

in this regard is necessary to remedy ten years of LEC recalcitrance in honoring even basic interconnection principles, such as mutual compensation, and will help fulfill Congress' objective of "foster[ing] the growth and development of mobile services, that, by their nature, operate without regard to state lines as an integral part of the national telecommunications infrastructure."⁵⁷

In the event that the Commission declines to exercise its Section 332 authority over CMRS-LEC interconnection rates, however, it should find that LECs owe the same obligations to CMRS providers as they do to other telecommunications carriers, and that CMRS providers may avail themselves of any pricing standards and interconnection arrangements developed pursuant to Sections 51 and 252.⁵⁸ As the Commission acknowledges (§168), CMRS providers fall within the definition of "telecommunications carrier[s]" set forth in Section 3(49) of the 1996 Act.⁵⁹ While the statute explicitly excludes CMRS providers from the definition of "local exchange carrier,"⁶⁰ there is no basis to exclude CMRS providers from the definition of "requesting telecommunications carriers" seeking interconnection for the transmission and routing of "telephone exchange service" for the

⁵⁷ H.R. Rep. No. 103-111, 103d Cong., 1st Sess. 260 (1993).

⁵⁸ Regardless of whether the Commission asserts exclusive authority over all LEC-to-CMRS interconnection rates, it is required to retain jurisdiction over the physical attributes of LEC-to-CMRS interconnection pursuant to Section 332(c)(1)(B). That section requires the Commission "[u]pon reasonable request of any person providing commercial mobile service" to order common carriers "to establish physical connections with such service pursuant to the provisions of section 201" of the Act.

⁵⁹ Telecommunications carriers providing telecommunications services have the right to reciprocal compensation under Section 251(b)(5) and may obtain unbundled elements from incumbent LECs under Section 251(c)(3). In addition, Section 252(i) requires LECs to make available any interconnection, service, or network element provided under an agreement approved pursuant to Section 252 on the same terms and conditions to "any other requesting telecommunications carrier."

⁶⁰ See Section 3(44). Congress declined to classify CMRS providers as LECs, but authorized the Commission to determine whether, and the extent to which, CMRS providers should be classified as LECs. See also Section 332(c)(3)(A)(ii).

purposes of Section 251(c)(2). Even if Sections 251 and 252 were permitted to govern LEC-to-CMRS interconnection rates, the Commission must adopt implementation rules that ensure that the states carry out their responsibilities under these provisions in a manner that is consistent with federal authority over CMRS rate and entry regulation under Section 332(c). Section 332(c) prohibits state entry and rate regulation of CMRS, except under very limited circumstances. Pursuant to Section 332(c), CMRS providers should not have to relinquish the federally-conferred freedom from entry and rate regulation in order to exercise their interconnection and pricing rights under Sections 251 and 252.⁶¹

⁶¹ Similarly, Section 252(i) does not allow states to require telecommunications carriers to comply with additional regulations as a condition to entering into agreements for interconnection and network elements that are equivalent to agreements made between LECs and other carriers. Today, CMRS carriers have been unable to receive reciprocal compensation and nondiscriminatory cost-based rates in some states where these interconnection features are available to ALECs because state PUCs have made certification as a ALEC and submission to state rate and entry authority a prerequisite for obtaining such an interconnection arrangement. See, e.g., State of Connecticut Department of Public Utility Control, DPUC Investigation into Wireless Mutual Compensation Plans, Docket No. 95-04-04, Decision, September 22, 1995; California Public Utilities Commission, Competition for Local Exchange Service, D.95-07-054, R.95-04-043, I.95-04-044, at 15, 35 (July 24, 1995).

III. THE COMMISSION SHOULD ADOPT SPECIFIC TSLRIC PRICING STANDARDS NECESSARY TO ENABLE STATES AND PARTIES TO CARRY OUT THEIR IMPORTANT ROLES IN BRINGING THE BENEFITS OF EXCHANGE COMPETITION TO CONSUMERS NATIONWIDE.

AT&T strongly supports the Commission's tentative conclusion that it should provide the states, as well as ILECs and their potential exchange competitors, with the specific economic-cost-based pricing guidance that they need to fulfill the procompetitive policies of the Act. Defining the basic network elements that must be offered on an unbundled basis is only part of the task of establishing the regulatory framework that will enable firms to become local service providers. Indeed, even if the Commission's rules are perfect in all other respects, they will be meaningless if ILECs are able to charge inflated prices. See NPRM ¶134 ("setting rates too high would contravene Congress' desire to allow new entrants to compete by purchasing, at cost-based rates, unbundled elements or services of the incumbent LEC network").

Establishing appropriate pricing standards may thus be the single most important task of the Commission in this proceeding. Absent clear and binding pricing constraints, the ILECs' current monopoly control over local exchange facilities will enable them strategically to set prices above economic costs in ways that may prevent entry or squeeze competitors and threaten the emergence of retail competition.⁶² Uncoordinated price arbitrations in each of the 50 states --

⁶² This point is starkly illustrated by current prices charged by the few ILECs which have begun, usually in response to state commission orders, to unbundle the local loop. For example, in New York City, NYNEX charges new entrants \$24.75 for the loop alone, in addition to a \$2.00 monthly charge to provide number portability. The total per line monthly charge, \$26.75 (excluding collocation and other non-recurring charges), is substantially more than twice the entire monthly charge (\$10.10) by NYNEX to customers for local service. Entry at these rates, which are not aberrations but are typical of ILEC charges for unbundled elements, is obviously not feasible.

hindered by the same ILEC efforts to thwart competition that led Congress to impose federal standards -- would yield a patchwork of differing and unpredictable pricing outcomes that would render effective voluntary solutions all but impossible.⁶³ More fundamentally, the resulting costs and uncertainty of any such approach would, in contravention of the central competitive goals of the Act, deter efficient entry and deny consumers the benefits of additional choices and lower prices. The federal/state pricing partnership created by Sections 251 and 252 of the 1996 Act is designed to deter such anticompetitive outcomes, but the states can effectively play their central role of arbitrating prices only if the Commission meets its Section 251 duty to provide a clear and uniform framework of efficient principles on which the states can base their individual decisions.

A. TSLRIC Is The Appropriate Pricing Standard For Unbundled Network Elements, Interconnection And Collocation.

Prices in competitive markets invariably are determined by and driven toward economic cost (including the relevant cost of capital), because prices that exceed costs attract entry or expansion by other firms. See NPRM ¶124 & n.164 (citing economic literature). Thus, Congress' underlying goal of competitive exchange markets compelled its decision in the 1996 Act to embrace economic-cost-based rates for the pricing of ILEC facilities and functionalities.

Specifically, Section 251 requires that ILEC rates be "just, reasonable, and nondiscriminatory." 1996 Act, § 251(c)(2)(D) and c(3) "[J]ust and reasonable" rates, the 1996

⁶³ Because of the ILECs' monopoly control, the private negotiations contemplated by the Act can yield efficiency-maximizing prices that benefit consumers only if the ILECs know in advance that failure to reach voluntary agreements will lead to arbitrated or regulated resolutions that are predictable and exclude any hope for one-sided monopoly outcomes. See May 14, 1996 Affidavit of William J. Baumol, Janusz A. Ordover and Robert D. Willig ¶¶56-58 ("Baumol, Ordover & Willig Aff.") (attached hereto as Appendix C).

Act makes clear, "shall be based on the cost . . . of providing the interconnection or network element" in question. Id., § 252(d)(1)(A) (emphasis added). The Act further clarifies that rates must be "determined without reference to a rate-of-return or other rate-based proceeding." Id. As one ILEC has explained, this "admonition against relying on rate-based proceedings is direction from Congress to look at forward-looking costs,"⁶⁴ -- i.e., true economic costs -- and not backward-looking historical expenditures of the sort considered in traditional rate-of-return regulation preempted by the Act.⁶⁵

There is broad agreement (NPRM, ¶124) that these true economic costs should be determined through a long run incremental cost ("LRIC") methodology. LRIC, in the Commission's words, includes "the full amount of incremental investment and expenses which would be incurred by reason of furnishing additional quantities of service," American Tel. & Tel. Co., 55 F.C.C. 2d 224, 231 n.18 (1975), and thus reflects all costs an efficient supplier in a competitive market would consider in deciding whether to furnish the additional quantities of service.

Here, however, ILECs will be providing unbundled network elements and interconnections, not merely the individual services that use those elements, and thus the relevant question is the incumbent's cost of producing the entire demand for the network elements in question. In these circumstances, the appropriate LRIC methodology is Total Service Long Run

⁶⁴ March 25, 1996 Ameritech ex parte submission at 2 (emphasis added) ("Ameritech Ex Parte").

⁶⁵ In this regard, it is important to recognize that "price cap" rates unquestionably are determined by reference to historical embedded expenditures because those "costs" were used to set the initial rates under price caps.

Incremental Cost, or "TSLRIC." The TSLRIC of an unbundled network element is the sum of all of the additional costs that an efficient supplier would incur to supply all of the output of that element that is demanded by all uses and users of that element, assuming that the supplier continued to provide its other network elements, services and functionalities. Because it assumes that the supplier does not currently provide the network element at all and thus must construct (and operate) all element-specific facilities necessary to produce that network element, TSLRIC, unlike LRIC, includes all element-specific fixed costs.

TSLRIC is compatible with both the 1996 Act and the Commission's own congruent goal of pricing policies that "replicate market-based incentives and prices" and thereby "ensure the availability to consumers of goods and services at lower overall cost" and "an efficient level of innovation . . . as well as the efficient entry of new firms."⁶⁶ TSLRIC is also an essential

⁶⁶ See, e.g., Notice of Proposed Rulemaking, Interconnection Between Local Exch. Carriers and Commercial Mobile Radio Serv. Providers, 1996 FCC LEXIS 77, at *4-5 (January 11, 1996) ("CMRS Order"); *id.*, ¶4 ("we adopt policies that are intended to create or replicate market-based incentives and prices for both suppliers and consumers").

By contrast, the Efficient Component Pricing Rule ("ECPR") would not replicate market-based prices for retail consumers of telecommunications services, and the Commission's tentative conclusion that ECPR would not be an appropriate standard in this context (¶147) is therefore certainly correct. ECPR pricing of wholesale elements may be appropriate where the incumbent's prices for retail services are held to economic cost. However, the passage of the 1996 Act reflects Congress' recognition that regulation has not succeeded in so constraining ILECs' retail rates, and that only competition at the retail level can do so. In these circumstances, including ECPR "opportunity costs" in the prices of ILEC network elements could allow ILECs to lock in existing monopoly rents and inefficiencies, thereby depriving retail consumers of the benefits of competition sought by the 1996 Act. See, e.g., U S WEST International, "A Framework for Effective Competition: A Response to OFTEL's Consultative Document at 29 (March 30, 1995) ("U S WEST OFTEL Submission") ("The ECPR depends on a number of assumptions about the market-place which, in the case of telecommunications, are clearly not valid It is effectively a tool to protect incumbent monopolists"). See also Baumol, Ordober, Willig Aff., ¶¶20-24 (explaining that if ECPR principles were applied to appropriate cost-based end-user prices, network element prices would be no higher than TSLRIC).

protection against ILEC efforts to prevent entry or squeeze competitors by pricing network elements above economic cost; it forces each carrier to compete on its actual efficiency by allowing pricing in monopoly exchange markets to mimic competitive market pricing.

TSLRIC is not, as some ILECs would mischaracterize it, a "marginal" costing approach. Rather, TSLRIC-based pricing as defined here is fully compensatory, as ILECs have conceded in other proceedings.⁶⁷ TSLRIC-based pricing will provide ILECs with the opportunity to recover all of the additional costs an efficient supplier would incur to build and operate an exchange network providing the network element functionalities that the Act unbundles, including a "reasonable profit" measured by the costs of attracting capital,⁶⁸ and, as discussed in more detail below, costs that are "common" to or "shared" between two or more network elements.

Having been designed for use in the regulatory process, TSLRIC is also administratively manageable. In this regard, TSLRIC (and related economic-cost-based methodologies) are routinely employed in regulatory proceedings and arbitrations.⁶⁹ TSLRIC has

⁶⁷ See, e.g., Prepared Rebuttal Testimony of Frank R. Kolb on behalf of BellSouth Telecommunications, Inc., Docket No. 5258-U (Ga. PSC, submitted November 7, 1994) ("as long as revenue is above total long run incremental cost . . . a service is compensatory and is not subsidized"); Prepared Testimony of Richard D. Emmerson on behalf of Bell Atlantic, Docket No. M-940587 at 18 (Pa. PUC, submitted Oct. 12, 1995) ("When [Bell Atlantic] is called upon to provide evidence that there is no subsidy accruing to a competitive service, it properly compares that service's revenues to the TSLRIC of that service").

⁶⁸ See 1996 Act, § 252(d)(1)(B) (just and reasonable rates "may include a reasonable profit") (emphasis added).

⁶⁹ The Surface Transportation Board (and its predecessor, the Interstate Commerce Commission), for example, have successfully used such an approach for years in determining the prices railroads may charge for the use of their bottleneck facilities, and pricing arbitrations that rely on forward-looking cost studies (of the cost to construct and operate an efficient rail network to provide the requested services) have proved a commonplace and effective means of settling pricing disputes that the parties have been unable to resolve through voluntary negotiations. See, e.g., West Tex. Util.

(footnote continued on following page)

been adopted or proposed in the telecommunications context by nearly half of the states⁷⁰ and by the Commission itself (here and elsewhere).⁷¹ And, perhaps most tellingly, TSLRIC has been advocated as an appropriate and workable pricing standard for interconnection by the ILECs themselves in proceedings in which they have found themselves in the positions of new entrants, rather than incumbents.⁷²

(footnote continued from previous page)

Co. v. Burlington Northern R.R., Dkt. No. 41191 (Surface Transp. Bd. May 3, 1996); Bituminous Coal -- Hiawatha, Utah to Moapa, Nevada, 10 I.C.C.2d 259 (1994); Omaha Pub. Power Dist. v. Burlington Northern R.R., 3 I.C.C.2d 123 (1986). See also Baumol, Ordovery & Willig Aff. ¶58.

⁷⁰ See, e.g., Decision, DPUC Investigation into the Southern New England Tel. Co.'s Cost of Providing Service, 1995 WL 509180, at *25 (Conn. DPUC June 15, 1995) (ordering SNET to submit "a TSLRIC(SNET) for all of its services, including unbundled services"); Decision, Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks, 1995 Cal. PUC LEXIS 929, ¶¶62-65, 68, 94-95 (Cal. PUC Dec. 6, 1995) (ordering Pacific Bell and GTE California Incorporated to perform TSLRIC studies for, *inter alia*, unbundled network elements); Order, Investigation of the Communications Infrastructure of the State of Hawaii, 1995 WL 553009 (Haw. PUC Aug. 14, 1995) (ordering GTE Hawaiian Tel. to unbundle and to submit TSLRIC estimates for each serving wire center, each unbundled service element, and certain groups of network functions); Opinion and Order, Methodology to Determine Long Run Incremental Costs, 156 P.U.R. 4th 1 (Mich. PUC 1994) (establishing TSLRIC as the test for cross-subsidization and requiring certain ILECs to submit TSLRIC studies of specified basic network elements); Decision, Application of MFS Intelnet of Pennsylvania, Inc. for a Certificate of Public Convenience and Necessity, 1995 Pa. PUC LEXIS 87, at *67 (Pa. PUC Oct. 4, 1995) (directing that the cost of unbundled facilities be measured by TSLRIC); Decision, Washington Util. and Transp. Comm'n. v. US West Communications, Inc., Dkt. No. UT-950200, slip op. at 80-82, 95, 132 (Wash. UTC April 11, 1996) ("Washington State Decision") (adopting TSLRIC as cost standard).

Arizona, California, Colorado, Connecticut, Hawaii, Illinois, Iowa, Louisiana, Michigan, Minnesota, Nevada, Ohio, Oregon, Tennessee, Texas, Utah, Vermont, Washington, West Virginia, Wisconsin, and Wyoming are among the states that have have embraced TSLRIC in some context.

⁷¹ See CMRS Order ¶¶47-48; NPRM ¶125.

⁷² See, e.g., U S WEST OFTEL Submission at 2 (rates "should be calculated through a 'bottom up' approach which identifies the cost drivers and their long run incremental cost (LRIC), including

(footnote continued on following page)

At least one operational model to estimate the TSLRIC of providing unbundled network elements already is being developed. Building upon (and employing much of the underlying logic and inputs of) earlier efforts to develop a costing model for local exchange facilities and functionalities championed by a number of ILECs, among others, the telecommunications experts at Hatfield Associates, Inc. are (at the request of AT&T and MCI) developing a detailed and realistic TSLRIC network element pricing model (Appendix E hereto). The Hatfield Model, which considers, *inter alia*, population demographics, and network architecture, sizing, technology and cost factors to produce highly deaveraged TSLRIC estimates, provides the states and interested parties with a tool to implement the Commission's economic-cost-based pricing standards.⁷³ In particular, the Hatfield Model uses the best available data about ILEC costs (likely overstated, as a result of unreflected recent changes to newer technology or enhanced efficiencies), and applies conservative TSLRIC calculations (that assign at least as much to the TSLRIC as pure economic theory would require). The model -- which is virtually complete (and is being further refined) -- produces, for each state, actual (and likely overstated) TSLRIC figures for

(footnote continued from previous page)

the appropriate contribution to the cost of capital"); Comments of BellSouth Europe to the European Commission's Green Paper on the Liberalization of Telecommunications Infrastructure and Cable Television Networks at 7 (March 15, 1995) ("Interconnection charges should reflect cost causation and, as such, should be based on long-run incremental costs (LRIC)").

⁷³ See Baumol, Ordoover & Willig Aff., ¶¶39-51. See also, e.g., Washington State Decision at 90, 132, 134-35 (endorsing earlier version of the Hatfield Model and rejecting US West cost studies); Order, Formal Investigation to Examine and Establish Updated Universal Service Principles and Policies for Telecommunications Services, 1995 WL 809842, at *4-5 (Pa. PUC Aug. 31, 1995) (endorsing earlier version of the Hatfield Model for use in the universal service context).

each of six population density zones (reflecting cost differences across low and high density regions within the state).

For all of these reasons, TSLRIC is the pricing methodology most consistent with the language and procompetition goals of the 1996 Act, and the Commission should, accordingly, adopt that standard as the uniform measure of just, reasonable and nondiscriminatory rates for unbundled network elements, interconnection and collocation.⁷⁴

The Commission also seeks comment on "the benefits, if any" of specifying generic rate ceilings based on some existing tool or methodology other than TSLRIC. The costs to competition and consumer welfare would far outweigh any benefits of that approach. First, given the present ability of parties and state arbitrators to estimate directly and manageably the relevant TSLRICs, there is little to be gained by adopting an economic cost "surrogate" or "proxy." See NPRM ¶136.⁷⁵ The costs, by contrast, would be quite high.⁷⁶ As the NPRM acknowledges, "to

⁷⁴ Although, for illustrative purposes, AT&T's comments focus on the application of TSLRIC pricing principles to the ILECs' provision of unbundled network elements, those principles apply equally to interconnection and collocation, and, for the reasons summarized in Part I above, to interstate access as well.

In this regard, the Commission should, at a minimum, clarify: (1) that collocation, which is one feasible method of interconnection and merely describes where and how the interconnection will take place, is inseparable from the Act's guarantee of interconnection "at any feasible point" at "just, reasonable, and nondiscriminatory" -- i.e., TSLRIC-based -- rates; and (2) that the TSLRIC of interconnection (including collocation) is the forward-looking, efficiency-maximizing cost of providing the requested physical connections.

⁷⁵ For largely the same reasons, the Commission should not adopt a "transitional pricing mechanism during an interim time period" before implementing TSLRIC pricing. See NPRM ¶132. Models that produce reliable estimates of TSLRIC are already available, and Section 252 of the Act establishes tight deadlines for state arbitration decisions.

⁷⁶ To the extent the Commission is concerned that frequent rate proceedings could be administratively burdensome, a price cap approach that set initial rates at the appropriate TSLRIC levels could be mandated or allowed.

be consistent with the pricing principles of the 1996 Act, any [such] mechanism" would have to "make it possible for competitors efficiently to enter the local exchange market, even if all elements are priced at the rate ceiling" and "constrain incumbent LECs' ability to preclude efficient entry, for example, by manipulating overheads and the allocation of common costs between services." Id. ¶135.⁷⁷ None of the price "ceilings" proposed in the NPRM remotely meets those standards, because each relies on historical "embedded" ILEC expenditures that bear no relation to true economic costs, and none measures costs associated with the specific network elements at issue, thus providing virtually unlimited opportunity for anticompetitive overhead and "common" or "shared" cost misallocations.⁷⁸ Indeed, the only valid "proxy" identified in the NPRM -- the Hatfield Model (NPRM ¶137 & n.187) -- is not a proxy at all, but a direct application of TSLRIC principles.

⁷⁷ Cf. Burlington Northern R.R. v. ICC, 985 F.2d 589 (D.C. Cir. 1993) (overturning regulatory use of a proxy for stand-alone costs absent evidence that the proxy generated good approximations of stand-alone cost).

⁷⁸ The ILECs' existing interstate access charges (NPRM ¶¶138-41), for example, are based on embedded, not economic, costs, are the product of complex and discretionary "regulatory allocations," id. ¶139, and reflect subsidies. The result is access rates which bear no relation to the cost of providing access itself, much less the cost of providing unbundled network elements, interconnection, and collocation. Further, applying such an approach at the network element level would, as the NPRM acknowledges, require an element-by-element analysis of proper deductions from, adjustments to and combinations of the various access components if rates were, as required by the 1996 Act, to relate even generally to the costs of providing elements. It is far from clear that such an approach would be more "easily-implemented" (NPRM, ¶139) than simply carrying out the appropriate TSLRIC cost studies in the first instance. Thus, rather than use inflated access rates as a surrogate for economic-cost-based pricing of network elements, the Commission should instead require economic-cost-based pricing for access rate elements as part of its forthcoming Part 69 reform proceeding.

TSLRIC, in contrast to all of the other approaches described in the NPRM, directly measures economic costs and meets each of the constraints the Commission has identified as necessary to be consistent with the pricing principles of the 1996 Act. The Commission should therefore direct states to accept the best evidence of TSLRIC in each case. Further, to assure that no ILEC can use the alleged lack of a viable TSLRIC model as a pretext for delay or resort to embedded cost-based "estimates" of economic costs, the Commission should clarify that where an ILEC fails to proffer an appropriate forward-looking, efficiency-maximizing TSLRIC-based estimate, the states should accept the Hatfield or other estimate submitted by the requesting carrier.

Moreover, the Commission can also consider using the Hatfield Model as an explicit "litmus test" for determining whether prices proposed for unbundled elements in particular states comply with the Act's requirements. The Hatfield Model is especially well suited to such a purpose not only because it produces over 300 individualized TSLRIC calculations (i.e., six density zones for each of the 50 states), but because its conservative design and potentially overstated input data guarantees that ILECs will be at least appropriately compensated. Under the litmus test approach, a rate being considered by the Commission in enforcement, complaint, Section 271, or other such proceedings can be presumed compliant if it is at or below the rate produced by application of the Hatfield Model. If an ILEC proposes a higher rate, it would bear the burden of proving that, for some reason, the Hatfield Model does not, in that instance, accurately reflect TSLRIC principles. Correlatively, a similar burden of proof must be met by any party proposing a lower rate than one that already is at or below the Hatfield Model result.

B. The Commission Should Prescribe A Limited Number Of Specific Rules To Define The TSLRIC Standard And To Deter ILEC Abuses Of That Standard.

Adopting the TSLRIC standard in name alone would do little to constrain ILEC pricing abuses. See NPRM ¶126. To assure the meaningful TSLRIC results upon which workable competition depends, there are certain well-accepted economic principles that must be incorporated into the prescribed definition of TSLRIC.⁷⁹ Accordingly, AT&T will focus here on the limited set of specific TSLRIC rules that the Commission must promulgate to ensure that parties bargain in good faith, that the rates established or approved by states are just, reasonable and nondiscriminatory, and that the procompetition goals of the Act are not thwarted. Each of these rules is well-accepted and administratively manageable, and each respects the roles that Congress envisioned for private negotiations and state arbitrations.

1. Rules That The Commission Should Prescribe To Define The TSLRIC Standard.

The Commission can initially define and clarify the TSLRIC standard and generally delineate appropriate (and inappropriate) methods of estimating the relevant costs with five basic rules. Each of these rules is necessary, and together they will go a long way toward foreclosing attempts to corrupt the TSLRIC process.

First, and most fundamentally, **the economic costs to be measured are the forward-looking costs of providing the network element in question, and the ILECs'**

⁷⁹ This is well illustrated by Ameritech's ex parte filing, which purports to support "TSLRIC" pricing, but which, through "add-ons" of "common," "shared" and "residual" costs that ignore the central forward-looking, additional cost tenets of TSLRIC, in fact produces results that are more akin to the flawed "embedded" cost approach preempted by the 1996 Act. See Ameritech Ex Parte at 1-7, 15.

backward-looking book costs should rarely, if ever, be used as "proxies" for those forward-looking costs. The entry and exit decisions that cause competitive prices to emerge necessarily are based on comparisons of expected costs and revenues. As the Commission has recognized, those decisions have nothing to do with costs that were experienced in the past or that are recorded in a firm's accounting or other books.⁸⁰ Thus, basing prices on embedded costs, as one ILEC has conceded elsewhere, would "rather defeat[] the object of using LRIC in the first place,"⁸¹ giving inefficient pricing signals for entry and exit, as well as for make-or-buy decisions by competitive suppliers and purchase decisions by end-users.⁸² This is precisely why the 1996 Act precludes "reference" to such historical measures in determining just, reasonable, and nondiscriminatory rates for unbundled network elements, interconnection and collocation. See 1996 Act, § 252(d)(1)(A).⁸³

⁸⁰ See, e.g., Further Notice of Proposed Rulemaking, Policy and Rules Concerning Rates for Dominant Carriers, 3 FCC Rcd. 3195, 3226-27 (1988) (rates based on historical expenditures have "no claim to economic rationality," because "current or anticipated costs and revenues are generally the relevant factors influencing business decisions to enter markets and price products").

⁸¹ U S WEST OFTEL Submission at 13.

⁸² See also, e.g., Baumol, Ordovery & Willig Aff. ¶¶8-10; Washington State Decision at 80 (TSLRIC should be measured on a "going-forward basis and without consideration of the actual costs incurred in the past by [the ILEC]"); Methodology to Determine Long Run Incremental Cost, supra, at 13-14; Ameritech Ex Parte at 4 n.7 ("TSLRIC is calculated based on forward-looking technology, and thus does not include historical costs"); Order, New England Tel. & Tel. Co., 157 P.U.R. 4th 112, 177 (Vt. PSB 1994); Wisc. Stat § 196.015(2); Wyo. Stat. 37-15-103(a) (xiii).

⁸³ Because TSLRIC is designed to be a surrogate for competitive markets, it does not include forward-looking costs that would be incurred by a new entrant merely by virtue of its failure to be first in the market. This principle, which has been recognized by the STB in coal rate cases, would preclude recognition in TSLRIC estimates of monopoly scarcity rents not paid by the ILEC, and would certainly preclude costs associated with barriers erected by the ILEC. This means that conduit and right-of-way costs in TSLRIC studies should reflect the fact that ILECs were able to install conduit during building construction. Cf. West Texas Utilities Co. v. Burlington Northern R.R. Co., STB Dkt. No. 41191 at 27-30, 59-60 (Surf. Transp. Bd. May 3, 1996).

Second, the economic costs to be measured include only the additional costs of providing the particular network element(s) the requesting carrier seeks to purchase (assuming production of all other network elements). In determining the unit cost for that network element or group of network elements, the entire demand of all uses and users of that element or group, including the demands of the ILEC itself, must be included. TSLRIC requires, and the 1996 Act makes clear, that the requesting carrier, and not the ILEC, determines what network elements or groups of elements the requesting carrier purchases, and that the just and reasonable rate for the requested interconnections or elements is "the cost . . . of providing th[ose] interconnection[s] or network element[s]." 1996 Act, § 252(d)(1)(A) (emphasis added).⁸⁴ Further, the ILEC's unit cost of providing a network element is determined by the entire output of the facilities used to provide that network element. Thus, for example, the TSLRIC of end-office switching must include the sources for all demands for switching, including the ILEC's own local and toll calling demands for the switch. Any other approach would result in improper cost shifting, inflate network element rates above economic cost, and give the ILECs overrecoveries and an unfair competitive advantage that could only harm consumers.⁸⁵

Third, the economic costs to be measured are the costs an efficient, cost-minimizing competitor would incur -- i.e., the costs of assets that are optimally configured

⁸⁴ See Baumol, Ordoover & Willig Aff. ¶11.

⁸⁵ See, e.g., Baumol, Ordoover & Willig Aff. ¶¶15, 16; Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks, supra, at *123-26; Ill. Admin. Code, § 791.60(b); General Order, Regulations for Competition in the Local Telecommunications Market, 1996 La. PUC LEXIS 7, at *33 (La. PSC March 5, 1996); Methodology To Determine Long Run Incremental Cost, supra, at 12.

and sized with current technology and efficient operating practices. The past architecture, sizing, technology, or operating decisions of the ILECs should not serve as bases for calculating TSLRIC. Because the possibility of new entry continuously disciplines prices in a competitive market, an incumbent in such an exchange market could never collect more than the costs of providing service through an efficiently constructed, optimally-configured and operated, state-of-the-art system. Accordingly, as the Commission has stated, "economists generally agree" that prices based on the long run incremental costs of an efficient supplier reflect "true economic cost," "give appropriate signals to producers and consumers," and "ensure efficient entry and utilization of the telecommunications infrastructure."⁸⁶

There is every reason to believe that ILEC architecture, sizing, technology, and operating practices, by contrast, have routinely departed from efficiency. As the Commission has recognized, the ILECs' book costs, technologies, architectures, and investment, are the product of their exploitation of features of rate-of-return regulation that allowed them to "operate inefficiently," to "manipulate their reported cost allocations," to "pad" rates with monopoly profits, and to "adopt the most costly, rather than the most efficient, investment strategies."⁸⁷

⁸⁶ CMRS Order ¶47. See also Baumol, Ordover & Willig Aff. ¶¶12-13; Rulemaking Regarding Competitive Telecommunications Services, 162 P.U.R. 4th 210, 220 (Ariz. C.C. 1995); Opinion and Order, Rulemaking on the Commission's Own Motion To Govern Open Access To Bottleneck Services And Establish a Framework for Network Architecture Development of Dominant Carrier Networks, *supra*, at *127; Regulations for Competition in the Local Telecommunications Market, *supra*, 1996 La. PUC LEXIS 7 at * 33; Methodology to Determine Long Run Incremental Cost, *supra*, at 13; U S WEST OFTEL Submission at 12 ("because LRIC is forward looking, competitors are not paying for inefficiencies in an operator's network").

⁸⁷ Further Notice of Proposed Rulemaking, Policy and Rules Concerning Rates for Dominant Carriers, 3 FCC Rcd. 3195, 3205, 3219 (1988). See also Averch & Johnson, Behavior of the Firm under Regulatory Constraint, 52 *American Economic Review* 1052 (1962).

(footnote continued on following page)

Thus, it is critical that the Commission make clear that cost studies must reflect:

(1) **the most efficient technology for the services the accessing carrier seeks to provide;** and

(2) **optimal network design, sizing and architecture.** In this regard, the most efficient

technology is not necessarily the most recently developed, most sophisticated or most flexible

technology, but the technology most efficient for and best suited to the provision of the basic

telephony services that Congress sought to open to competition. Thus, arbitrators must be careful

to eliminate from TSLRIC studies, for example, any consideration of forward-looking costs based

on the ILECs' massive strategic investments in facilities "over-designed" to enable the present or

future delivery of cable television or other video services. "official networks" oversized to

facilitate the potential future provision of interexchange services, and other investments designed to

meet the expected incremental demands or technical requirements of non-basic or enhanced

services.⁸⁸ Similarly, TSLRIC studies must exclude the costs of capacity in excess of amounts that

(footnote continued from previous page)

The estimation model favored by certain ILECs, the Benchmark Cost Model ("BCM"), strays from fundamental TSLRIC principles in, inter alia, simply assuming that current embedded ILEC expense structures are efficient and should be carried through in lockstep fashion in computing efficient, forward-looking costs.

⁸⁸ See Baumol, Ordovery & Willig Aff. ¶29. See also Application of Southern New England Tel. Co. for Approval to Offer Unbundled Loops, Ports and Assorted Interconnection Arrangements, Dkt. No. 95-06-17 (Conn. DPUC Dec. 20, 1995) at 77 (rejecting incumbent's proposed assignments of hybrid fiber coax infrastructure costs between telephone and broadband services as inconsistent "with the economic principle of cost causation" and "wholly ignor[ing] consideration of issues of capacity utilization and derived benefit"); Pacific Telesis 1995 Summary Annual Report at 7 ("We're seamlessly integrating several technologies to offer customers quality and reliability no matter what services they choose: local, toll, and long distance; voice mail; data transport; Internet access; video services; end-to-end network solutions; wireless communications; or TV service"); Business Wire via Fulfillment by Individual, Inc. (June 16, 1995) ("GTE is deploying 60 Asynchronous Transfer Mode (ATM) switches in 13 states . . . which will bring the latest high-speed voice, video and data switching technology to all of GTE's major markets").

an efficient, cost-minimizing carrier would deploy based on reasonable projections of demand, reasonable assumptions relating to future technologies and their costs, and reasonable spare operating capacity assumptions.⁸⁹

Fourth, TSLRIC cost studies should reflect any significant geographic cost differences. Because ILECs could impede Section 251 competition in low-cost and urban areas by charging uniform rates for areas with very different costs, the Commission should require that rates for network elements be deaveraged upon a showing of significant cost differences. This requirement will not be difficult to implement in practice, because loop network elements generally will be the only network elements for which there are such significant geographic cost differences, and both the Hatfield and earlier ILEC costing models readily account for such cost differences.⁹⁰

Fifth, the costs to be measured exclude all costs attributable to the ILEC's retailing operations (e.g., marketing, billing). The pertinent costs are the capital and operating costs an efficient supplier would incur in the production of network elements, whether for use by itself or for sale to its potential retail competitors, and thus TSLRIC studies should not include forward-looking costs attributable to retailing. It should be noted, however, that the carrier-to-

⁸⁹ See, e.g., Baumol, Ordovery & Willig Aff. ¶28; West Texas Utilities Co. v. Burlington Northern R.R., *supra*, at 14 n.36; Washington Utilities and Transportation Commission v. US West Communications, Inc., 1995 Wash. PUC LEXIS 47, at * 184 (Wash. PUC Oct. 31, 1995) (rejecting proposed rates reflecting excess capacity as contrary to public policy of promoting efficiency); New England Tel. & Tel. Co., *supra* at 136-38 (disallowing certain costs associated with unjustified investment in optical fiber); Washington State Decision at 88 (including costs of excess capacity in TSLRIC "would be inconsistent with the theory that incremental cost studies should be prepared on a forward-looking basis and without respect to actual costs incurred in the past").

⁹⁰ The Hatfield Model, for example, calculates costs in six population density zones -- 0-5, 5-200, 200-650, 650-850, 850-2550, and greater than 2550 households per square mile.

carrier costs included in the relevant TSLRICs will include virtually all true economic costs of providing the public switched network (including, most significantly, an ILEC's forward-looking cost of providing network elements to itself to support its own retail services). But the relevant TSLRICs will exclude those costs attributable to ILEC retailing to end users, which the ILEC can and should recover from retail consumers alone.⁹¹

2. Rules That The Commission Should Prescribe To Deter ILEC Abuses In The Allocation Of Forward-looking Costs That Are Not Causally Attributable To A Particular Network Element.

ILECs should be allowed to recover all of the TSLRIC costs of their carrier-to-carrier operations through network element rates. For purposes of determining those rates, there are two types of forward-looking ILEC costs: those that are causally attributable to particular network elements, and those that are not. The former -- causally attributable costs -- will be picked up in the TSLRIC of a network element. Recoverable costs in the latter category, however, must be allocated among the network elements that cause them. As the NPRM recognizes, unless properly constrained, the ILECs could, by "manipulating" such allocations, "preclude efficient entry." NPRM ¶135. Accordingly, the Commission should, "consistent with the pricing principles

⁹¹ Because, as noted above, the unit prices derived from proper TSLRIC estimates will reflect all uses of the ILECs' network element facilities, existing jurisdictional separations/cost allocation rules will play no role in calculating TSLRIC-based prices. If other reasons to maintain the existing separations process remain, it is critical that the rules be changed to require that accounting costs (and revenues) associated with ILECs' carrier-to-carrier provision of unbundled network elements be removed before the separations process. Requesting carriers will use unbundled elements to provide both interstate and intrastate services and will pay the full TSLRIC costs of providing those elements (aside from the portion of those costs properly borne by the ILEC by virtue of its own internal use of network elements to provide retail services), and thus failure carefully to exclude the corresponding accounting costs from the accounting-cost-based separations process would result in double recoveries. See NPRM at ¶120. Finally, uniform Commission rules distinguishing retail and network element ILEC costs would be useful in evaluating TSLRIC studies.

of the 1996 Act," id., establish certain minimum standards to guide the parties and the states in identifying and quantifying "common" or "shared" costs eligible for inclusion in network element rates and in determining how those recoverable costs should be allocated among the network elements that contribute to them.

"Common" costs do not, as some contend, present an intractable problem with TSLRIC pricing. Properly defined, the vast majority of relevant costs are causally attributable. See NPRM ¶130 ("it may be possible to minimize the costs to be allocated as joint and common by identifying a substantial portion of costs as incremental to a particular service or element"). Indeed, at least at the level of the four basic network element groupings of loop, switching, transport, and signaling, virtually all costs should be causally attributable, because each of these natural groupings is comprised of a discrete set of physical elements of the local network. Even at the network element level, there will be a number of elements that will "share" no significant costs with any other element.⁹² Claims to the contrary generally rest on imprecise or ambiguous usage of terms like "common," "joint," and "overhead."⁹³ As noted above, the TSLRIC of a network element includes all of the element-specific investment needed to construct and operate the facilities used to produce that element, including costs that are fixed in the short run.⁹⁴ There may well be some

⁹² It is unlikely, for example, that there will be any non-trivial "common" cost sharing between individual network elements in the loop grouping.

⁹³ The glossary attached as Appendix D hereto provides definitions of these and other relevant terms.

⁹⁴ Ameritech's claim that TSLRIC estimation of the cost of providing Call Waiting could yield inaccurately low prices for that service because the majority of its costs are common to the provision of switching generally is a good example of the confusion surrounding common costs. See Ameritech Ex Parte at 4-5. The 1996 Act calls for the unbundling (and economic-cost-based pricing) of network elements, not services. In part because the services noted by Ameritech do

(footnote continued on following page)

cases of non-trivial "common" or "shared" costs, however, and, particularly in light of the potential for confusion and abuse in this area, it is critical that the Commission establish rules to constrain the ILECs' incentives and abilities to manipulate the quantification and allocation of "common" or "shared" costs in ways that thwart competition.

As an initial matter, the Commission should make clear that the only relevant "common" or "shared" costs are the forward-looking costs of an efficient supplier -- i.e., the additional costs, beyond those directly attributable to particular network elements (and therefore included in the TSLRIC of those network elements), that are part of the long-run incremental cost of producing the entire bundle of network elements. Efficient "common" or "shared" costs are never measured by an ILEC's actual historical "overhead" expenditures or by the difference between embedded and prospective costs.

Second, the burden should be on the ILEC to demonstrate that "add-ons" to the TSLRIC costs of a particular unbundled network element are appropriate. The Commission should establish a rebuttable presumption that the just and reasonable rates for the network elements an accessing carrier seeks are the TSLRICs calculated for those network elements. The burden of rebutting this presumption in state arbitration proceedings should be on the ILEC, and to meet its

(footnote continued from previous page)

share significant costs in common, AT&T and other parties have proposed unbundling of the switching function as a whole, and not of individual switch services or functionalities. Thus, the relevant question is not the TSLRIC of Call Waiting, but the TSLRIC of the switching network element -- which includes the functionalities that make it possible for requesting carriers, if they so desire, to provide Call Waiting or other such services -- and the ILECs can make no credible claim that the switching network element, which relies on discrete physical facilities, is plagued by significant common costs.

burden, the ILEC should have to identify and quantify the forward-looking, efficiency-maximizing "common" or "shared" costs with specificity -- through TSLRIC studies on the relevant network elements (and combinations of those elements). Further, the ILEC should be required to demonstrate that the "common" or "shared" costs in question are not already reflected in the TSLRIC estimates themselves by virtue of simplifying assumptions in the models used to produce those estimates.⁹⁵

Third, because an ILEC with unlimited allocation flexibility could: (1) overassign costs associated with a particular grouping of network elements such that its combined revenues for those elements exceed its economic cost of providing those elements, or (2) strategically assign costs among network elements in ways that would squeeze competitors or otherwise impede competition, it is equally important that the Commission establish certain basic allocation rules. As a general principle, the Commission should require that all cost allocations be competitively neutral.⁹⁶

More specifically, the Commission should establish a presumption that such costs will be assigned on an equiproportional basis relative to causally attributable costs -- e.g., where the causally attributable costs of two network elements are equal, the costs "common" to or shared

⁹⁵ See Baumol, Ordovery & Willig Aff. ¶¶39, 44-46, 49 (describing certain of the simplifying assumptions in the current version of the Hatfield Model that result in TSLRIC estimates that overstate actual TSLRIC costs by including certain common costs).

⁹⁶ Consistent with this principle and the 1996 Act's requirement of nondiscriminatory rates, the Commission should also adopt a rule (to be enforced through complaint proceedings) requiring ILECs to charge themselves (and their affiliates) the same cost loadings they charge their competitors -- especially with respect to their provision of "enhanced" services, including video data, and interLATA services.

between those two elements and not causally attributable to either should be apportioned equally among the two elements. ILECs also should have the burden of demonstrating that proposed assignments of costs that are not causally attributable will not cause rates for the network element in question to exceed the stand-alone cost of providing that network element.⁹⁷ And the ILEC should have the burden of demonstrating that its proposed assignment of costs that are not causally attributable will not yield total revenues for the network elements to which the cost is common that exceed the TSLRIC for that group of network elements.⁹⁸

Finally, an add-on for overhead that is common to an ILECs' carrier-to-carrier and retail sectors should not and need not be allowed. First, the total of those "general overhead" costs -- and certainly the fraction of those costs that could be allocated to the carrier-to-carrier sector under any legitimate allocation methodology -- are *de minimis*.⁹⁹ There is thus little to be gained by allowing ILECs to litigate appropriate levels of such overheads, and much to be lost through transaction costs and potential error costs resulting from ILECs' attempts to lard up overhead add-ons. And, in practice, the ILECs are likely to have an opportunity to more than recover any real forward-looking overhead costs in any event, both because of the existence of asymmetric information that favors the ILECs and because TSLRIC models are likely to

⁹⁷ See, e.g., Baumol, Ordoover & Willig Aff. ¶38; Omaha Pub. Power Dist., *supra*, 3 I.C.C.2d at 139-41; Coal Rate Guidelines, *supra*, 1 I.C.C. 2d at 544, 546.

⁹⁸ See, e.g., Baumol, Ordoover & Willig Aff. ¶37; Omaha Pub. Power Dist., *supra*, 3 I.C.C.2d at 139-41; Coal Rate Guidelines, *supra*, 1 I.C.C. 2d at 544, 546.

⁹⁹ All retail carriers will incur overhead costs, and thus ILECs will retain the opportunity to recover the (substantial) portion of these forward-looking overhead costs that would be incurred by an efficient stand-alone retail carrier, subject only to the same competitive constraints that will limit competing carriers' ability to recover their overhead costs.

incorporate simplifying assumptions that result in the inclusion of most or all of such costs (e.g., by assuming away other ILEC businesses and thus not taking advantage of cost savings from economies of scope). In these circumstances, allowing an explicit overhead add-on is unnecessary and would merely create a dangerous loophole through which ILECs could improperly inflate network element rates.¹⁰⁰

C. The Commission Should Provide Meaningful Rate Structure Guidance.

The NPRM recognizes that the "structure of incumbent LEC rates for interconnection and unbundled network elements will influence the incentives for interconnectors to purchase and use these services, independent of the level at which rates are set." NPRM ¶149. Inappropriate rate structures could impair competition, create inefficiencies, and harm consumers in ways that are "at odds with the procompetitive goals of the 1996 Act." Id. ¶¶149, 152 (providing examples). See also Baumol, Ordovery & Willig Aff. at ¶52 For these reasons, AT&T strongly supports the Commission's tentative conclusion that "clear federal rules and principles concerning rate structures" will "assist states and the parties in arbitrating rates for interconnection and unbundled network elements." Id. ¶149.¹⁰¹

¹⁰⁰ As one ILEC has noted: rates "should be calculated through a 'bottom up' approach which identifies the cost drivers and their long run incremental cost (LRIC), including the appropriate contribution to the cost of capital. There should be no arbitrary mark-up to this LRIC, as any attempt to add common or overhead costs will distort the market, serve as a barrier to effective competition and operate against the public good." U S WEST OFTEL Submission at 2.

¹⁰¹ The need for a uniform ordering and billing unit structure for carrier-to-carrier transactions has long been recognized by both federal and state regulators. See, e.g., Second Report and Order, Provision of Access for 800 Services, 8 FCC Rcd. 907, 909 (1993) ("In the absence of readily apparent unreasonable consequences, we want to encourage uniform rate structures"); Opinion and Order, Application of MFS Intelenet of Pennsylvania, Inc. for a Certificate of Public Convenience & Necessity, 1995 Pa. PUC LEXIS 87, at *106 (Pa. PUC Oct. 4, 1995).

The Commission should prescribe three basic rate structure principles. First, rate design should generally reflect cost causation: "costs should be recovered in a manner that reflects the way they are incurred." *Id.* ¶150. Second, unduly complex rate designs should be avoided. The transaction costs of designing and publishing complex rate schedules, metering the relevant service units, and modifying customer behavior in response to the rates are real costs. If the transaction costs exceed the efficiency advantages of moving to prices that would otherwise be optimal, "clearly considerations of economic efficiency alone would dictate refraining from doing so." 1 Alfred E. Kahn, The Economics of Regulation 84 & 86 (1970). The third principle follows from the first two: billing units should be non-usage sensitive except where a usage sensitive rate structure is clearly required. The costs of network elements dedicated to identifiable accessing parties can be attributed directly to the party ordering the network element that uses the facility. A non-usage-sensitive capacity charge ensures that the customer will pay no more, and no less, than the full forward-looking cost of providing the facility NPRM ¶150.¹⁰²

The Commission should prescribe non-usage sensitive capacity-based billing units for the following network elements: (1) loop distribution (de-averaged into six or more "zone" prices reflecting geographic cost differences), (2) loop concentrator/multiplexer (de-averaged into six or more "zone" prices reflecting geographic cost differences), (3) loop feeder (de-averaged into six or more "zone" prices reflecting geographic cost differences), and (4) dedicated transport.

Other network elements have non-trivial usage-sensitive cost drivers. With respect to these elements, the Commission should prescribe the following rate structures:

¹⁰² See also Baumol, Ordovery & Willig Aff. ¶¶53-55.