, in many cases, wireless interconnection rates much lower than existing interstate or intrastate access rates. In addition to the advantage of a lower reciprocal compensation rate,

geographically large MSAs mean wireless carriers can, in many cases, offer *local* calling between communities for which toll calling is required when the service is provided by IXCs.

For many consumers, though, having to purchase wireless mobility at a premium may not be worth the price, even if it includes expanded calling scope and long-distance pricing advantages. Furthermore, it is neither competitively nor technologically neutral to allow disparities in rates paid by wireless carriers and IXCs to remain. ARIC believes its proposed unified rate structure will encourage all telecommunications carriers to offer competitive long-distance services that will benefit all consumers, not simply those that choose wireless service. Unified interconnection rates will benefit consumers by treating all telecommunications carriers equally when purchasing interconnection services, leading to more competitive long-distance pricing by all telecommunications carriers and a healthier, more-stable industry.

C. Local Service Rate Rebalancing Is Essential to a Fair, Equitable Compensation Solution.

ARIC's primary objective in developing the FACTS Plan is to achieve a balanced and fair solution to the industry's compensation problems. Among the components of such a solution is a rebalancing of basic local service rates for ILECs across the country. Because local rates vary considerably between states and between rural and urban areas, some customers today bear larger local service burdens than do others. Recognizing that low local service rates exist in some states because of higher intrastate switched access rates, the Plan introduces a local rate-rebalancing mechanism to assist in offsetting revenues that will be reduced when intercarrier compensation rates are unified.

The Plan promotes a structured, principled approach for use by state commissions in establishing local service rate benchmarks that treat all customers equitably. While preserving

state commission authority over this critical customer issue, the Plan rebalances local rates without causing "rate shock" to consumers. Additionally, the Plan complies with statutory affordability and comparability requirements in establishing a national benchmark range for local rates.

Under the Plan, companies would choose to rebalance residential local service rates, over a period not to exceed five years, to benchmark levels established by state commissions. To ensure affordability, as well as comparability among states, these state benchmarks must be set within a nationwide rate range to be recommended by the Joint Board on Universal Service and approved by the Commission. State commissions will then set state-specific benchmarks within this pre-established range. State commissions may consider differences in calling scope and affordability between rural and non-rural exchanges when setting benchmarks. After the state commission establishes a benchmark, an ILEC would be encouraged, but not required, to transition rates to the benchmark. Should an ILEC not transition its local rates to the benchmark local rate, that benchmark rate would be nonetheless imputed in the company's calculation of supplemental state funding under the Plan.

1. States Will Establish Local Benchmarks within Reasonable Ranges.

The Joint Board on Universal Service would be charged with establishing a nationwide rate range for single-party residential service but not for business service. As part of their responsibilities for setting specific benchmark levels, state commissions would determine if residential and business benchmark rates should be unified or not. A state commission may set as many benchmarks as it deems necessary to fully account for differences in affordability and calling scope. At the extreme, a state commission may set a different benchmark rate for each

study area in a state, if such granularity is deemed appropriate. The local service benchmark rate should include all mandatory charges necessary to receive local service at a given location, including mandatory EAS additives, zone charges, touch tone and basic unlimited local service. Optional services, such as custom-calling services or optional calling plans, would not be included in the basic local service rate. Also, fees and surcharges passed through to other entities are not considered in the basic local service rate for benchmark-setting purposes. The Plan presumes that the benchmark rate would apply to all local lines, including second lines.

When not prohibited by state law, state commissions should strongly consider making administrative local rate changes for all companies, in lieu of individual rate cases. Such a method would expediently achieve rate comparability, yet not impair a state commission's ability to consider a company's earnings in supplemental support payments, if necessary. ILECs that move their local service rates to the benchmark will achieve revenue neutrality with respect to the Plan's rate rebalancing mechanisms under the provisions of the "hold-harmless" proposal explained in a later section.

2. Special Provisions Are Necessary for Local Rates Not Set within the Benchmark Range.

Recognizing that competitive pressures or other factors may place some LECs in a position where they are unable to charge the full benchmark rate established by a state commission, the Plan would allow such ILECs to charge local service rates lower than the benchmark. Those ILECs would receive supplemental support, as introduced later in this filing, based on the assumption that the ILEC had moved its local service rates to the benchmark. For example, an ILEC may bill local service at a rate lower than the benchmark in some exchanges

and at or higher than the benchmark in other exchanges. In such instances, the benchmark rate would be applied to all lines for purposes of calculating supplemental state fund requirements.

In some instances the existing ILEC rates may be higher than state-established benchmark rates or an ILEC may *choose* to charge an average rate in excess of the benchmark rate. In such instances, the ILEC would receive supplemental support computed with the ILEC's actual average rate. Obviously, if the ILEC's average rate is higher than the benchmark rate, the ILEC would experience a reduction in its supplemental state fund payment. This result is appropriate since, with state commission approval, the ILEC has *chosen* to recover costs from the customer instead of through the supplemental fund. If an ILEC's local rate exceeds the upper limit of the national local rate range established by the Joint Board then the ILEC should be allowed to lower its local rate to the upper limit of the rate range and draw supplemental funding for the difference in local rates.

For those ILECs whose revenues increase as a result of the Plan's rate rebalancing mechanism, the state commission would reset the benchmark for that particular ILEC in such a manner that revenue neutrality would be achieved. As in the previous case, the ILEC may *choose* to charge local service rates lower than the new benchmark, but the ILEC must absorb the loss of revenue associated with that action. Resetting the benchmark for this particular LEC will not impact the benchmarks for other ILECs in the state.

3. The Joint Board on Universal Service Will Propose a Nationwide Local Rate Range.

The FACTS Plan proposes to create a nationwide rate range bounded by both a floor and a ceiling – essentially a range within which state benchmarks will be set. The Joint Board on Universal Service would be charged by the Commission with responsibility for setting this

range.[72] The nationwide rate floor is established to achieve comparability and fairness among customers across the nation. If a nationwide support mechanism were instituted without a nationwide rate floor, then ratepayers in some states would subsidize low local rates in other states. A nationwide rate ceiling is included in the Plan because local rates by law must remain affordable. Some state commissions may want to set the benchmark rate high enough that supplemental state funding is effectively eliminated. In order to maintain affordable rates in high-cost areas, however, the funding burden should be spread broadly among all customers within that state. Therefore, a nationwide rate ceiling is appropriate policy to assure maintenance of just, reasonable and affordable local rate levels.

A highly important issue remaining is how to set the floor and ceiling. The Plan proposes basing the calculation of the nationwide floor and ceiling on the national average urban, single-line, residential local service rate. This rate, including touch-tone service, is currently $14.61[73] per line per month, according to a sampling of 95 cities served primarily by RBOCs. These sampled cities represent areas ranging in size from several thousand to several million customers; thus a wide array of calling scopes is represented. Using a similar sample of nationwide local rates, the Commission previously concluded that rates were comparable if they

[72] The Joint Board should also consider measures to counteract the possibility of gaming in the interplay between calling scope and local benchmark rates. For example, a state may choose to implement mandatory charges to expand local calling areas in order to meet the benchmark range criteria without increasing basic local rates. Other states, through federal funding of the residual fund, would then provide the funding for that state's expanded local calling — a result that could discriminate against states with small calling areas or states with low federal contribution percentages.

[73] *See* Appendix C – Calculation of Benchmark Range. The rate, excluding touch tone service, is $14.57 per line per month. Calculations show how the average rate, as well as standard deviation in the rate, was derived. Paul R. Zimmerman, "Reference Book of Rates, Price Indices, and Household Expenditures for Telephone Service," (Washington, DC: FCC Reference Information Center, 2004).

were no higher than two standard deviations above the mean.[74] The Plan proposes a comparable approach by setting the nationwide rate floor at one standard deviation below the average rate in the sample and the nationwide rate ceiling at one standard deviation above the average rate. The nationwide floor and ceiling, using one standard deviation on either side of the mean, would be set at $10.96 and $18.26 per line per month.[75] Such a range gives state commissions the ability to set local rate benchmarks so that other variables, such as calling scope, are considered.

4. The FACTS Plan Proposes a Five-Year "Hold-Harmless" Period.

An important goal of the Plan, as stated initially, is to inject much-needed stability into the industry's compensation and rate-setting system. To assist in accomplishing this goal, the Plan proposes that ILECs' compensation will be revenue-neutral at implementation and during the five-year transition period while local rates are adjusted to the benchmarks. This transitional "hold-harmless" provision provides a period of stability while benchmark local rates, unified intercarrier compensation and supplemental state support are fully implemented. The "hold-harmless" provision does not alter a state commission's ability to review or evaluate the intrastate operations of any carrier, if such an evaluation or review is allowed in a particular state. Additionally, during this five-year "hold-harmless" period, the Joint Boards will exercise a monitoring and oversight function. After that period, the Joint Boards may address any changes necessary to fine-tune the functioning of the Plan.

[74] *See Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Order on Remand, Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order, FCC 03-249 (rel. Oct. 27, 2003) at ¶ 81.

[75] A benchmark range using two standard deviations results in rates between $7.31 and $21.91. ARIC contends such a range is too broad to assure affordability and comparability.

5. Local Rate Rebalancing Will Result in Comparable Local Rates Nationwide.

As discussed previously, within the context of establishing a unified approach to intercarrier compensation,[76] the development of a rational rate design platform is critical to achieving the universal service goals established by the Act.[77] In the context of developing the local rate component of a holistic approach to rate design that preserves and promotes universal service, the Act's federal-state consultative processes provide an appropriate forum for the development of a benchmark.

A factual inquiry instituted by the Joint Board on Universal Service would develop recommendations for the establishment of a nationwide rate range for "reasonably comparable" universal services. The factual determination accomplished through this inquiry would be officially recognized by state commissions and would provide the foundation and framework for the establishment of reasonable local rate benchmarks. Such local rate benchmarks are necessary to meet the statutory directive that access to telecommunications services in rural areas should be available at reasonably comparable rates to those in urban areas.[78] Establishment of local rates within the nationwide range also would satisfy the statutory requirement that the states' approach to local ratemaking is "not inconsistent with the Commission's rules to preserve and advance universal service."[79]

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[76] *See supra* Section V.B.

[77] 47 U.S.C. § 254(b)(1), establishes the principle that services should be available at affordable rates; 47 U.S.C. § 254(b)(3), establishes the principle that access to telecommunications services in rural areas should be available at reasonably comparable rates to those in urban areas.

[78] *Ibid.*

[79] 47 U.S.C. § 254(f).

As proposed in the Plan, the derivation of a nationwide range for local rates is also necessary for other reasons: (a) to meet the statutory directive to ensure that state actions do not burden the federal universal service program, (b) to ensure equity among both universal service support contributors and recipients, and (c) to eliminate inappropriate cost shifting of implicit subsidies[80] to universal service.[81] Clearly, local rate design can result in internal subsidies (i.e., those that affect only local rates) and external subsidies (i.e., those that affect a total recovery plan, including all federal elements) that impact universal service availability and funding. Therefore, the implementation of a sustainable universal service program benefits from the establishment of a nationwide range of reasonable local rates.

The 10th Circuit Court of Appeals has recognized that a "partnership" exists between federal and state regulators to support universal service and the Commission has the responsibility to formulate policies that induce appropriate state action.[82] In the context of developing a comprehensive approach to rate regulation able to sustain nationwide universal service, this guidance is particularly pertinent. The Plan's federal-state cooperation in establishing the local rate benchmark is entirely consistent with this 10th Circuit directive.

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[80] The United States Court of Appeals for the Fifth Circuit, in explaining the nature of an implicit subsidy, provided as an example the instance where "the regulators may require the carrier to charge 'above-cost' rates to low-cost, profitable urban customers to offer the 'below-cost' rates to expensive, unprofitable rural customers." *Texas Office of Pub. Util. Counsel v. FCC*, 183 F.3d 393, 406 (5th Cir. 1999).

[81] 47 U.S.C. § 254(e). Federal universal service support "should be explicit and sufficient to achieve the purposes of this section."

[82] *Qwest v. FCC,* 258 F3d 1191, 1200 (10th Cir. 2001).

D. Unifying Federal SLCs in Each State Ensures Rate Comparability Lacking Today.

While rebalancing local rates across the country is an important step toward achieving meaningful rate comparability, as the Telecommunications Act requires,[83] another area lacking comparability today is the varying levels of federal SLCs among ILECs. Establishing comparable local rates without addressing unequal SLCs would be counter-productive and unfair to customers. Therefore, the Plan recommends that SLCs be unified among all companies on a state-specific basis, with rural companies setting their SLCs at the weighted-average residential and business SLCs for the price cap carriers in their state.

1. Current SLC Caps Will Not Be Increased under the FACTS Plan.

For the vast majority of customers in this country, a scan of their telephone bills would not reveal that current single-line residential business and multi-line business SLC caps are currently $6.50 and $9.20 per month respectively. Because most customers are served by non-rural ILECs, their SLC rates are often substantially lower than the caps. On the other hand, customers served by rural ILECs almost always pay SLCs at the capped levels. When caps were raised, permitting non-rural ILECs to recover a portion of non-traffic-sensitive costs,[84] low-cost ILECs recovered those non-traffic sensitive costs without approaching the new SLC caps. Conversely, virtually all rural ILECs reached the SLC caps after the MAG Order[85] raised SLC caps for rate-of-return carriers. Different SLC levels between the nation's urban and rural

[83] 47 U.S.C. § 254(b)(3).

[84] *See CALLS Order* at ¶ 77 and ¶ 79.

[85] *See MAG Order* at ¶ 42.

populations, and to some degree even among the rural populations, depend on whether a non-rural or rural ILEC serves a particular customer.

ARIC believes SLCs caps should not be increased to recover significant revenues from intercarrier compensation rate reductions. This position is contrary to the recently announced ICF plan, which increases SLC caps to $10 plus inflation and allows de-averaging. In contrast, by redefining SLCs to include recovery of both non-traffic-sensitive and traffic-sensitive costs, the FACTS Plan would utilize SLCs for cost recovery in non-rural areas, without raising the existing caps. By moving traffic-sensitive costs to the SLC, along with local rate rebalancing, RBOCs and low-cost price cap ILECs can lower their intercarrier compensation rates, while minimizing their support funding requirements.

2. Equalizing Rural and Non-Rural SLCs Will Create Rate Comparability.

Once the price cap ILECs have determined their traffic-sensitive costs eligible to be moved into SLCs under the existing $6.50 and $9.20 caps, the Plan requires that those new SLCs become the new statewide SLC level billed by all ILECs in that state. If there are multiple price cap companies in a state, the SLC level is the weighted-average for those companies. The new weighted-average SLCs then become the levels at which a state equalizes its SLCs for all customers, thereby accomplishing another significant step toward statewide rate comparability. With SLC equalization between rural and non-rural companies, it is expected that many rural SLCs will decline from their current capped levels.

3. Price Cap Carriers' SLC Levels Depend on Their Intercarrier Compensation Rates.

Since SLCs are being redefined to include traffic-sensitive costs, price cap ILECs first have to establish their unified intercarrier compensation rates in order to determine the appropriate amount of money to be moved to SLCs. As described in Section V.B.4., price cap intercarrier rates will be set at the lower of those companies' reinitiated price cap rates or current price cap rates. If the company's existing price cap rates are lower than the reinitiated rates, then the excess of revenues from reinitiated rates over the price cap revenues will be added to the company's SLC rates up to the existing caps. Low-cost price cap ILECs will reduce their intercarrier compensation rates, while high-cost price cap ILECs will maintain current rates and recover additional costs, first through SLC increases up to the cap and then through supplemental state support, if necessary.

This linkage between intercarrier compensation rates and SLCs for price cap companies is appropriate and has several benefits. First, end-user customers will benefit since SLCs will be reset once and frozen thereafter, while rural customers' SLCs probably will be reduced. Second, the Plan complies with Section 61.38(b)(2) of the Commission rules for new price cap services and with the Act's additional cost standard for reciprocal compensation. Third, the same intercarrier compensation calculation is used for both rate-of-return and price cap ILECs;[86] thus, all companies are handled under the same framework without a "one-size-fits-all" conclusion. Fourth, on average intercarrier compensation rates will either stay the same or decrease, benefiting Retail Service Providers. Finally, traffic-sensitive costs would either be recovered

[86] Reinitiated price cap rates should yield a result equivalent to a traffic-sensitive, unseparated, embedded cost rate.

through intercarrier compensation rates or SLCs, not through additional support.[87] The Plan will inject stability, predictability and equitability into a system that lacks such attributes today.

E. Federal USF will Continue to Be Based upon Current Methodologies.

Another benefit of the FACTS Plan is that it does not over-burden any single cost-recovery source, yet it strives to achieve a better balance among the existing sources, particularly those not now comparably implemented among all customers and carriers. One source that is largely left intact is federal universal service support. Although federal USF support may be affected by other pending developments such as the Commission's NPRM on potential modification of the current practice of supporting all lines,[88] only two changes to the federal USF mechanisms are anticipated under the Plan.

As discussed previously in this filing, the first change to federal USF is the modification necessary to recover the TIC from traffic-sensitive rates rather than through ICLS support. Since TIC represents traffic-sensitive transport costs, it is inappropriate to recover these costs in a support mechanism.[89] To avoid double-recovery, TIC would be removed from ICLS when traffic-sensitive transport rates are revised to include TIC costs.

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[87] Except in those instances where a price cap carrier reaches the SLC cap without fully recovering its traffic-sensitive, unseparated, embedded cost.

[88] *See Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers*, CC Docket No. 00-256, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, *Access Charge Reform for Incumbent Local Exchange Carriers Subject to Rate-of-Return Regulation*, CC Docket No. 98-77 and *Prescribing the Authorized Rate or Return for Interstate Services of Local Exchange Carriers*, CC Docket No. 98-166, Petition for Reconsideration of the Plains Rural Independent Companies in CC Docket Nos. 00-256, 96-45, 98-77 and 98-166, (Fil. Dec. 31, 2001) at p. 4.

[89] *See Petition for Reconsideration of Plains Rural Independent Companies*, CC Dockets No. 00-256, 96-45, 98-77 and 98-166, filed Dec. 31, 2001.

The second change to federal USF is a lifting of the existing cap on High Cost Loop ("HCL") Support. The HCL cap[90] has resulted in substantial under-recovery of costs for rural companies, which qualify for HCL support based on their costs but are not receiving the full amount of HCL support. The cap has significantly harmed rural ILECs by forcing them to curtail investments, which results in reduced service for rural customers. In addition to assuring that the nation's universal service objectives are met through adequate support of the federal jurisdiction's full share of rural loop infrastructure, removal of the HCL cap also will reduce the funding required from the supplemental state fund proposed in the Plan. Even without the cap, there is an incentive for LECs to be efficient because the HCL fund is not designed for 100 percent cost recovery.[91]

While two countervailing Plan components would impact the size of existing federal USF – removal of the HCL cap and recovery of TIC in intercarrier rates rather than through ICLS support – the most significant impact of the Plan is on limiting the growth in federal USF. The joint funding of supplemental state support will encourage state regulators to evaluate seriously whether the designation of additional ETCs in some rural service areas is in the public interest and worth the additional expenditure on support. With a more measured approach to ETC designation, the growth in federal USF due to duplicate support payments will be curtailed.

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[90] *See Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, and *Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers*, CC Docket No. 00-256, Fourteenth Report and Order, Twenty-Second Order on Reconsideration, and Further Notice of Proposed Rulemaking in CC Docket No. 96-45, and Report and Order in CC Docket No. 00-256, FCC 01-157 ("*RTF Order*") at ¶37 and ¶¶ 40-43.

[91] LECs receive 65 percent of their costs between 115 percent and 150 percent of the National Average Cost per Loop and 75 percent of their costs above 150 percent of the National Average Cost per Loop.

F. Revenue Shortfalls Will Be Recovered from Newly Established State Equalization Funds.

Under the FACTS Plan, any residual revenues not recovered through rebalanced local rates, equalized SLCs or unified intercarrier compensation rates will be recovered through a State Equalization Fund ("SEF"). Operating under federal rules, state commissions will be responsible for SEF oversight, since it is primarily state revenues that SEF will replace. Each state's SEF will be funded through a shared obligation between federal and state sources, with rural states receiving a higher federal contribution than urban states. The Plan structures the SEF program in a manner to motivate each state commission to establish a state fund where no sufficiently sized state fund already exists to meet the revenue shortfall. States that choose not to establish a SEF would lose matching federal contributions; thus, there is a strong impetus for state commissions to establish funds. If for whatever reason states do not set up a SEF, the Commission will require that a charge on each working number be collected or imputed to fund the aggregate state revenue shortfall. Funds generated by these charges would be redistributed to compensate for companies' revenue shortfalls.

1. The SEF Recovers Revenue Shortfalls Not Recovered Elsewhere.

The FACTS Plan proposes that the new SEF will replace intercarrier compensation revenues not otherwise recovered through local rate rebalancing or SLCs, as depicted in Figure 7. For the majority of rural LECs, SEF funding will be necessary because revenues lost through intercarrier compensation rate changes will not be recouped adequately through local rate increases to benchmark levels. Conversely, for many lower-cost companies, SEF funding may not be required because a low-cost company's intercarrier compensation rate changes will likely

be offset by local rate and SLC increases.

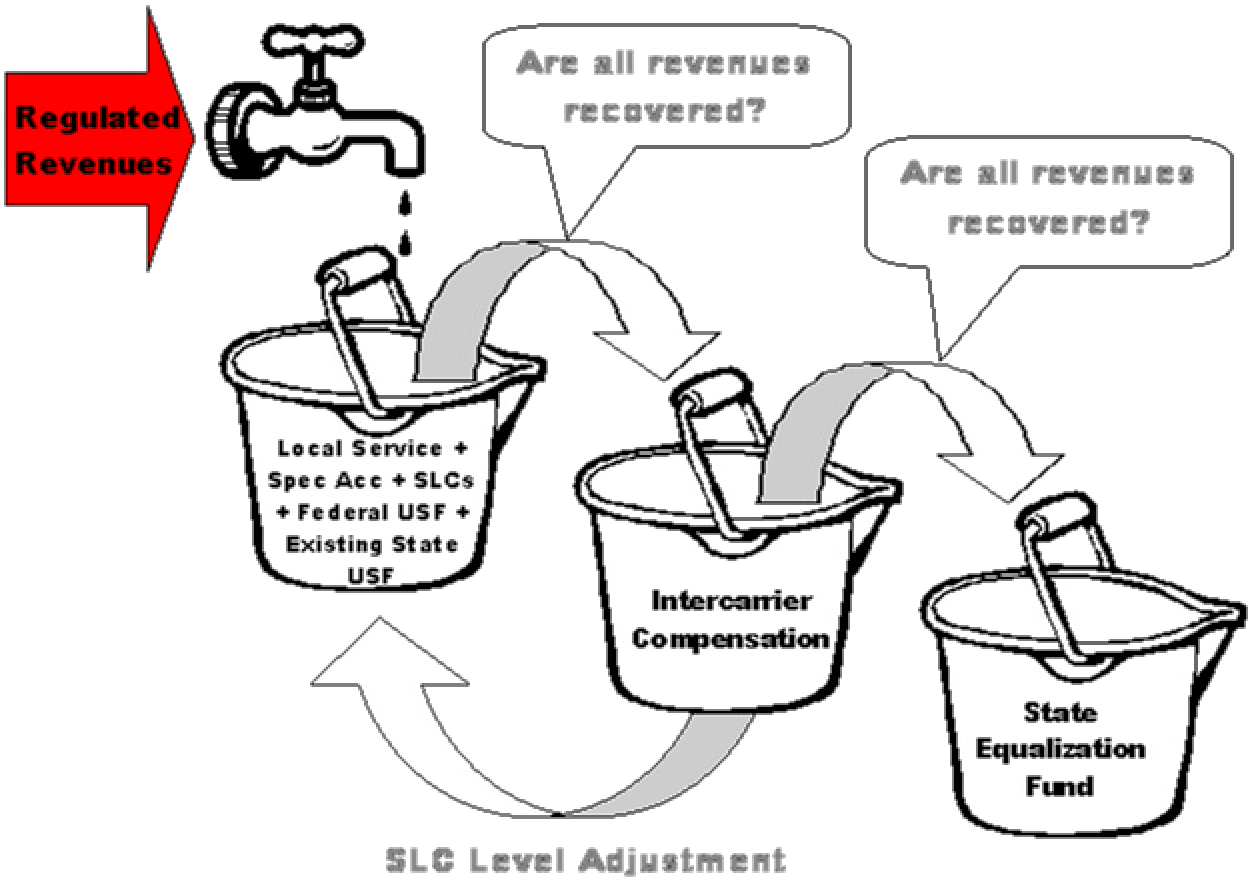

Fig. 7. Residual Revenues Are Recovered Through a State Equalization Fund

The SEF mechanism compares current-year regulated revenues with prior-year regulated revenues, to determine if SEF should be paid. Local service, intercarrier compensation and SLC rates all are set according to the specifications outlined previously in the Plan. Price cap rates are set first, then rate-of-return carriers set their SLCs at the weighted-average price cap level for the state. On a study-area basis, companies will receive SEF if there is a revenue shortfall as compared to prior-year regulated revenues, after all rates are reset to new levels. Such calculations may need to be done on a prospective basis and then adjusted after demand and cost information is known, as is done today with ICLS.

Regulated revenues are defined as interstate revenue requirements[92] plus intrastate switched access, special access and universal service,[93] plus local regulated revenues,[94] plus net reciprocal compensation payments[95] to other carriers. Specifics of the calculation are shown below:

- In subsequent years of SEF operation, intrastate switched and special access revenues will be adjusted annually by the percent change in their respective interstate revenue requirements. Similarly, net reciprocal compensation revenues will be adjusted by the percent change in switched interstate revenue requirements.
- Inclusion of net reciprocal compensation payments in current net regulated revenues will allow ILECs to receive reimbursement for additional reciprocal compensation and transiting obligations not currently in existence.
- Average schedule, price cap or those ILECs deregulated at the state level can still calculate current net regulated revenues because these companies are required to keep their books in accordance with Part 32 of Commission rules.[96] A surrogate for interstate revenue requirement would either be an average schedule company's interstate settlement or a price cap ILEC's interstate revenues.

[92] Interstate revenue requirements include federal USF.

[93] SEF payments are included as a part of net regulated revenue in subsequent years.

[94] Local regulated revenues include basic local service revenues only.

[95] Net reciprocal compensation payments equal reciprocal compensation payments a LEC receives, less reciprocal compensation and transiting payments made to other carriers.

[96] *See* 47 C.F.R. § 32.

2. SEF Funding Is a Joint Federal-State Obligation, with Higher Federal Contributions in Rural States.

Consistent with other cooperative components of the Plan, funding of the SEF is a joint obligation of federal and state sources. Receipt of federal funding is contingent upon states setting their benchmarks within the nationwide range and the state funding its share of the SEF. Federal funding is desirable in order to limit the burden on rural states that need more funding per customer because of the higher costs of service and because these rural states have fewer customers from whom to collect SEF assessments. State funding is desirable in order to encourage states to wisely commit USF dollars. States can manage SEF size through state benchmarks and limit both state and federal USF growth through judicious application of the ETC designation process.

Implementing a higher federal contribution in more-rural states will equalize the SEF funding burden among all states. Three factors affect the federal contribution percentage that the Plan proposes: rural costs in the state, rural population of the state and the total population of the state. Higher-cost states obviously need more funding to maintain rural infrastructure. Moreover, states with low populations need higher federal funding to spread the funding burden across more ratepayers. Therefore, the Plan specifies that the minimum federal contribution to a state's SEF will be 25 percent, while the maximum contribution will be 75 percent. This range will ensure that sufficient federal support is available to encourage state commissions to establish SEFs and that sufficient contribution is required from state sources to induce state commissions' participation in the management and oversight of universal service funding, in both the state and federal jurisdictions.

The Plan proposes that a formula for federal contributions be adopted recognizing the higher cost of serving rural customers, as well as considering the population in the state available to support state contributions to SEF. To that end, ARIC used 2000 U.S. Census data to identify the number of rural households in a state at the census block level and the total number of households in a state. In computing rural households, ARIC assumes that a household is rural if it exists in an area with less than ten households per square mile. The number of rural households in a state is multiplied by the adjusted rural cost per loop and the product is divided by the total households in a state to create the state's "rural cost factor."[97] The more rural households within a state, the higher the "rural cost factor." Similarly, the larger the population of a state, the lower the "rural cost factor." Since the number of households does not reflect the cost of serving those customers, the rural cost per loop must be incorporated into the "rural cost factor." This rural cost factor then is mapped to a straight-line equation with the end-points set at

[97] If $\text{Households}_{\text{Rural}}$ are less than $\text{Loops}_{\text{Rural}}$, then
Rural Cost Factor =
$(\text{Households}_{\text{Rural}} * \text{Cost}_{\text{Rural}}) / \text{Households}_{\text{State}}$

Otherwise,
Rural Cost Factor =
$[(\text{Loops}_{\text{Rural}} * \text{Cost}_{\text{Rural}}) + (\text{Households}_{\text{Rural}} - \text{Loops}_{\text{Rural}}) * \text{Cost}_{\text{Rural and Non-rural}}] / \text{Households}_{\text{State}}$

where,
$\text{Households}_{\text{Rural}}$ = Households in an area with fewer than ten households per square mile
$\text{Households}_{\text{State}}$ = Households in the state
$\text{Loops}_{\text{Rural}}$ = Category 1.3 loops for companies in the Common Line pool
$\text{Cost}_{\text{Rural}}$ = Cost per loop for companies in the Common Line pool
$\text{Cost}_{\text{Rural and Non-Rural}}$ = Cost per loop for all companies in the state

For eight states, the Rural Cost Factor was calculated using the more complex formula.
No common line pool members are in the states of New Jersey, Delaware or Rhode Island, thus, $\text{Loops}_{\text{Rural}}$ equals zero. For these states the Rural Cost Factor = $(\text{Cost}_{\text{Rural and Non-Rural}} * \text{Households}_{\text{Rural}}) / \text{Households}_{\text{State}}$
For the remaining five states, the rural cost is a weighted average using both rural and non-rural costs. For example, in Hawaii, there was only one rural company, with 1,106 loops and a cost per loop of $ 8,071.13. Since in Hawaii there are 4,639 households with ten or less households per square mile, obviously this cost per loop should not be applied to all 4,639 households. Thus, the rural cost factor was calculated as a weighted average, i.e. Rural Cost Factor = [(1,106 * 8071.13) + [(4,639 – 1,106) * 271.11] / 403,232 = 24.5132.

25 percent and 75 percent.[98] By freezing the end points, the state(s) with the highest "rural cost factor" – that is the most-rural state(s), according to the measurement – will receive a federal contribution of 75 percent. Likewise, the state(s) with the lowest "rural cost factor" will receive a federal contribution of 25 percent. States that fall between the highest and lowest rural cost factor values will receive federal contributions between 25 percent and 75 percent. The results are illustrated in Table 1:

[98] The process involves solving two simultaneous equations. For the lowest "rural cost factor," the federal contribution is 25%, i.e., .25 = a + b* lowest "rural cost factor." For the highest "rural cost factor," the federal contribution is 75%, i.e., .75 = a + b* highest "rural cost factor." Solving these equations simultaneously yields "a" equal to .24872 and "b" equal to .00528. Thus, Federal Contribution = .24872 + .00528 * "rural cost factor."

Table 1
Federal Contributions to SEF

State	% Federal Contribution to SEF based on Rural Cost Factor	Rural and Non-rural Cost per Loop	Rural Cost per Loop	Rural Loops	Rural Households with Less Than Ten Households per Square Mile	Weighted Average Cost per Loop Used?	Adjusted Cost per Loop	Households in State	Rural Cost Factor = Rural Households * Adjusted Rural Cost per Loop/ State Households
AK	39%	$466.54	$466.54	439,105	12,614		$ 466.54	221,370	26.5843
AL	38%	$331.01	$453.84	206,745	98,702		$ 453.84	1,737,078	25.7877
AR	52%	$397.68	$513.55	461,422	104,416		$ 513.55	1,042,696	51.4268
AZ	33%	$358.94	$807.08	41,033	37,570		$ 807.08	1,901,327	15.9479
CA	27%	$184.41	$516.60	220,858	93,668		$ 516.60	11,502,860	4.2067
CO	37%	$357.95	$655.09	135,129	59,951		$ 655.09	1,658,903	23.6744
CT	25%	$237.30	$273.09	25,339	2,546		$ 273.09	1,301,617	0.5342
DE	25%	$265.31	$0.00	0	1,026	Yes	$ 265.31	236,159	1.1527
FL	27%	$298.66	$408.45	193,149	59,122		$ 408.45	6,337,761	3.8102
GA	34%	$360.87	$459.69	457,010	107,377		$ 459.69	3,006,366	16.4186
HI	38%	$271.11	$8,071.13	1,106	4,639	Yes	$2,130.74	403,232	24.5132
IA	53%	$241.51	$413.15	248,163	149,768		$ 413.15	1,149,276	53.8398
ID	65%	$333.21	$750.63	47,270	27,872		$ 750.63	275,286	75.9991
IL	31%	$206.54	$389.92	256,191	140,164		$ 389.92	4,591,779	11.9023
IN	33%	$244.95	$405.00	164,880	86,846		$ 405.00	2,336,306	15.0548
KS	70%	$369.50	$993.49	123,364	89,656		$ 993.49	1,042,618	85.4311
KY	39%	$353.26	$453.48	203,212	95,061		$ 453.48	1,590,647	27.1013
LA	40%	$337.77	$692.94	191,454	68,852		$ 692.94	1,656,053	28.8097
MA	25%	$211.28	$428.94	4,145	6,308	Yes	$ 354.30	2,443,571	0.9146
MD	26%	$221.53	$392.67	7,716	13,015	Yes	$ 322.99	1,995,154	2.1070
ME	37%	$282.79	$387.13	151,444	29,561		$ 387.13	518,163	22.0856
MI	31%	$244.28	$498.43	203,198	88,794		$ 498.43	3,785,647	11.6909
MN	44%	$271.23	$423.08	411,601	159,337		$ 423.08	1,895,127	35.5716
MO	45%	$320.99	$500.16	326,860	168,537		$ 500.16	2,194,594	38.4102
MS	55%	$403.21	$635.57	98,099	94,233		$ 635.57	1,046,434	57.2339
MT	64%	$381.17	$558.36	168,212	48,011		$ 558.36	358,667	74.7418
NC	28%	$303.01	$317.61	731,775	64,688		$ 317.61	3,145,143	6.5326
ND	62%	$347.70	$442.22	175,171	41,346		$ 442.22	257,152	71.1022
NE	61%	$330.84	$629.87	75,746	72,717		$ 629.87	666,184	68.7533
NH	30%	$269.58	$321.51	57,768	13,934		$ 321.51	474,606	9.4393
NJ	25%	$225.70	$0.00	0	4,637	Yes	$ 225.70	3,154,136	0.3318
NM	49%	$342.28	$907.65	45,817	34,144		$ 907.65	677,971	45.7111
NV	29%	$212.19	$479.77	33,065	10,958		$ 479.77	751,165	6.9990
NY	27%	$248.94	$305.15	266,738	81,996		$ 305.15	7,056,835	3.5457
OH	28%	$230.77	$300.37	519,637	80,689		$ 300.37	4,445,772	5.4517
OK	52%	$328.07	$641.68	242,683	108,262		$ 641.68	1,342,293	51.7543
OR	35%	$316.07	$533.51	155,454	47,045		$ 533.51	1,333,723	18.8186
PA	27%	$239.11	$280.15	873,254	67,912		$ 280.15	4,777,003	3.9828
RI	25%	$226.48	$0.00	0	436	Yes	$ 226.48	408,424	0.2418
SC	31%	$357.83	$395.13	532,345	46,832		$ 395.13	1,533,846	12.0644
SD	75%	$391.12	$542.66	150,826	50,781		$ 542.66	290,245	94.9433
TN	32%	$311.34	$395.61	366,744	76,801		$ 395.61	2,232,905	13.6070
TX	35%	$318.47	$516.68	612,339	262,712		$ 516.68	7,396,773	18.3512
UT	30%	$309.35	$492.10	72,383	14,656		$ 492.10	701,281	10.2843
VA	30%	$285.70	$347.80	118,952	77,237		$ 347.80	2,699,167	9.9523
VT	48%	$330.70	$478.57	64,686	21,782		$ 478.57	240,634	43.3199
WA	30%	$281.10	$455.46	269,601	48,336		$ 455.46	2,284,757	9.6356
WI	39%	$261.74	$379.29	831,108	143,521		$ 379.29	2,084,544	26.1138
WV	41%	$348.51	$533.59	16,989	55,234	Yes	$ 405.43	736,481	30.4064
WY	65%	$466.01	$685.45	44,733	21,827		$ 685.45	198,302	75.4475

* Cost per Loop Source: NECA, Universal Service Fund 2004 Submission of 2003 Study Results (Filed October 1, 2004).

* Household Data Source: 2000 United States Census Data.

The results for ARIC's proposed method of determining federal SEF contributions appear reasonable. States with the lowest federal contributions (less than or equal to 30 percent) either have large populations able to support state funding or relatively few or low cost rural customers. States in this category include California, Connecticut, Delaware, Florida, Massachusetts, Maryland, New Hampshire, New Jersey, Nevada, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Utah, Virginia and Washington. On the other extreme, states with the highest federal contributions (over 60 percent) include Idaho, Kansas, Montana, Nebraska, North Dakota, South Dakota, and Wyoming because of their large number of rural households or high loop cost, coupled with low overall state populations. Rural states with moderately high federal contributions (50 percent and above but less than or equal to 60 percent) include Arkansas, Iowa, Mississippi and Oklahoma. Federal contributions for the remaining states fall between 30 percent and 50 percent.

The Commission may want the Joint Board on Universal Service to consider other appropriate variables for determining federal contribution percentages. Once SEF funding requirements can be estimated by state, the Joint Board would have the necessary information to calculate the state contribution per customer. An overall objective should be to approximately equalize these state contributions per customer. Therefore, the Joint Board may want to set a cap on the maximum state contribution per customer to mitigate any abnormalities that exist in the factors used to calculate the federal contribution percentage.

3. States with Existing Access Restructuring Funds Will Receive Federal Contributions for these Funds.

When a state has an existing state fund that was established as an access restructuring mechanism, the Plan envisions that the funds would be merged[99] and the federal contribution percentage would apply to the entire obligation — both the SEF and the existing state fund requirement. If existing funds are not merged with the SEF, then the federal contribution only applies to the new SEF. This provision is necessary because states that have implemented rate rebalancing already have imposed collections on their constituents. Without federal contributions to ease the burden already imposed on customers in a state with an existing USF, these customers will assume too much of the cost-support burden in that state. Tables 2 and 3 contrast states with and without existing USF programs and the impacts of federal funding:

Table 2

Federal Jurisdiction Does Not Assist in Funding SEF

Line	Description	Calculation	State A	State B
1	Required Revenues	Input	$1,000	$1,000
2	Current Access Revenues	Input	$1,000	$500
3	Current State USF/ Access Replacement Fund	Line 1 – Line 2	$0	$500
4	Access at Unitary Rate	Input	$250	$250
5	State Equalization Fund (SEF)	Line 2 – Line 4	$750	$250
6	Federal Contribution for Original Fund at 0%	0% * Line3	$0	$0
7	Federal Contribution for SEF at 50%	50% * Line 5	$375	$125
8	Total Federal Contribution	Line 6 + Line 7	$375	$125
9	State Contribution for Original Fund at 100%	100% * Line 3	$0	$500
10	State Contribution for SEF at 50%	50% * Line 5	$375	$125
11	Total State Contribution	Line 9 + Line 10	$375	$625

[99] Merging of the SEF with an existing state access restructuring fund assumes that there is not a state law prohibiting such a merger.

Table 3

Federal Jurisdiction Assists in Funding SEF

Line	Description	Calculation	State A	State B
1	Required Revenues	Input	$1,000	$1,000
2	Current Access Revenues	Input	$1,000	$500
3	Current State USF/ Access Replacement	Line 1 – Line 2	$0	$500
4	Access at Unitary Rate	Input	$250	$250
5	State Equalization Fund (SEF)	Line 2 – Line 4	$750	$250
6	Federal Contribution for Original Fund at	50% * Line3	$0	$250
7	Federal Contribution for SEF at 50%	50% * Line 5	$375	$125
8	Total Federal Contribution	Line 6 + Line 7	$375	$375
9	State Contribution for Original Fund at 50%	50% * Line 3	$0	$250
10	State Contribution for SEF at 50%	50% * Line 5	$375	$125
11	Total State Contribution	Line 9 + Line 10	$375	$375

The above tables show two states with similar cost characteristics. State A has not rebalanced rates or established a state USF, while state B has previously rebalanced rates and established a state USF. When state B established a state USF, it imposed a collection surcharge on the consumers of that state. In Table 2, the federal jurisdiction does not assist in funding the existing USF in state B. Consequently, the consumers of state B have too high a funding obligation relative to state A, and the federal contribution is lower in state B than it is in state A. In Table 3, the federal jurisdiction assists in funding the existing USF in state B. In this case, both the federal and state contributions are equalized between state A and state B. These examples demonstrate that federal contributions should assist in the funding of both new SEFs and existing state universal service funds.

Unless prohibited by state statute, states will have the option of combining SEFs with existing state universal service funds created for access charge reductions or other intercarrier compensation restructuring. Under the proposed Plan, special-purpose state funds created for reasons other than restructuring intercarrier compensation may not be merged with the SEF

because these funds were unrelated to such restructuring. For example, funds for lifeline or expanded local calling areas[100] should not be merged with the SEF. States with such funds may separate the intercarrier compensation restructuring funds from special-purpose funds, and then combine the intercarrier compensation restructuring portion with the SEF.

4. States Must Make Necessary Collections to Meet Their SEF Obligations.

In order to establish a SEF, a state will need to implement a surcharge or other collection method to assess customers for the state contribution to a SEF. The Plan does not take a position on the basis for state contributions, as that responsibility lies with individual state regulators. As for federal contributions, the Plan proposes requiring that ISPs and cable-modem providers fairly contribute to the USF programs since these entities use the public switched network to provide telecommunications. While federal funding requirements will increase to some degree under the Plan, any assessment rate increases will be minimized by the broadening of the contribution base. Other than an increase in the level of federal support required, the Plan does not contemplate a change in the contribution methodology for federal money used to support universal service funds, with the exception of expanding the collection base. ARIC believes that the increase in federal support will be far smaller under the FACTS Plan than under other plans[101] with equivalent intercarrier compensation rate levels, since local rate and SLC changes will offset the amount of support necessary.

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[100] Expanded calling areas should be supported by local rates. Federal support, funded nationally, should not provide the means to expand local calling areas in specific states. Also, similarly situated companies that don't expand their local calling area will receive less in total support, plus their customers will have a smaller calling scope. Thus, these companies are disadvantaged relative to companies that have expanded local calling.

[101] Under the ICF Plan, for instance, an estimated $2.5 billion of additional USF has been reported to be required. Blair Levin, Rebecca Arbogast and David Kaut, "Intercarrier Group Unveils Reform Proposals, Though Obstacles Abound," Legg Mason, August 17, 2004.

5. States that Do Not Establish SEFs Risk Losing Federal Support.

With state input into the process, it is hoped that state commissions will realize the value in raising local service rates to benchmark levels and establishing a SEF. In instances where a state does not establish a SEF under the Plan, the Commission will impose a federally mandated end-user Access Equalization Charge ("AEC") to make up the revenue shortfall resulting from intercarrier compensation rate changes. Without such a charge, customers served by those companies would be harmed because companies then would have to absorb the shortfall. Ultimately, revenue shortfalls will affect service and the long-term infrastructure in the state.

The AEC would be collected from all Retail Service Providers for each of their working numbers in the state. Even if a Retail Service Provider elects not to charge its customers the AEC, it is still liable to remit AEC amounts for funding of the state's revenue shortfall. AEC amounts would be remitted to NECA, which would then distribute state collections based on each ILEC's revenue shortfall. When an AEC is required to fund shortfalls, federal contributions will not be available to a state.[102] Because no federal funding is available when an AEC is implemented in lieu of a SEF, it is anticipated that such a mechanism rarely will be utilized.

6. The SEF Treats Companies and Customers Equitably in All States.

The SEF is a reasonable and fair approach to residual cost recovery because customers and ILECs in all states are on a level playing field. High-cost or low-cost ILECs are treated similarly and states that have previously rebalanced rates and those that have not are also treated equally. Since the SEF becomes the final cost-recovery mechanism to be accessed in the Plan, it

[102] The Joint Board on Universal Service should investigate whether federal contributions should be drastically curtailed rather than eliminated when a state does not establish and fund a SEF. To ensure affordable rates, a cap on the AEC may be necessary, with remaining funds coming from federal sources. The cap on the AEC should be sufficiently high to motivate states to create a SEF instead of utilizing the AEC.

is appropriately sequenced to provide supplemental support for lost revenues only after the other recovery steps, such as adjusting local rates and SLCs, have been exhausted.

7. All SEF Recipients Must Be ETCs.

Whether regulated under state law or not, ILECs wishing to receive SEF must comply with the provisions of the Plan. To qualify for SEF funding, a carrier must be designated an ETC in that state. If a company chooses not to raise local rates to benchmark levels, it will still receive SEF support calculated with imputed local benchmark rates, but the revenue difference between the company's local rates and the benchmark rates will be absorbed by the company.

The Plan further proposes that the decision on SEF portability is the responsibility of each state commission. Some states may decide that the funding burden is onerous enough that funding multiple ETCs is not in the public interest. The state funding requirements may cause states to take funding requirements into account in ETC proceedings.

8. The SEF Is Consistent with Existing Federal Universal Service Statute.

Congress has specified that "[q]uality services should be available at just, reasonable, and affordable rates."[103] In addition, with specific reference to rural and high-cost areas,

> [c]onsumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high-cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.[104]

[103] 254 U.S.C. § 254(b)(1).

[104] 254 U.S.C. § 254(b)(3).

The accomplishment of these directives requires a unified federal-state regulatory approach. The Plan appropriately encourages state participation in the ratemaking process, as discussed previously. Similarly, it promotes the states' compliance with the nationwide rate range established through this cooperative process by offering federal funding assistance to the SEF once states have set rates in the established range. Moreover, federal funding for the SEF helps states ensure cost recovery in high-cost areas.

The Commission has long recognized the critical importance of partnering with state authorities to promote universal service principles.[105] Precedent exists within the current universal service funding framework for federal encouragement of the specific state actions proposed by the Plan, such as the Lifeline matching fund program.[106] Under the Lifeline program, federal matching funds are available to carriers in those states that have established parallel programs ensuring that all citizens have access to basic telecommunications services. The SEF, as proposed by the Plan, similarly promotes and rewards states that adopt mechanisms designed to preserve and promote universal service.

Congress confirmed the Commission's paramount role in determining national universal service policy, while still recognizing the states' interest, by specifying that states "may adopt regulations not inconsistent with the Commission's rules to preserve and advance universal service."[107] Furthermore, states are precluded from adopting measures which "rely on or burden

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[105] "[W]e agree with the Joint Board that state and federal governments have overlapping obligations to strengthen and advance universal service." *See Universal Service Order*, 12 FCC Rcd 8776, para. 192 (1997).

[106] *See* 47 C.F.R. § 54.403(a)(3).

> Additional federal Lifeline support in an amount equal to one-half the amount of any state-mandated Lifeline support or Lifeline support otherwise provided by the carrier, up to a maximum of $1.75 per month in federal support, will be made available to the carrier providing Lifeline service to a qualifying low-income consumer.

[107] 47 U.S.C. § 254(f).

Federal universal service support mechanisms."[108] In fact, where no SEF is established by a state, such inaction is tantamount to the adoption of a position that would be inconsistent with the national goal to preserve and advance universal service. Refusal to establish a SEF ultimately would unfairly burden federal universal service support mechanisms. Accordingly, when no SEF is established by the state, the Commission must establish an alternate universal service support mechanism specifically targeted to collecting charges from all carriers within a state to ensure cost recovery for high-cost companies, while preserving nationwide affordable rates.

As the courts have recognized, the Commission's intervention in intrastate matters is justified when it cannot otherwise carry out a valid federal objective.[109] In this case, it is clear that the Commission is permitted to address intrastate matters preemptively and establish the AEC, because absent this approach it could not accomplish its statutory mandate.

A unified approach to rate design and intercarrier compensation is critical to the preservation and advancement of universal service. The factual predicate for this determination established the criteria relied upon for federal involvement in the Plan's SEF design. The judicial test for valid Commission action in an intrastate arena consists of three elements:

(1) the matter to be regulated has both interstate and intrastate aspects;
(2) Commission preemption is necessary to protect a valid federal regulatory objective; and
(3) state regulation would negate the exercise by the Commission of its own lawful authority because regulation of the interstate aspects of the matter cannot be unbundled from regulation of intrastate aspects.[110]

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[108] *Ibid*.

[109] *See, e.g., Public Util. Comm'n v. FCC,* 885 F.2d 1325 (D.C.Cir. 1989); *Illinois Bell Tel. Co. v. FCC,* 883 F.2d 104 (D.C.Cir. 1989); *National Ass'n of Regulatory Util. Comm'rs v. FCC,* 880 F.2d. 422 (D.C.Cir. 1989).

[110] *Public Serv. Comm'n v. FCC,* 909 F.2d 1510, 1515 (D.C. Cir. 1990).

Clearly universal service implicates both the interstate and intrastate jurisdictions and cannot be reasonably sustained or managed on an "unbundled" basis. Congress has expressly precluded the states from acting in a manner inconsistent with or that burdens one of the federal universal support mechanisms. In those states where a SEF is not adopted, absent federal establishment of the SEF replacement, a valid federal objective of universal service is thwarted. Therefore, the Commission's universal service mechanism is stymied.

VI. THE FACTS PLAN PROPOSES A STRUCTURE FOR REGULATION AND COMPENSATION IN AN IP ENVIRONMENT THAT WILL BENEFIT ALL CUSTOMERS AND ENSURE THE CONTINUED EXISTENCE OF UNIVERSAL SERVICE.

While the circuit-switched network will continue to exist for many years to come, over time, the use of circuit switching will decline as applications migrate to IP. Until full convergence is reached, however, two different compensation systems must co-exist. Circuit-switched compensation, in the form of access charges and reciprocal compensation, should be paid for minutes traversing the PSTN and a new compensation regime must be developed for IP that reflects the cost-drivers in a packet-switched network.

To enable future multimedia applications, quality of service ("QoS") guarantees will replace the "best-effort" delivery standard [111] of today's Internet. In the future, QoS-enabled routers will reserve network resources upon customer request in a manner similar to today's circuit-switched network, except that customers will have much greater ability to "seize" significant amounts of network resources. The cost-recovery system for a packet-switched network must reflect how network resources are requested and consumed. Switching and transport cost-recovery mechanisms must be put in place that require ISPs to pay for the network resources their customers use. A new, infrastructure-based universal service system also will be necessary to facilitate cost recovery in high-cost rural areas.

In order to ensure that IP transmission services of comparable quality are available nationwide at reasonable prices, it will be necessary for regulators to oversee IP and broadband

[111] "Best-effort" delivery occurs when packets are sent over the network without a guarantee that they will arrive at their destination in the correct sequence in a timely manner.

interconnection relationships. Targeted regulation to constrain market power in the evolving IP environment is appropriate to protect independent ISPs needing affordable, reasonable access to the IP backbone and local distribution facilities. These changes are necessary to ensure broadband Internet access availability to all customers at reasonable rates.

A. Physical Infrastructure Is Essential for Both Circuit-Switched and IP Platforms.

A recent Wall Street Journal article proclaimed: "Prices are likely to keep dropping in the months ahead because it is so much cheaper for companies to run an Internet phone service than a conventional phone network. They no longer have to buy and maintain hundreds of millions of dollars worth of telephone equipment."[112] The only reason such "Internet phone service" can be priced lower than conventional phone service is that "Internet phone service" is not required to pay for the network it uses. In fact, today's physical infrastructure is used for both conventional circuit switching and IP packet switching. The most costly portions of the telecommunications network, namely the local distribution and transport facilities, are the same for both platforms. The primary difference between the two platforms is in *how* information is switched and transported over these very same facilities. As convergence progresses, switches will be replaced by routers and time-division-multiplexed circuits will be replaced by transport links that support packet streams. The physical-layer infrastructure will remain virtually the same, only routing and transport functionality will change as the network evolves.

[112] Shawn Young, "A Price War Hits Internet Calling," Wall Street Journal, August 26, 2004.

1. Compensation Systems Are Necessary in Both the Circuit-Switched and Packet-Switched Worlds.

The circuit-switched network will continue to exist for many years to come. Over time, though, the use of circuit switching will decline as applications migrate to IP. Thus, two different compensation systems must co-exist. Applying the RSPP concept, when a Retail Service Provider uses the network functionality of an underlying carrier, it is clear that compensation should be paid, regardless of the transmission method. Consistent with the Commission's policy statement in the IP-Enabled Services NPRM,[113] circuit-switched compensation, in the form of access charges or reciprocal compensation, should be paid for minutes traversing the circuit-switched network. Similarly, a sustainable, cost-causative IP compensation framework should be in place for packet-switched network usage. The current DSL tariff structure is not designed to reflect how the variable costs associated with switching and transport of IP traffic are incurred, so tariff changes are necessary.

As applications transition from circuit switching to packet switching, the mix of those entities seeking access to the LEC's network will also change. Today IXCs, wireless carriers and CLECs reach their customers on the PSTN by purchasing services from the ILEC. In the future, it will be ISPs and other Retail Service Providers that increasingly will purchase broadband services from the LEC.

In many rural areas, there is a limited number of customers from whom the variable costs of switching and transport can be collected. While IP costs may decrease, at least for switching technology, transport costs will likely remain fairly constant. Therefore, continued support is

[113] *See In the Matter of IP-Enabled Services*, WC Docket No. 04-36, NPRM, FCC 04-28 ("*IP-Enabled NPRM*") (rel. Mar. 10, 2004) at p. 42.

needed from sources outside the rural area for rural transport and higher rural switching costs. If a plan such as the FACTS Plan is implemented, today's traffic-sensitive access charges will only recover the costs of switching and transport for the PSTN. In a similar manner, usage-based compensation will only recover incremental switching and transport costs for the packet IP environment. So, high rural costs must be recovered from another source – infrastructure-based universal service.

In a converged environment, the LEC will be a wholesale provider, as all retail services will be provided by the ISP or other Retail Service Providers. Dial-tone service, or Plain Old Telephone Service as we know it today, will no longer exist because customers will use their Internet connection for all wireline communications. The LEC will no longer charge customers a connection fee, known today as local service. Without local service or carrier charges contributing to loop cost recovery, the loop must entirely be supported by USF.

Considering that the nation is evolving to a broadband network, and that both Presidential candidates have called for a ubiquitous broadband network, we must find a way to finance such a network. Unfortunately, wireline broadband networks are extremely costly to build, especially in rural areas. Since there is really no other reasonable substitute for wireline broadband, USF policies should be implemented that provide revenue stability to wireline providers who build broadband networks. Without stable funding, wireline providers will be unwilling to make the large, up-front investment necessary to support broadband.

Capped, portable universal service funding does not provide the revenue stability necessary. Capped support means that rural companies receive less support than their costs would entitle them to. Furthermore, portable support means that revenues originally meant to support broadband infrastructure can be ported to another carrier that doesn't provide broadband

and may not even serve the most costly rural customers. Therefore, today's services-based USF must be replaced with infrastructure-based USF to ensure a viable broadband network is put in place.

2. The Economics of the Internet Will Change with Applications.

The economics of the Internet will also change as congestion management gains importance to both consumers and providers. There are two key factors driving today's Internet economic framework. First, in response to the "dot-com" hype, certain network segments have been over-engineered and have significant excess capacity. This over-capacity will likely not continue in the future. Second, most Internet applications today, such as e-mail and web browsing, are not real-time and do not require significant throughput. In the future, real-time multimedia applications, such as gaming, video streaming, video imaging, VoIP and web casting, will become widely used by customers. Consequently, not only will future Internet applications require additional network resources, but also there will be more applications on the Internet, as applications currently residing on the PSTN migrate en mass to the Internet. These future multimedia applications will impose significant additional network requirements. While significant congestion problems have yet to materialize, managing network cost relative to congestion will be key to economic viability as bandwidth-consuming applications proliferate.[114]

Today's Internet can be characterized as "best-effort" delivery. The multimedia applications of the future cannot successfully operate on "best-effort" delivery. Instead, packet

[114] Alice Barrett-Mack, "Carrier Class in IP Networks: What's It All About?" IP Applications and Services 2003 (Chicago: International Engineering Consortium, 2002), pp. 119-125.

delivery through the network must be controlled to guarantee the required levels of service[115] necessary for a particular multimedia application. For example, a VoIP conversation would not be understandable if there is excessive delay in transmission or if too many packets are lost. VoIP providers today do not guarantee quality of service because generally Internet congestion is not severe enough to cause call disruption. Without QoS guarantees, as more applications migrate to the Internet, service disruptions will occur for applications that have real-time requirements.

3. QoS Multimedia Applications Will Require QoS Routers with Recording Capability.

In order to implement QoS multimedia applications, the "best-effort" routers currently utilized on the Internet will need to be replaced with QoS routers. Such a replacement process has already begun, and QoS routers may even be prevalent on some private networks. These new routers will be capable not only of controlling the QoS of real-time multimedia applications, but also will be capable of recording QoS information for billing purposes as well. Similar to how today's toll-recording equipment records billable toll minutes, QoS routers will record network resource commitments relative to throughput, jitter, delay and packet loss for the duration of an IP connection, called a "session." As pulver.com's President, Jeff Pulver, said when referring to the future of communications metrics: "Think sessions, not minutes!"[116]

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[115] Collectively, QoS parameters include service availability, throughput, jitter, delay and packet loss rate. *Service Availability* is the reliability of the user's connection to the Internet. *Throughput* is the rate at which packets are transmitted in a network. *Jitter* refers to the variation in time duration between all packets in a stream taking the same route. *Delay* refers to the interval between transmitting and receiving packets between two reference points. *Packet Loss Rate* is the maximum rate at which packets can be discarded during transfer through a network. Northern Telecom Bay Networks, "IP QoS—A Bold New Network," (Research Triangle Park, NC: Nortel Marketing Publications, Department 4262, 1998).

[116] Pulver, Jeff, "Communications Unusual: Heteromorphic Communications," Fall 2003 VON Meeting.

Until these "best-effort" routers are replaced, multimedia applications will not be widespread on IP networks and QoS commitments will not be recorded.

Once QoS-enabled routers are installed, customers can initiate sessions and dynamically request network resources along the entire path of the transmission to guarantee certain QoS levels. Essentially, a telephone call in the circuit-switched world is analogous to a session in the IP world, except that additional QoS parameters — service availability, throughput, delay, jitter and packet loss — can be altered dynamically at the customer's request. These varying QoS levels drive different levels of variable network cost, since higher classes of QoS require greater consumption of network resources. For example, the higher the throughput provided, the greater the network resource consumed, and the higher the network cost. Combinations of QoS characteristics will lead to varying levels of cost, such as shown in Table 4 below:

Table 4

Example of Potential QoS Service Classes

Class of Service	Application	QoS Requirements
1	• Non-critical data • E-mail • Internet web browsing	• Best Effort Delivery • Un-managed Performance
2	• Error Free Data • VPN • Data Downloads	• No Loss • Controlled Delay and Variation • Medium Throughput
3	• Real Time Applications • VoIP	• Low Delay • Low Jitter • Low Loss • Low Throughput
4	• Gaming • Web Casting • Video Streaming	• Low Delay • Low Jitter • Low Loss • High Throughput

To recover these varying costs in a QoS environment, the users of applications that utilize significant network resources should be charged a higher rate than more-traditional IP applications, such as web browsing or e-mail. In addition to pure cost differentiation, customers historically have been willing to pay more for interactive applications than for pure content applications.[117] QoS-enabled routers will provide the technology necessary to facilitate the next advances in interactive communications. Thus, resource cost, as well as customer demand, will drive IP pricing. In response to customer demands, ISPs could eventually begin offering packages reflecting the different service categories that customers desire. For example, an ISP

[117] Jim Hourihan, "Session-Aware Networking: Architecture for the King's Next Throne," IP Applications and Services 2003 (Chicago: International Engineering Consortium, 2002) pp. 35-44.

might introduce a circuit-quality "first class," a prior-queued "business class" and a best-effort "economy class" service.[118]

B. Cost Recovery in an IP World Must Evolve.

The IP network is composed of the local distribution and transport network owned or leased by LECs,[119] routers owned by ISPs, and the Internet backbone owned by backbone providers. Together, this combination of network components provides the transmission functionality to support IP applications and content services. LECs, ISPs and backbone providers all incur both fixed and variable costs in provisioning this network. The fixed costs are associated with physical layer functionality such as the underlying distribution facilities. Variable costs are associated with routing and transport functionality, as well as QoS commitments, which must be invoked both on the LECs' networks and on the backbone provider's network. Existing broadband tariffs, i.e. DSL tariffs, include only flat-rate charges. In the future, LECs, ISPs and backbone providers must recover their respective transmission costs on a more cost-causative basis, including variable network costs associated with QoS commitments. The FACTS Plan, therefore, introduces a new billing element in the DSL tariff based on a network session.

[118] Michael Golden, Arno Penzias, and William Rundquist, "The IP-Everywhere Reality," Carrier IP Telephony 2000 (Chicago: International Engineering Consortium, 2000), pp. 1-6.

[119] Transport is segmented into two parts likely owned by different LECs: (1) transport from the DSLAM to the ISP connection point, and (2) transport from the ISP connection point to the backbone connection.

1. The Network Session Charge Recovers Variable Costs Associated with QoS Commitments.

Session charges can be billed both at the wholesale and at the retail level. At a wholesale level, sessions are billed based on RSPP compensation obligations. Since ISPs are Retail Service Providers and use the transmission functionality of the LEC, the LEC is entitled to compensation from ISPs. LECs with edge routers capable of initiating and recording QoS-committed connections would bill originating and terminating sessions to ISPs, possibly by QoS class.[120] Through DSL charges, the LEC could also recover some of the fixed costs associated with the physical layer functionality, which could reduce the pressure on USF collections. Such charges would be part of the LEC's DSL tariff, since in a fully converged environment, wholesale broadband and special access are the only services being sold by the LEC.

At the retail level, the ISP must recover the cost of the fixed and variable charges billed by LECs plus costs associated with wholesale IP backbone services. The ISP combines its own routing functionality with the wholesale services provided by LECs and IP backbone providers to offer transmission services to broadband end-users, content providers and application providers. While the FACTS Plan does not specifically address the compensation arrangements between the ISP and its retail customers, the ISP of the future likely would charge a monthly fee to recover its fixed costs and a session charge to recover variable costs associated with QoS-guaranteed connections.

[120] Thomas C. Miller, "Scaling VoIP to PSTN Levels," Carrier IP Telephony 2000 (Chicago: International Engineering Consortium, 2000), pp. 189-196.

2. Session-based Billing Will Encourage Efficient Network Utilization.

In the circuit-switched network, the "throughput-limited" transmission path has been designed around voice applications. With IP, transmission demands are much less constrained. Customers can place significant demands on network resources while initiating multimedia applications,[121] resulting in throughput greatly in excess of what the circuit-switched network provides today.[122] To conserve IP network resources, it is imperative to implement pricing strategies that recognize customers' network resource utilization.

The billing of session charges will encourage customers to efficiently utilize network resources. Under this pricing regime, customers who reserve network resources will pay incrementally for that consumption. If a session charge were not in place, customers always would demand the highest level of network resource because there would be no price penalty to do otherwise. From a fairness perspective, the cost of premium resources should be borne by those who use them.[123]

While some in the industry argue that usage-based pricing cannot be used for IP, in fact the trend is moving from flat rate to usage-based billing for IP services. Many providers already bill customers for the megabytes of disk space used, the number of e-mail messages, or the amount of data transferred in excess of specified limits.[124] Flat-rate capacity charges, by their

[121] Vikash Varma, "The Business Case for IP Usage," Carrier IP Telephone 2000 (Chicago: International Engineering Consortium, 2000), pp. 55-59.

[122] For example, a customer of a rural LEC has a 256K DSL service, which represents two-tenths of one percent of the company's subscribed capacity, yet the customer uses seven percent of the total company's IP based bandwidth.

[123] Vikash Varma, "The Business Case for IP Usage," Carrier IP Telephone 2000 (Chicago: International Engineering Consortium, 2000), pp. 55-59.

[124] Tim Hall, "The Evolution of IP Service-Billing Technologies and Their Impact on Service Providers," Carrier IP Telephony 2000 (Chicago: International Engineering Consortium, 2000), pp. 179-188.

very nature, do not reflect the variable network cost of customer-requested QoS real-time service guarantees and are an inappropriate mechanism to recover these costs. Flat-rate charges may be appropriate for an Internet using a "best-effort" delivery standard, but as the Internet moves toward a "connections-based" standard, whereby customers can "reserve" network resources along the transmission path (similar to what happens with circuit switching), a usage-based charge will become both appropriate and necessary.

3. Charging Flat Rates Is Inappropriate for Recovery of Load-sensitive Costs.

A common misperception is that bandwidth-sensitive flat-rate charges, otherwise known as port charges, at the network interfaces appropriately reflect cost causation in an IP network. IP networks are different than circuit-switched networks in the way that customers use common network resources. In contrast to a circuit-switched network user, who is limited by a relatively small maximum bandwidth throughout the network, an IP network user not only has a larger dedicated bandwidth to access the network, but also can "seize" significant amounts of shared network resources depending on the user's application.

Flat-rate charges may be appropriate for recovering the costs associated with access ports and links associated with a single customer's use, which reflect the maximum throughput requirements of that particular customer's load requirement. In contrast, flat-rate charges are generally not appropriate for recovering shared network costs associated with routers and inter-nodal transport links (transport between routers, as well as transport between routers and DSLAMs[125]) serving multiple customers. These multi-user network costs are driven by the

[125] Digital Subscriber Line Access Multiplexer.

maximum throughput presented to the network by the combination of all users. Since the load characteristics of a given customer's offered load will not generally be the same as the load characteristics for the aggregate traffic offered to the network, a more cost-causative approach to the pricing of the shared IP network components would be to charge customers on the basis of how much each customer uses the shared network resources in real time, not on a pre-subscribed basis. The Plan's QoS-based session charges are consistent with this approach.

4. All Providers Must Pay Compensation for Network Resources Utilized – Now and in the Future.

Of prime interest to some in the LEC industry is how to make VoIP providers fairly pay for the network resources they use. Hybrid VoIP providers, such as Vonage, utilize both the IP network and the PSTN to initiate and complete calls, and thus are Retail Service Providers utilizing the network resources of an ISP and a PSTN carrier. Following the Commission's decision in the *AT&T Petition*, the LEC would charge Vonage, or its underlying carrier, for the use of the PSTN. Similarly, once recording capability is available, ISPs and LECs would be capable of billing the hybrid VoIP provider a session charge to recover the variable network costs related to QoS guarantees on the IP network.

In a converged IP world, hybrid VoIP providers likely will cease to exist and connections will be made on a peer-to-peer basis.[126] Peer-to-peer VoIP providers, such as Skype, facilitate voice transmissions between two end-users with broadband connections. End-users utilizing broadband connections are responsible for the variable network costs associated with those voice transmissions. Since the end-users are customers of the ISP and cause the ISP to incur variable load-sensitive costs, the ISP may choose to charge sessions to its broadband end-users for the

[126] Peer-to-peer refers to connections made directly from one computer to another computer.

QoS guarantees required by peer-to-peer VoIP sessions. Similarly, when LEC network resources are involved, the LEC would bill session charges to the ISP to recover that LEC's load-sensitive costs.

C. Regulations Are Necessary to Restrain Market Power and Ensure Universal Service.

In order to ensure that comparable IP transmission services are available nationwide at reasonable prices, it will be necessary for regulators to oversee IP interconnection relationships and to re-target universal service support to broadband-capable physical layer infrastructure.

1. Market Power Has Already Taken a Toll on the IP Market.

As commenters have pointed out in the Commission's *IP Enabled Services* proceeding,[127] concentration of market power already exists with vendors that provide broadband local distribution and Tier I backbone services. Vertical integration of these independent functions potentially poses an even greater threat to consumers if the market behaviors of these vertically integrated firms are left unrestrained. Without regulations to ensure that networks remain open, telecommunications companies can effectively shut-out independent ISPs from last mile and backbone facilities.

Conceivably, a few large telecommunications players could become vertically integrated across all IP network transmission functions for a particular market. For example, a wholesale Tier I backbone provider such as AT&T could merge with an RBOC providing wholesale broadband local distribution facilities as well as retail ISP services. If such a scenario comes to

[127] *See IP-Enabled Services*, WC Docket No. 04-36, MCI Comments (filed May 28, 2004) at pp. 15-16, Comments of the Verizon Telephone Companies (filed May 28, 2004) at p. 20, and Comments on Notice of Proposed Rulemaking by Vermont Public Service Board (filed May 28, 2004) at p. 14.

fruition, the emerging company would be fully integrated from the backbone to the local distribution facilities. The question here is apparent: How will other independent ISPs be able to compete with such a well-situated retail ISP? Vertical integration without regulatory constraints allows backbone providers to introduce interconnection incompatibilities to competitive ISPs, refuse to inter-operate with competing networks, and withhold or over-price functionality.

An even more-troublesome scenario could be a merger between a Tier I backbone provider and a large cable television provider. The resultant entity would be completely vertically integrated in the IP environment, yet would have no interconnection or open-network obligations under current Title VI, Cable Communications regulation. Adding to the problems that would exist in a vertically integrated, closed telecommunications network, the closure of the cable television network also would inhibit the provision of independent content. Because unaffiliated content providers have no method to sell directly to the public, they must negotiate with the transmission system owner, which holds all the cards at the "negotiation table."

If open-network interconnection obligations are removed as a result of ongoing deregulation lobbying or if open-network obligations are not extended to cable-modem services, the vertically positioned entities described above could remove, impair and overprice wholesale services in order to drive their retail competitors from the market. Specifically, this would squeeze independent ISPs from the markets served by these large, vertically positioned ISPs.[128] By stifling competition from independent ISPs in this manner, the unregulated, vertically integrated company could derive monopoly profits while hindering innovation and restricting IP-based commerce.

[128] Mark Cooper, "The Public Interest in Open Communications Networks," (Consumer Federation of America, 2004), p. 6.

Several large telecommunications firms already have adopted this network foreclosure strategy. Mark Cooper, director of research at the Consumer Federation of America ("CFA"), observes that the number of ISPs nationally per 100,000 customers has been reduced from 15 to 2.5 as IP access has migrated from dial-up to broadband. Reflecting the closed-network environment for cable providers, there are even fewer ISPs, at less than one cable-modem ISP per 100,000 customers.[129] Empirical evidence cited by CFA shows that even oligopolistic competition, which would exist if just a few ISPs were competing in the same market, would give the network owner too much rent and control.[130]

2. IP Transmission Services Are Telecommunications Services.

In order for regulators to impose interconnection requirements or universal service contribution obligations on a service provider, that provider must be found to be a telecommunications carrier under Title II, Common Carrier provisions of the Act. To classify a service provider as a telecommunications carrier, it is first necessary to determine if the service provider provides telecommunications.

Federal statute provides a three-part test to determine if a service is telecommunications.[131] First, the functionality provided by IP must be transmission. IP is simply another method of transmission, using much of the same facilities as are used today for circuit-switched traffic. ISPs create end-to-end IP transmission services by purchasing transmission from IP backbone providers and LECs. As described earlier, the primary

[129] *Id*. at p. 67.

[130] *Id.* at p. 12.

[131] 47 U.S.C. § 153(43).

distinction between circuit switching and packet switching is in *how* information is switched and transported over the same network. IP uses routers to "switch" packets and transport links to move packet streams across the network. VPN and VoIP are both IP applications that clearly are transmission related, not content related. Thus, IP provides transmission — just using different methods than circuit switching.

Second, the transmission must undergo no change in form. Those IP providers that stand to gain most from an unregulated regime attempt to use the "change-in-form" test to evade the label of telecommunications. These providers assert that IP services are delivered through a myriad of protocol conversions. Consequently, they claim IP is an information service, not telecommunications.[132] ARIC strongly disagrees. While IP transmission is usually bundled with applications, transmission *inherently* does not involve a net change in form because the purpose of transmission is to accurately reproduce the originating signal at the terminating location. The application may manipulate the content or change the form of the content, but this manipulation does not change the fact that transmission is completed without a net change in form.

Finally, federal statute also provides a test to determine if providers of telecommunications are also providers of telecommunications service.[133] The telecommunications must be provided to the public for a fee to be a telecommunications service. Since fee-based IP transmission functionality is indeed a telecommunications service, providers of DSL or cable-modem service, as well as ISPs and IP backbone providers, provide telecommunications service, often as part of a service bundle. Once it is determined that an

[132] *See IP-Enabled Services*, WC Docket No. 04-36, Comments of Vonage Holdings Corp. (filed May 28, 2004) at p. 25.

[133] 47 U.S.C. § 153(46).

entity is a provider of telecommunications services, by definition that entity is a telecommunications carrier.[134] A more-detailed discussion of the FACTS Plan's handling of ISPs, which can generally be extended to IP, can be found in Section V.B.9. Regulators have statutory authority under Title II and a duty to regulate IP interconnection and to require USF contributions be made for IP services. The Plan recommends such a determination in order to create a viable IP environment.

3. Universal Service Funding Must Ultimately Become Infrastructure-Based in an IP World.

Title II provides the legal framework for the universal service support system. As described previously, the universal service support system is under pressure because of increased funding requirements and a limited contribution base. Unless changes are made, the assessment base will likely decline further as traffic migrates to IP. At the same time, funding requirements are rapidly escalating because of multiple ETC designations and decisions to move cost recovery from access charges to universal service. As additional ETCs are designated in rural areas, funding that the ILEC would use to upgrade infrastructure necessary to support broadband becomes portable to a competing ETC. Under current Commission rules the incumbent does not lose funding as a competing ETC receives funding. Given concerns about funding constraints on the universal service fund as a whole, however, eventually the current USF structure will become unsustainable. A more-dependable universal service system needs to be established that recognizes the costly, long-term nature of the investment necessary to implement and sustain broadband. Therefore, ARIC recommends that universal service support ultimately become

[134] 47 U.S.C. § 153(44).

infrastructure-based rather than services-based and that the assessment base be expanded to include all IP transmission services.

In summary, the FACTS Plan proposes the creation of universally applied, open-network protections by instituting interconnection requirements under the umbrella of Title II. Such protections should apply symmetrically to all providers of IP transmission services, including DSL, cable-modem and IP backbone providers, as well as ISPs. This new regulatory regime will ensure that all ISPs can compete on a level playing field in an open network environment. The Plan also proposes that universal service funding must be retargeted to broadband-capable, physical layer infrastructure. These changes should be endorsed in the Commission's Intercarrier Compensation Docket (CC 01-92) and effected in its ongoing Universal Service Docket (CC 96-45).

VII. "APPROPRIATE FEDERALISM" IS AN OVERRIDING GOAL IN THIS PRINCIPLED SOLUTION.

Through its comprehensive steps, the Plan attempts to chart a course that appropriately considers all parties – rural and urban customers, all carriers utilizing a variety of technologies, and federal and state regulators. The Plan is a measured, accomplishable proposal consistent with the goals established by the National Association of Regulatory Utility Commissioners ("NARUC") Study Committee on Intercarrier Compensation.[135]

In particular, the Plan's design recognizing the existing jurisdictional responsibilities of the Commission and states, under a national "umbrella" to achieve comparability from state to state, is very much in the spirit of NARUC's intercarrier compensation principle of "Appropriate Federalism." That term, as NARUC's Study Committee describes it, recognizes that any intercarrier compensation plan should recognize states' roles under existing law, especially in establishing intercarrier and retail rates, and "ensuring that revenues, cost assignment, and the risk of confiscation are jurisdictionally consistent for all classes of traffic."[136] The Plan strives to meet the "Appropriate Federalism" principle by maintaining specific state authority over intrastate retail and wholesale rates, as well as retaining state oversight over residual SEF. The cooperation between state and federal regulators is evident in three areas of the Plan: (1) setting of unified intercarrier compensation rates, (2) joint funding of SEF, and (3) determining an appropriate range for local service benchmarks. ARIC believes that preemption plans, which

[135] *See* "The National Association of Regulatory Utility Commissioners Study Committee on Intercarrier Compensation Goals for a New Intercarrier Compensation System," issued May 5, 2004.

[136] *Id*. at p. 3.

ignore or negate the existing role of state regulators, will require extensive law changes or be subject to lengthy court challenges.

Consistency with this "Appropriate Federalism" principle is not the only stated NARUC goal with which the FACTS Plan comports. In fact, the Plan is consistent with each NARUC goal for intercarrier compensation reform. ARIC applauds NARUC for its proactive approach in developing these goals and believes they largely encompass the characteristics that must be contained in any reasonable and fair intercarrier compensation plan. Those goals include the following:

- *Applicability*—A unified, cost-based usage rate for compensation of all traffic (interstate access, intrastate access and reciprocal compensation) ensures that LECs are compensated fairly for origination and termination on their network facilities. Unified rates are designed to recover an appropriate portion of network costs from all Retail Service Providers using the network. The Plan also has specific provisions related to the treatment of ISP-bound traffic and for toll traffic terminating from an ISP to the LEC network.

- *Economically Sound*—Cost-based rates are efficient because they cause neither over-consumption nor under-consumption. Unifying rates will provide carriers substantial reductions in intrastate access rates, which will in turn help eliminate the arbitrage that occurs when carriers misrepresent their minutes in order to pay the lowest rates. Costly arbitrations will be all but eliminated because intercarrier compensation tariff rates are established through due process. Consistent with federal law, the RSPP compensation framework ensures that when a Retail Service Provider utilizes the network resources of

a network provider, a compensation obligation arises. Since all Retail Service Providers pay on the same basis, no party will have an undue competitive advantage.

- *Appropriate Price Regulation*—Prices should be regulated where market power exists, both in the circuit-switched and packet-switched environments. The Plan also ensures that carriers have an opportunity to earn a reasonable return and have protections of due process through the tariffing of cost-based intercarrier rates. Price cap SLC increases also allow those carriers whose costs justify such an intercarrier compensation solution to lower their rates.

- *Consumer and Universal Service Protections*—Nationwide local rate ranges set by the Joint Board on Universal Service and implemented by the states, combined with unified SLCs at existing SLC caps, frame an end-user rate structure that is both comparable and affordable. Unified SLCs also allow low-cost carriers to recover most or all traffic-sensitive costs with moderate SLC increases. The Plan also prevents customer "rate shock" through a five-year local rate transition period.

The Act requires network providers to receive sufficient, sustainable and predictable revenues, which are essential to the maintenance and upgrade of networks used by all Retail Service Providers. The SEF provides such revenues. Federal and state joint funding mitigates the burden on low-population rural states and encourages regulators to commit USF dollars wisely. Consistent with previous regulatory policies, competitors will have access to support mechanisms under the conditions established by each state.

While other industry plans only address intercarrier compensation and universal service, the FACTS Plan is a holistic approach that addresses all sources of

telecommunications revenue in a measured manner. The FACTS Plan will constrain, rather than exacerbate, growth in federal USF through judicious ETC designations and minimal expansion of existing mechanisms. Local service rate benchmarks and intercarrier compensation payments also minimize the size of the SEF.

- *Achievability and Durability*—The Plan shows appropriate resiliency in the face of change by recognizing the existing circuit-switched conditions and by anticipating longer-term IP changes. Proposed compensation mechanisms and safeguards necessary to meet the social and competitive goals required by law are consistent with the IP market structure. Thus, the Plan provides a smooth transition from compensation in the circuit-switched environment to compensation in the IP environment.

- *Plan Implementation Prerequisites*—The specifics of Plan procedures will be framed by the Joint Boards and through a Joint Conference. Since ARIC is supplying a complete Rules set with its filing, the cost impact is readily identifiable once appropriate data are gathered. Federal support continues to ensure that local rates remain affordable, since federal USF mechanisms are substantially maintained.

By using the existing intercarrier compensation framework as a starting point, there will be fewer implementation or financial discontinuities. In comparison to other plans that revamp the intercarrier compensation structure, with all associated unforeseen market implications and compensation impacts, the FACTS Plan will be straightforward to implement.

VIII. IN COORDINATION WITH THE STATES, THE COMMISSION SHOULD PROCEED WITH A FURTHER NOTICE OF PROPOSED RULEMAKING TO FULLY EVALUATE THE FACTS PLAN.

The FACTS Plan provides the Commission and state regulators with a realistic, cooperative framework to address the ongoing intercarrier compensation quagmire in a way that recognizes the problem is far more complex than simply differing rates for services utilizing the same network functionality. ARIC firmly believes this Plan is superior to other alternatives presented to the Commission or in other public forums. Without changing the existing authority of the Commission and the states, the Plan sets forth a comprehensive series of measures that address all components of cost recovery.

A. The FACTS Plan Can Be Implemented on an Expedited Timeline.

ARIC believes the FACTS Plan provides the Commission and states a reasonable, comprehensive proposal to lower the highest intercarrier compensation rates in an expedited manner, yet can be implemented without a federal law change. Final Commission approval of the Plan will follow a series of actions by the Commission, the Joint Boards and the Joint Conference. The timeline for implementation of the Plan should be sequenced as follows and should be established in the Commission's order:

Upon Commission Order Specifying Implementation of the FACTS Plan, as Produced and Recommended by the Joint Boards and the Joint Conference

- The Commission approves a nationwide local rate floor and ceiling.
- States begin the process of adopting local service rate benchmarks.
- States begin the process of creating their respective SEFs.

Six Months After the Commission's Action Above

- New unified intercarrier compensation rates based on the Plan will be filed by individual companies and NECA. State Commissions and the Commission will then act upon the filed rates.
- New SLC levels for each state, set at the weighted-average statewide price cap SLC rates, take effect.
- First-year transitional local service rates take effect.
- A SEF or AEC takes effect. The SEF or AEC will be recalculated annually as companies further transition local rates toward benchmarks.

To assist the Commission, state regulators and all interested parties to better understand the mechanics of the Plan, Appendix E provides a proposed mark-up of affected portions of applicable Commission rules in the Code of Federal Regulations, Title 47. Those portions include Part 32 (Uniform System of Accounts for Telecommunications Companies), Part 36 (Jurisdictional Separations Procedures), Part 51(Interconnection), Part 54 (Universal Service), Part 61 (Tariffs) and Part 69 (Access Charges).[137] While ARIC has made a "good faith" attempt to make all necessary changes to the rules, the magnitude of the changes means that some items inadvertently may be misstated or omitted. In such cases, ARIC reserves the right to amend or modify the filed rules to be consistent with the Plan description.

B. <u>The FACTS Plan Is Superior to Other Intercarrier Compensation Reform Plans.</u>

Unlike other alternatives, the FACTS Plan is *legally superior* since it can be implemented without changing existing federal law. Indeed, rather than ignoring or "twisting" federal telecommunications law, the Plan embraces it. The Plan is also *economically superior* to other proposals because it creates proper pricing signals through the use of cost-based rates, rather than

[137] *See* Appendix E – Mark-up of Commission Rules in the Code of Federal Regulations, Title 47.

arbitrary, self-serving rates or no rates at all. Customers and ILECs in all states are also treated fairly by creating a balance among cost-recovery sources: local service rates, SLCs, intercarrier compensation rates and universal service obligations. The Plan is also *technically superior* because it utilizes existing retail-wholesale carrier relationships in affirming lawful network interconnection obligations. Other plans resort to complex network diagrams that attempt to identify who pays for what. ARIC believes such diagrams are confusing and unnecessarily distort who is the retailer and who is the wholesaler. Finally, the Plan meaningfully addresses IP compensation and interconnection, whereas other plans simply ignore IP. If service providers are allowed to bypass intercarrier compensation obligations through an IP label, then the current compensation system will collapse and the infrastructure will not be in place to support broadband IP, particularly in rural areas. Thus, addressing IP compensation is a critical component of intercarrier compensation reform.

With this filing and the accompanying proposed rules set, ARIC has provided the Commission and the states with a thoughtful recommendation deserving close consideration by regulators and other interested parties. ARIC respectfully requests that an appropriate next step would be for the Commission to issue forthwith a Further Notice of Proposed Rulemaking in this docket to seek comments and evaluation of the FACTS Plan. Additionally, it is recommended that the Commission charge the Joint Boards on Universal Service and Separations to convene and analyze the Plan, provide their independent comments and recommendations, and investigate what actions would be needed to implement the Plan. ARIC urges the Commission to issue an order approving the Plan thus resolving critical questions relating to intercarrier compensation and IP regulation within nine months of this filing.

Appendix A. Price Cap SLC Rates by State and NECA Pool Member SLC Rates by Band.

Price Cap SLC Line Counts

Qwest	Single Line Business/ Residential Access Lines	SLC RATE	Multi-line Business Access Lines	SLC RATE
Arizona	1,669,638	$ 6.50	697,535	$ 6.51
Colorado	1,699,843	$ 6.50	689,004	$ 8.42
Idaho	374,333	$ 6.50	150,226	$ 6.68
Iowa	665,075	$ 4.93	251,711	$ 4.93
Minnesota	1,259,893	$ 5.06	484,724	$ 5.06
Montana	243,746	$ 6.50	104,916	$ 9.20
Nebraska	213,561	$ 5.05	124,451	$ 5.05
New Mexico	588,823	$ 6.50	221,958	$ 9.20
North Dakota	114,531	$ 6.50	38,233	$ 8.51
Oregon	886,638	$ 6.50	284,104	$ 7.85
South Dakota	124,395	$ 6.50	66,881	$ 6.70
Utah	652,025	$ 6.50	266,752	$ 6.57
Washington	1,598,853	$ 6.12	588,077	$ 6.12
Wyoming	142,288	$ 6.50	74,606	$ 9.20
Cincinnati Bell				
All States	694,800	$ 5.37	273,288	$ 5.37
Bell South				
All States	14,648,318	$ 6.50	5,947,450	$ 6.76
SBC				
Arkansas, Kansas, Missouri, Oklahoma, Texas	8,805,095	$ 5.21	4,240,148	$ 5.21
California, Nevada	9,809,371	$ 4.42	6,035,724	$ 4.42
Illinois	3,210,076	$ 4.49	2,269,110	$ 4.49
Indiana	1,180,138	$ 5.51	713,708	$ 5.51
Michigan	2,159,146	$ 5.34	1,549,804	$ 5.34
Ohio	2,069,677	$ 5.38	1,095,015	$ 5.38
Wisconsin	1,068,895	$ 5.06	610,133	$ 5.06
VERIZON				
Massachusetts, Maine, New Hampshire, Rhode Island, Vermont	4,278,550	$ 6.38	1,922,141	$ 6.38
New York, Connecticut	7,350,463	$ 6.38	3,267,031	$ 6.38
California	3,220,588	$ 6.50	1,327,321	$ 7.61
Florida	1,704,061	$ 6.50	519,717	$ 8.98
Hawaii	472,700	$ 6.50	225,655	$ 8.34

Idaho	103,980	$	6.50	33,072	$	9.20
Illinois	612,263	$	6.50	199,209	$	8.85
Indiana	728,096	$	6.50	234,810	$	9.20
Michigan	558,439	$	6.50	153,848	$	9.20
North Carolina	268,635	$	6.50	86,519	$	9.20
Ohio	724,450	$	6.50	207,977	$	8.19
Oregon	345,797	$	6.50	101,511	$	9.20
Pennsylvania	520,605	$	6.50	148,880	$	8.11
South Carolina	153,455	$	6.50	50,058	$	9.20
Texas	1,127,078	$	6.50	491,538	$	9.20
Virginia	497,672	$	6.50	177,015	$	9.20
Washington	657,967	$	6.50	202,942	$	9.20
Wisconsin	301,845	$	6.50	91,847	$	7.65
DC	275,016	$	3.84	664,960	$	3.84
Delaware	382,497	$	6.42	182,917	$	6.42
Maryland	2,441,554	$	5.67	1,302,828	$	5.67
New Jersey	4,114,112	$	6.26	2,061,112	$	6.26
Pennsylvania	3,951,584	$	6.05	1,626,437	$	6.05
Virginia	2,075,790	$	6.29	1,293,233	$	6.29
West Virginia	625,538	$	6.50	187,422	$	8.27
SPRINT						
Florida	1,574,289	$	6.45	525,016	$	7.39
Indiana	197,727	$	6.23	51,393	$	9.20
Nevada	635,035	$	3.80	248,636	$	4.30
New Jersey	170,126	$	5.27	59,506	$	7.95
North Carolina	1,147,520	$	5.66	301,954	$	6.08
Ohio	467,619	$	5.73	130,079	$	6.95
Oregon	53,853	$	6.50	17,641	$	9.20
Pennsylvania	317,854	$	3.69	80,958	$	7.24
Tennessee	178,107	$	5.07	54,932	$	5.46
Texas	312,680	$	6.50	71,703	$	9.20
Virginia	321,696	$	6.50	86,534	$	9.20
Washington	59,086	$	6.50	26,394	$	9.20
Total Price Cap Lines	96,807,485			45,192,304		

* Line Count Source: 2003 Carrier-specific ARMIS Data
  Available at http://www.fcc.gov/wcb/ armis/carrier_filing_history/
* SLC Data Source:
  Verizon/GTE Telephone Operating Companies -- FCC No. 14
  Verizon/Bell Atlantic Telephone Companies -- FCC No. 1
  Verizon/Bell Atlantic Telephone Companies -- FCC No. 11 (Formerly NYNEX)
  Sprint Local Telephone Companies -- FCC No. 1
  Bell South Telecommunications -- FCC No. 1
  SBC/Ameritech Operating Companies -- FCC No. 2
  Pacific Bell Telephone Company -- FCC No. 1
  SBC/Southwestern Bell Telephone Company -- FCC No. 73
  Qwest/US West Communications -- FCC No. 5
  Cincinnati Bell Telephone Company -- FCC No. 35

NECA End User Tariff Members' SLCs by Band

Rate Band	Single Line Business/ Residential Access Lines	SLC Rate	Multi-line Business Access Lines	SLC Rate
1	678	$ 3.61	246	$ 3.61
2	65,384	$ 6.14	15,348	$ 6.14
3	43,800	$ 6.32	13,245	$ 6.32
4	-	$ 6.50	-	$ 6.63
5	-	$ 6.50	-	$ 6.88
6	-	$ 6.50	-	$ 7.13
7	5,710	$ 6.50	3,774	$ 7.30
8	7,098	$ 6.50	2,103	$ 7.55
9	34,780	$ 6.50	6,969	$ 7.90
10	103,452	$ 6.50	29,568	$ 8.10
11	32,768	$ 6.50	8,725	$ 8.40
12	13,547	$ 6.50	2,981	$ 8.55
13	48,064	$ 6.50	17,693	$ 8.88
14	51,385	$ 6.50	21,657	$ 9.11
15	7,982,291	$ 6.50	1,782,408	$ 9.20
Total Lines	**8,388,957**		**1,904,717**	

*Source: June 16, 2004 NECA Access Charge Filing

Appendix B. Example Calculation of Interoffice Switching and Transport Rates.

Description	Annual Amount	
Switching Rate		
Total Unseparated Embedded Switching Revenue Requirement	$3,922,419	
Less: 30% Allocation for Non-Traffic Sensitive Costs	$1,176,726	
Traffic Sensitive (TS) Unseparated Embedded Switching Revenue Requirement	$2,745,693	
Percent Allocated to Interoffice (1)	50.32%	
Interoffice TS Unseparated Embedded Switching Rev. Requirement	$1,381,633	
Switched Access and Reciprocal Compensation Minutes of Use (1)	222,191,713	
Interoffice TS Unseparated Embedded Switching Rate	**$0.0062**	
Transport Rate (3)		
Total Unseparated Embedded Interoffice Transport Revenue Requirement	$2,980,373	
Switched Access and Reciprocal Compensation Minutes of Use (2)	222,191,713	
Unseparated Embedded Switched Transport Rate	**$0.0134**	
Total Switching and Transport rate per minute	**$0.0196**	
(1) Switching Allocation-Frozen 2000 DEM	**Minutes**	**Percent**
Interstate DEM	103,265,907	22.75%
Intrastate DEM	125,185,648	27.57%
Total Interstate and Intrastate DEM	228,451,555	50.32%
Local DEM	225,540,328	49.68%
Total DEM	453,991,883	100.00%
(2) Switched Access Minutes	192,756,713	
Reciprocal Compensation Minutes	29,435,000	
Total Switched and Reciprocal Compensation Minutes	222,191,713	

(3) This rate calculation represents an aggregate transport rate. In an actual filing, the transport rate elements used in the interstate rate structure would be calculated.

Appendix C. Calculation of Benchmark Range.

Calculation of Mean and Standard Deviation: Description	Value Including Touch Tone	Value Excluding Touch Tone
Mean	14.61	14.57
Standard Deviation	3.65	3.65
Minimum	9.03	8.45
Maximum	26.95	26.95
Two Standard Deviations above and below:		
Average - 2*Std Dev	7.31	7.27
Average + 2*Std Dev	21.91	21.86
Percent to Average (2*Std Dev Below)	0.50	0.50
Percent to Average (2*Std Dev Above)	1.50	1.50
One Standard Deviation above and below:		
Average - 1*Std Dev	10.96	10.92
Average + 1*Std Dev	18.26	18.21
Percent to Average (1*Std Dev Below)	0.75	0.75
Percent to Average (1*Std Dev Above)	1.25	1.25

Data Supplied			Statistics for Rate including Touch Tone			Statistics for Rate excluding Touch Tone		
Unlimited Charge	Touch Tone	Weight	Unlimited Charge + Touch Tone	(Unlimited Charge + Touch Tone) * Weight	Weight * (Observation - Mean)**2	Unlimited Charge	(Unlimited Charge) * Weight	Weight * (Observation - Mean)**2
$16.30	-	1.00897982	16.30	0.16	0.03	$16.30	0.16	0.03
$12.05	-	6.99986000	12.05	0.01	0.00	$12.05	0.01	0.00
$13.18	$0.00	7.31985360	13.18	0.10	0.01	$13.18	0.10	0.01
$15.17	$0.00	9.49981000	15.17	0.14	0.00	$15.17	0.14	0.00
$20.26	$0.00	4.04158583	20.26	0.01	0.01	$20.26	0.01	0.01
$10.69	$0.00	3.36056712	10.69	0.04	0.05	$10.69	0.04	0.05
$10.69	$0.00	7.11985760	10.69	0.08	0.11	$10.69	0.08	0.11
$10.69	$0.00	8.41983160	10.69	0.09	0.13	$10.69	0.09	0.13
$17.25	$0.00	5.53956499	17.25	0.10	0.04	$17.25	0.10	0.04
$10.69	$0.00	4.55287793	10.69	0.49	0.70	$10.69	0.49	0.68
$10.69	$0.00	7.09621367	10.69	0.08	0.11	$10.69	0.08	0.11
$10.69	$0.00	7.54984900	10.69	0.08	0.12	$10.69	0.08	0.11
$17.25	$0.00	1.16297674	17.25	0.20	0.08	$17.25	0.20	0.08
$10.69	$0.00	8.54982900	10.69	0.09	0.13	$10.69	0.09	0.13
$10.69	$0.00	1.42133601	10.69	0.15	0.22	$10.69	0.15	0.21
$10.69	$0.00	1.18897622	10.69	0.13	0.18	$10.69	0.13	0.18
$14.96	$0.00	1.01491819	14.96	0.02	0.00	$14.96	0.02	0.00
$14.96	$0.00	7.58984820	14.96	0.11	0.00	$14.96	0.11	0.00
$14.96	$0.00	6.48493181	14.96	0.10	0.00	$14.96	0.10	0.00
$13.53	$0.00	4.47991040	13.53	0.06	0.01	$13.53	0.06	0.00
$12.53	$0.00	8.83982320	12.53	0.11	0.04	$12.53	0.11	0.04
$12.78	$0.00	1.78596428	12.78	0.23	0.06	$12.78	0.23	0.06
$11.04	$0.00	8.30983380	11.04	0.09	0.11	$11.04	0.09	0.10
$12.10	$0.00	1.15597688	12.10	0.14	0.07	$12.10	0.14	0.07
$10.42	$0.00	9.92980140	10.42	0.10	0.17	$10.42	0.10	0.17
$14.95	$0.00	9.76980460	14.95	0.15	0.00	$14.95	0.15	0.00
$17.45	$0.00	9.27981440	17.45	0.16	0.07	$17.45	0.16	0.08
$14.10	$1.65	3.43993120	15.75	0.05	0.00	$14.10	0.05	0.00
$12.55	-	4.43591128	12.55	0.56	0.19	$12.55	0.56	0.18
$19.00	-	9.00981980	19.00	0.17	0.17	$19.00	0.17	0.18
$19.00	-	8.72982540	19.00	0.17	0.17	$19.00	0.17	0.17
$11.51	$0.00	6.27987440	11.51	0.07	0.06	$11.51	0.07	0.06
$15.94	$0.00	9.00981980	15.94	0.14	0.02	$15.94	0.14	0.02
$10.26	$0.00	1.08597828	10.26	0.11	0.21	$10.26	0.11	0.20
$18.40	$0.00	9.43981120	18.40	0.17	0.14	$18.40	0.17	0.14
$12.64	$0.00	9.49981000	12.64	0.12	0.04	$12.64	0.12	0.04
$12.64	$0.00	9.63980720	12.64	0.12	0.04	$12.64	0.12	0.04
$17.19	$0.00	9.47981040	17.19	0.16	0.06	$17.19	0.16	0.07
$16.26	$0.00	1.20097598	16.26	0.20	0.03	$16.26	0.20	0.03
$19.30	$0.49	1.73696526	19.79	0.34	0.47	$19.30	0.34	0.39
$19.30	$0.49	4.36991260	19.79	0.09	0.12	$19.30	0.08	0.10
$19.30	$0.49	1.02197956	19.79	0.20	0.27	$19.30	0.20	0.23
$14.31	$0.00	2.49695006	14.31	0.36	0.00	$14.31	0.36	0.00
$13.82	$0.00	1.07497850	13.82	0.15	0.01	$13.82	0.15	0.01
$13.65	$0.00	8.54982900	13.65	0.12	0.01	$13.65	0.12	0.01
$13.96	$0.00	1.06897862	13.96	0.15	0.00	$13.96	0.15	0.00
$14.76	$0.00	1.11797764	14.76	0.17	0.00	$14.76	0.17	0.00
$17.95	$0.00	1.24697506	17.95	0.22	0.14	$17.95	0.22	0.14
$11.27	$0.00	7.56984860	11.27	0.09	0.08	$11.27	0.09	0.08
$9.03	$0.00	1.04797904	9.03	0.09	0.33	$9.03	0.09	0.32
$11.27	$0.00	1.37597248	11.27	0.16	0.15	$11.27	0.16	0.15
$16.73	$0.00	4.70990580	16.73	0.08	0.02	$16.73	0.08	0.02
$18.15	$0.00	1.05097898	18.15	0.19	0.13	$18.15	0.19	0.13
$8.45	$1.00	1.31666801	9.45	0.01	0.04	$8.45	0.01	0.05
$13.50	$0.00	4.96990060	13.50	0.07	0.01	$13.50	0.07	0.01
$19.64	$0.00	9.23981520	19.64	0.18	0.23	$19.64	0.18	0.24
$22.61	$0.00	7.71984560	22.61	0.17	0.49	$22.61	0.17	0.50
$18.19	$0.00	2.23323596	18.19	0.04	0.03	$18.19	0.04	0.03
$19.64	$0.00	0.10005799	19.64	1.97	2.53	$19.64	1.97	2.58
$18.19	$0.00	2.14667643	18.19	0.04	0.03	$18.19	0.04	0.03
$11.71	$0.00	9.66980660	11.71	0.11	0.08	$11.71	0.11	0.08
$13.95	$0.00	9.60980780	13.95	0.13	0.00	$13.95	0.13	0.00
$11.91	$0.00	1.19697606	11.91	0.14	0.09	$11.91	0.14	0.08
$14.25	$0.00	8.95982080	14.25	0.13	0.00	$14.25	0.13	0.00
$16.95	$0.00	7.86984260	16.95	0.13	0.04	$16.95	0.13	0.04

Appendix D. Glossary of Terms

AEC	Access Equalization Charge
ARIC	Alliance for Rational Intercarrier Compensation
CALLS	Coalition for Affordable Local and Long-distance Service
CFA	Consumer Federation of America
CLEC	Competitive Local Exchange Carrier
COBAK	Central Office Bill and Keep
COMMISSION	Federal Communications Commission
DEM	Dial Equipment Minute
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
EAS	Extended Area Service
EPG	Expanded Portland Group
ESP	Enhanced Service Provider
ETC	Eligible Telecommunications Carrier
FACTS	Fair Affordable Comprehensive Telecom Solution
HCL	High Cost Loop
ICF	Intercarrier Compensation Forum
ICLS	Interstate Common Line Support

ILEC	Incumbent Local Exchange Carrier
IP	Internet Protocol
ISP	Internet Service Provider
IXC	Interexchange Carrier
LEC	Local Exchange Carrier
LSS	Local Switching Support
LTR	Local Transport Restructure
MAG	Multi-Association Group
MTA	Major Trading Area
NARUC	National Association of Regulatory Utility Commissioners
NECA	National Exchange Carrier Association
NPRM	Notice of Proposed Rulemaking
NTCA	National Telecommunications Cooperative Association
OSI	Open System Interconnection
PLAN	The FACTS Plan
PSTN	Public Switched Telephone Network
QoS	Quality of Service
RBOC	Regional Bell Operating Companies
RSPP	Retail Service Provider Pays

RTF	Rural Task Force
SEF	State Equalization Fund
SLC	Subscriber Line Charge
TIC	Transport Interconnection Charge
USF	Universal Service Fund
VoIP	Voice over Internet Protocol
VPN	Virtual Private Network

Appendix E. Mark-up of Commission Rules in the Code of Federal Regulations, Title 47.

The proposed Commission Rules for Parts 32, 36, 51, 54, 61, and 69 are filed as a separate document due to file size constraints.