A prehearing conference and preliminary hearing was convened on January 21, 1997, pursuant to proper notice as provided by law and in accordance with 170 IAC 1-1-16. Respondent Ameritech Indiana, the Office of Utility Consumer Counselor ("OUCC") and intervenors AT&T, Competitive Telecommunications Association, the Indiana Cable Telecommunications Association, Inc., MCI, Sprint, TCG, Telecommunications Resellers Association, Time Warner Communications of Indiana, LP ("Time Warner"), and WorldCom, Inc., appeared and participated at the preliminary hearing and prehearing conference. Thereafter, Consolidated Communications Telecom Services Inc. also was permitted to intervene. The parties reached agreements as to various procedural matters, including a briefing and hearing schedule, which we approved in our Prehearing Conference Order issued March 5, 1997.

Ameritech Indiana prefiled most of its case-in-chief on February 7, 1997, and the remainder was prefiled soon thereafter. Supplemental testimony and workpapers were submitted by Ameritech Indiana on March 14, 1997. Revised testimony was submitted by Ameritech Indiana on April 16, 1997.

On February 7, 1997, Ameritech Indiana also filed a motion for protection of confidential and proprietary information and prefiled certain testimony and exhibits under seal. Those parties wishing to review information designated as confidential and proprietary by Ameritech Indiana were required to execute appropriate nondisclosure agreements, under which certain testimony and exhibits were submitted under seal and treated as confidential and proprietary.

On March 13, 1997, the OUCC requested an extension of the prefiling dates, and an attorneys' conference was conducted on March 25, 1997 to address scheduling issues. Thereafter, the following revised schedule was established: the OUCC and Intervenors would prefile their cases in chief on or before April 18, 1997; Ameritech Indiana would prefile any rebuttal testimony on or before May 16, 1997, and the evidentiary hearing would commence on June 2, 1997.

In response to a request by Ameritech Indiana, a technical conference for the purpose of facilitating the examination of Ameritech Indiana's cost studies was conducted on March 18 and 19, 1997. Portions of the presentations at the technical conference were treated as confidential and subject to nondisclosure agreements.

On April 18, 1997, the OUCC prefiled its case-in-chief. AT&T and MCI also prefiled their cases-in-chief, which were supplemented on June 9 and 12, 1997. On May 16, 1997, Ameritech Indiana prefiled its rebuttal evidence.

On May 28, 1997, AT&T, MCI and the OUCC requested a revision of the hearing schedule to permit adequate time to review revised Ameritech Indiana cost studies submitted with its rebuttal testimony. On May 30, 1997, the request was granted as follows: the evidentiary hearing was set to commence on June 5, 1997, for the testimony of non-cost related witnesses, and to reconvene on June 19, 1997, for the completion of testimony.

Ameritech Indiana presented testimony by William Palmer, Daniel Broadhurst, David Klingerman, Edward Marsh, Michael Domagola, Paul Quick, Debra Aron and Robert Korajczyk. The Office of the Utility Consumer Counselor presented testimony by Ben Johnson, Trevor Roycroft and Donald Durack. AT&T presented testimony by James Henson, James Webber and Janusz Ordover. MCI presented testimony by August Ankum and Michael Starkey. AT&T and MCI jointly presented the testimony of John Hirshleifer, Michael Majoros, and Brad Behounek.

Evidentiary hearings were held in this Cause on June 5-6, 9-10, 19-20, 30, and July 1, 1997 before Commissioner Mary Jo Huffman and Chief Administrative Law Judge Clayton Miller. The parties were permitted to submit post-hearing briefs and proposed orders, which have been received and reviewed.

In reaching the findings set forth herein, the Commission has considered the credibility of the witnesses. All contentions in the briefs and proposed orders of the parties not specifically determined in this Order are hereby rejected. The Commission has given consideration to the evidence presented herein and the arguments made in the post-hearing filings in arriving at the findings and conclusions set forth in this Order. Having heard and considered the evidence, and based upon the applicable law, the Commission now finds:

1. **Notice and Jurisdiction.**

Due, legal and timely notice of the prehearing conference and preliminary hearing, and of the commencement of the public hearings herein was given and published by the Commission as required by law.

Ameritech Indiana is a public utility within the meaning of the Indiana Public Service Commission Act, as amended, and is a telephone company as that term is defined in IC 8-1-2-88. Ameritech Indiana is also an incumbent LEC within the meaning of Section 251(c) of the Act, and is a Bell Operating Company ("BOC") within the meaning of Section 271 of the Act.

Section 252 of the Act authorizes state commissions such as this one to determine the prices an incumbent LEC may charge for fulfilling its duties under the Act. Iowa Utilities Board v. Federal Communication Comm'n, 120 F.3d 753, 796 (8th Cir. 1997) ("Eighth Circuit Decision"), *cert granted*. This Commission also is empowered by Ind. Code § 8-1-2-5 to prescribe "reasonable conditions and compensations" for physical connections between two public utilities engaged in the conveyance of telephone messages in Indiana, and Ind. Code § 8-1-2-5(b) specifically authorizes us to "determine how and within what time such connection or connections shall be made, and by whom the expense of making and maintaining such connection or connections shall be paid." Section 252(e)(3) of the Act preserves the authority of this Commission under State law, and we are conducting this proceeding as a generic Commission investigation pursuant to our authority in IC 8-1-2-58, -59, 69, and 8-1-2.6, and other related statutes.

Accordingly, this Commission has jurisdiction over Ameritech Indiana and the subject matter of this Cause.

2. Pricing Standards.

The Commission has compiled in this proceeding a record from which it can structure and set permanent prices for interconnection, unbundled network elements ("UNEs") and transport and termination of traffic that Ameritech Indiana is required to provide pursuant to the mandate of the Act.[1] These prices will also replace the interim prices previously established for Ameritech Indiana's arbitrated interconnection agreements.

On January 31 and February 8, 1996, respectively, the United States Congress passed and President Clinton signed TA'96 with the express intent of introducing competition into the market for local telephone service across the country. The Act imposes a general duty on all telecommunications carriers to interconnect with each other's networks. Section 251 of that Act imposes such additional obligations on incumbent LECs as the duty to provide access to unbundled network elements at any technically feasible point and to provide for collocation. 47 U.S.C. § 251(c)(3) and (c)(6). This landmark federal legislation sets forth procedures, standards and expeditious and mandatory timetables for implementation of the Act by the Federal Communications Commission ("FCC") and State regulatory commissions such as this Commission.

Three provisions of TA'96 set forth the principles that must underlie the permanent rates set in this proceeding. According to Section 252(d)(1), rates for interconnection and UNEs shall be "based on cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the interconnection or network element . . . and [shall be] nondiscriminatory, and . . . may include a reasonable profit." 47 U.S.C.A. § 252(d)(1). Further, Section 252(d)(2) states that in order for a state commission to find reciprocal compensation (transport and termination of calls) terms and conditions just and reasonable, the approved rates must provide for the recovery of costs determined "on the basis of a reasonable approximation of the additional costs of terminating such calls." 47 U.S.C.A. § 252(d)(2)(A)(ii). Finally, Section 251(c)(6) prescribes that rates for collocation be just, reasonable, and nondiscriminatory.

In its First Report and Order,[2] the FCC set forth its analysis on the issue of the appropriate pricing principles to be utilized in setting rates for interconnection, UNEs and termination and transport of traffic. That Order also imposed rules upon state

---

[1] As discussed in greater detail below, certain charges will require further investigation.

[2] First Report and Order, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98 (released August 8, 1996) ("FCC Order").

commissions governing how states must implement pricing for unbundled network elements and set price ranges for those elements. According to the FCC, the appropriate cost on which prices are to be based is the forward-looking economic cost of providing each element, which it described as the sum of the total element long-run incremental cost ("TELRIC") and a reasonable allocation of forward-looking common costs.[3] The FCC defines "long-run" as a period of time long enough so that all of the business' costs become variable or avoidable. FCC Order at ¶ 677. "Incremental costs" are the additional costs a firm will incur as a result of expanding the output of a good or service by producing an additional quantity of the good or service. *Id.* ¶ 675.

Numerous parties, including several state utility regulatory commissions, challenged various aspects of the FCC Order in court. The U.S. Supreme Court consolidated these challenges into Iowa Utilities Board v. FCC, 120 F.3d 753 (8th Cir. 1997). The Eighth Circuit initially stayed the FCC's pricing rules, and subsequently held that state commissions have exclusive jurisdiction under TA'96 to determine prices for interconnection, unbundled access, resale and transport and termination. Thus, that Court concluded that the FCC had exceeded its jurisdiction in promulgating the pricing rules in its First Report and Order, and the court vacated those rules without ruling on their merits.

In our earlier orders arbitrating disputed aspects of ILEC/CLEC interconnection agreements pursuant to Section 252 of the Act, which orders were issued after the Eighth Circuit's stay, we noted that the FCC's pricing regulations "cannot dictate this Commission's implementation of [the Act]." We also determined that, while we are free to construct our own pricing policies, we also retain "the discretion to look to the FCC Order as an additional source of information" for establishing prices for interconnection, UNEs and transport and termination.[4] That determination is equally applicable to this proceeding. While we are not required to follow the pricing methodology described in the FCC Order, neither are we precluded from adopting that methodology to establish prices in this proceeding.

We find that the TELRIC methodology has considerable merit. We specifically agree with Ameritech Indiana that the FCC Order developing the TELRIC methodology "sets forth a well-considered analysis and rationale for the determination of just and reasonable prices for interconnection and unbundled network elements that (i) are based on the cost of providing the interconnection or network element; (ii) are nondiscriminatory; and (iii) include a reasonable profit." Ameritech Indiana Proposed Order at 10.

---

[3] 47 C.F.R. § 51.505(a). The FCC's use of the term "common" costs includes both joint (also called shared) and common costs. FCC Order at ¶ 676. Additionally, the FCC defines the term "unbundled network elements" to also include network interconnection. 47 C.F.R. § 51.50(b). Rules 51.501 and 51.505 were among the FCC's pricing rules pertaining to local exchange service which, as discussed *infra*, have been vacated by the Eighth Circuit Court of Appeals.

[4] In the Matter of the Petition of AT&T Communications of Indiana, Inc., Cause No. 40571-INT-01, p. 8 (I.U.R.C. Nov. 27, 1996).

3. Burden of Proof and "Modified" TELRIC.

As we indicated in our Order commencing this investigation, Ameritech Indiana bears the burden of proving its costs. We are in specific agreement with the provisions in the FCC Order placing the burden on the incumbent LEC to prove the nature and magnitude of any forward-looking costs it seeks to recover and further placing the burden on the incumbent LEC to demonstrate "with specificity why and how specific functions are necessary to provide unbundled elements and how the associated costs were developed." FCC Order, ¶¶ 680, 691.

We also note that Ameritech Indiana proposed two separate pricing structures in this proceeding -— "Basic" and "Modified" prices, the latter based on longer term UNE purchases — with differing capital costs and fill factors. We agree that Ameritech Indiana's costs to provide UNEs pursuant to term contracts should be lower, and while we find several adjustments to its TELRIC cost study are in order, its Modified TELRIC prices should reflect the same lower cost projections relative to the "basic" TELRIC factors we approve herein. For example, Ameritech Indiana proposed a "basic" cost of capital in this proceeding of 13.6% for its provision of UNEs other than unbundled loops, and a cost of capital of 11.5% for its Modified TELRIC cost study, a discount of 15%. While, as discussed below, we reject the 13.6%, if Ameritech Indiana wishes to offer a tariff based on a Modified TELRIC cost study for UNE customers willing to make term commitments, the cost of capital used in such a Modified TELRIC cost study should be 15% less than we approve for the basic TELRIC cost study.

4. Inputs to the Cost Studies.

A. Cost of Capital.

A key element in determining the economic cost of providing unbundled elements is the cost of capital. Never an exact science, our task is complicated further by the lack of hard data specific to the business in question. Our goal is to set prices for UNEs which truly reflect the incremental cost to the incumbent LEC of leasing elements of its telephone network over the long run. Prices set above the "correct" level would make it uneconomic for CLECs to enter the local telephone service market through purchasing UNEs from an ILEC. Prices set below the "correct" level would put the ILEC at a competitive disadvantage, forcing it to subsidize CLEC entry into the market and discouraging CLECs' investment in their own facilities.

Although Ameritech Indiana's cost studies, sponsored by Mr. Palmer, include a cost of capital assumption of 13.6%, Mr. Palmer presented no cost of capital analysis in support of that assumption. This rate came from some "preliminary numbers" provided to Mr. Palmer by Mr. Domagola, a financial analyst in Ameritech Corporation's Treasury Department, who sponsored the only cost of capital analysis on behalf of Ameritech Indiana. *Tr.* at M32; *see also* Ameritech's Response to AT&T and MCI's Proposed Order at 41. Mr. Domagola estimated the cost of capital for Ameritech Indiana to be in the

range of 10.6% to 14.0%, with a midpoint of 12.3%. Ameritech Indiana Exh. MJD (Domagola Direct), p. 2.

AT&T and MCI jointly sponsored the testimony of Mr. Hirshleifer, who estimated a cost of capital in the range of 9.12% to 10.36%, with a midpoint of 9.74%. AT&T/MCI Joint Exh. 1.0 (Hirshleifer Direct), p. 4. OUCC witness Dr. Johnson made specific recommendations concerning certain components of the cost of capital but did not calculate an overall cost of capital for Ameritech Indiana. Public Exh. 3 (Johnson Direct).

The primary difference between the parties' positions appears to be their assumptions about the degree of risk involved in the UNE leasing business. The higher the risk, the higher the cost of capital, and vice versa. The parties agreed that the cost of capital should be adjusted for risk, but their witnesses disagreed as to whether that adjustment should reflect relatively greater or lesser risk.

Ameritech Indiana witness Mr. Palmer focused on risk in the local exchange business, opining that retail competition and network unbundling are likely to increase financial and business risks through, for example, lower asset portability and higher customer churn. Ameritech Indiana Exh. WCP-DP at 9. Ameritech Indiana witness Mr. Domagola relied on stock market data and future expected dividend growth forecasts for Ameritech Corporation as the most reliable proxies for those of Ameritech Indiana. He also calculated a beta for Ameritech Corporation of 1.25, suggesting that Ameritech Corporation is appreciably riskier than the market as a whole, although a group of comparable companies he studied had betas of less than 1, indicating that investments in such companies bore less risk than the market as a whole.

According to AT&T/MCI witness Mr. Hirshleifer, the business of leasing local exchange telephone network elements to retail providers has less risk than many of the other business ventures undertaken by Ameritech Corporation and its peer companies, which ventures include cable television, cellular, global electronic commerce, on-line services, electronic advertising and security monitoring services. While Ameritech Corporation's primary business remains the provision of retail telephone services, which its witness Mr. Domagola testified represents about 70% of its revenues, the evidence established its growing involvement with a wide variety of other nonregulated business ventures, including large international investments, most of which are riskier than the telephone service of Ameritech Indiana. Domagola Cross, Tr. A-22 to A-24, B-9 to B-10. In fact, the only Ameritech Corporation business ventures identified by Mr. Domagola without higher cost of capital risk were Leasing (with lower risk) and Directory Publishing (with comparable risk). Domagola Cross, Tr. B-15.

Discussion and Findings. The Commission has been presented with a wide array of information and results to aid its determination of an appropriate cost of capital. Each of the parties' models attempts to predict the incremental cost of the capital essential to Ameritech Indiana's UNE leasing line of business. Ameritech Indiana currently faces no competition in this line of business, making such investments virtually risk free. *See* FCC

Order ¶ 702. The longer our time horizon, however, the greater our expectation that retail competition will flourish, which arguably could eventually translate into competition for Ameritech Indiana's UNE leasing line of business. Nevertheless, we agree with the Ohio Public Utility Commission that these particular services will for the foreseeable future be bottleneck, monopoly services that do not face significant competition. In the Matter of Ameritech Ohio, Case No. 96-922-TP-UNC at 21 (Ohio PUC June 19, 1997).

Although numerous other companies have received certification from this Commission to operate their own local telephone facilities, the Act does not require non-incumbent LECs to resell or lease their unbundled network elements. Thus, even an anticipated diminution in Ameritech Indiana's share of the retail telephone service market and the corresponding increase in the risk associated with that line of business would not necessarily result in increased risk for the UNE leasing business, particularly if one expects continued growth in the size of the retail market. Accordingly, we find that Ameritech Indiana's weighted average cost of capital should reflect the relatively minimal risk associated with this particular business for the foreseeable future as compared to Ameritech Corporation as a whole.

We find that not only has Ameritech Indiana failed to prove a cost of capital of 13.6%, but the use by Mr. Domagola of a 1.25 beta coefficient as part of his capital asset pricing model is incredible. This figure is clearly an outlier as compared to the 0.94 average beta for his comparable companies, and we agree with the conclusion of the Michigan Public Service Commission that assigning a beta of 1.25 to the Ameritech Corporation is "at odds with [its] regional dominance in telecommunications networks...." In the Matter of Ameritech Michigan, Case No. U-11280, at 8 (Mich. PSC July 14, 1997). The more reasonable approach was presented by AT&T/MCI witness Mr. Hirshleifer, who proposed a weighted average cost of capital of 9.74%, and we find that Ameritech Indiana should recalculate its TELRIC using this lower percentage.

B. Depreciation Lives

Ameritech. Ameritech proposed lives for use in its TELRIC study of five years for digital switching equipment, five years for digital circuit equipment, and twelve years for outside plant. Ameritech cost witness Mr. Palmer chose these specific lives based on the recommendations of Ameritech's depreciation witness Mr. Marsh, who recommended a reasonable range of lives of 5-10 years for digital switching and circuit equipment and 10-15 years for outside plant. Both Mr. Palmer and Mr. Marsh asserted that these shorter lives were appropriate due to the increased demand for state-of-the-art UNEs from new entrants, as well as the increased competition for UNEs that they foresaw. Ameritech Indiana Exh. WCP-DN (Palmer Direct), pp. 9-12; Ameritech Indiana Exh. EJM-D (Marsh Direct), p. 3. Ameritech also notes that Mr. Marsh's proposed lives are derived from three outside sources: (i) the lives used by Ameritech and other telecommunications carriers for SEC financial accounting purposes, (ii) the IRS's recommended recovery periods, and (iii) the depreciation lives for outside plant set by the FCC for cable TV companies. Ameritech Indiana Exh. EJM-D (Marsh Direct), pp. 11-14. Ameritech asserts that the FCC's current prescribed projection lives for Ameritech Indiana are

inappropriate because they are based on historical mortality data and are not forward-looking.

OUCC. The OUCC, by its witness Dr. Johnson, submitted evidence concerning the economic levels and depreciation rates to be used in a TELRIC study. Public Exh. 3A (Johnson Direct), p. 17. Specifically, Dr. Johnson recommended the following economic lives for each of the listed account categories:

Aerial and Intrabuilding fiber	20 years
Underground and Buried fiber	25 years
Copper Cable (all accounts)	15 years
Central Office Switching	12 years
Electronic Circuitry	12 years
Radio Systems	9 years
Operator Systems	8 years
Poles	30 years
Conduits	50 years

Id., pp. 17-26.

With two minor exceptions (which were in the conduit and central office switching accounts), Dr. Johnson's recommendations on the appropriate economic lives were within the FCC prescribed range. He testified that the FCC-prescribed depreciation lives reflected both the technological change and the economic obsolescence that is occurring in the telecommunications industry. *Id.*, p.17. Dr. Johnson disagreed with Mr. Marsh's suggestion that the FCC considers nothing but physical lives when prescribing depreciation rates. In response, Dr. Johnson stated:

> To the contrary, the underlying historic data trends which are considered by the FCC reflect the impact of economic factors, as well as physical factors. Furthermore, the FCC does not simply wait for obsolescence to occur before taking it into account. Instead, the FCC anticipates trends and tries to project future patterns of economic obsolescence. It tries to accurately anticipate the future pattern of retirement for each category of investment, based upon economic and engineering judgments relating to future technological change, changing customer preference, and similar economic factors.

Id., pp. 17-18.

AT&T and MCI. AT&T and MCI challenged Ameritech's support for its recommended shorter lives. They argued that Ameritech's lives are simply reflective of financial accounting lives that Ameritech and other telecommunications carriers used for SEC financial reporting purposes, which are based on conservative general accounting principles that have no place in a TELRIC proceeding.

AT&T and MCI further submitted that the FCC's prescribed projection lives for Ameritech Indiana are proper forward-looking lives to be used for setting TELRIC prices. AT&T/MCI witness Mr. Majoros noted that in the mid-1980s, the FCC directed its staff to set lives based on forward-looking plans and technological developments. AT&T/MCI Joint Exh. 2.0 (Majoros Direct), pp. 5-6. Mr. Majoros also pointed to the rise in the depreciation reserve level over the last decade as an indicator that the FCC's lives have been forward-looking. *Id.*, pp. 6-9. Most importantly, Mr. Majoros noted that the FCC's life prescriptions for Ameritech Indiana are significantly below Ameritech's historical life indications. *Id.*, pp. 10-11 and Attach. 6. We note that, in its brief responding to other parties' proposed orders, Intervenor Time Warner joined AT&T and MCI in recommending adoption of the FCC's prescribed depreciation lives. Time Warner Post-Hearing Brief at 9-10.

Commission Analysis and Conclusion. In analyzing the parties' contrary testimony on the subject of appropriate estimates for the lives of the various plant and equipment underlying Ameritech's provision of unbundled network elements, the Commission strives to be consistent with our understanding that Congress intended that our determinations be forward-looking. As a general matter, we agree that it is appropriate for us to focus on economic lives rather than physical lives, given our expectation that technological advances in this industry, coupled with demand for state-of-the-art UNEs, will continue to necessitate the retirement of plant and equipment prior to their physical exhaustion. For example, although a digital switch installed today might reasonably be expected to last at least twenty years before wearing out, we can anticipate that that switch may become economically obsolete and have to be replaced at an earlier date. Accordingly, we adjust our allowance for the depreciation of that switch to account for its shorter economic life, shortening the term over which the cost of that switch has to be recovered and thereby increasing that component of UNE costs attributable to depreciation.

The FCC has previously established economic lives for specific telephone companies' plant and equipment, including for Ameritech Indiana. Ameritech has also received this Commission's approval to utilize particular depreciation lives in its prior TSLRIC/LRSIC studies. The economic lives Ameritech has proposed in the instant proceeding, however, are shorter than those currently employed. While the FCC's prescribed lives for major accounts discussed in Mr. Palmer's and Mr. Marsh's testimony are significantly shorter than the recent historical life indications for Ameritech Indiana, *see* AT&T/MCI Joint Exh. 2.0 (Majoros Direct), pp. 10-11 and Attachment 6, the fact that there is such a difference has little bearing on the essential question of how large the difference should be. We are satisfied that the telecommunications landscape has been affected by the passage of TA'96 to a sufficient degree that depreciation rates established prior to that Act merit another look for purposes of the instant proceeding. We turn, then to Ameritech's explanation for its proposed depreciation ranges, keeping in mind that it must prove each cost it would attribute to UNEs.

In support of its proposed shorter economic lives, Ameritech relied on the testimony of Messrs. Palmer and Marsh, both of whom reasoned that in the new

competitive environment depreciation lives will be driven to such shorter terms by the requirements of sophisticated customers for state-of-the-art UNEs. Ameritech Indiana Exh. WCP-DN (Palmer Direct), pp. 9-12; Ameritech Indiana Exh. EJM-D (Marsh Direct), p. 3. Of course, as noted above in our discussion of the cost of capital, Ameritech at present faces neither competition from other UNE providers nor outside demand for its UNEs. Contrary to AT&T and MCI's suggestion in their proposed order, however, we find that the absence of competitive pressures today tells us little about the expected economic lives of the plant and equipment underlying Ameritech's provision of UNEs. And while the more vigorously contested a market is the greater the gap between physical and economic lives, other factors can also contribute to the need to depreciate plant and equipment over a shorter period of time. Even when the presence of competitors in a market is minimal, technological advances can still force companies susceptible to competition, i.e., companies without captive customers, to upgrade their plant and equipment.

In the telecommunications industry, we anticipate technological advances to continue at a rapid pace for the foreseeable future. Because we expect Ameritech to take full advantage of the efficiencies such developments are expected to represent, then at least for the limited purpose of establishing the forward looking cost of UNEs we are prepared to accept economic lives which are less than prescribed by the FCC and less than Ameritech's previous estimates in its TSLRIC studies. And while we agree with AT&T and MCI that Ameritech's reliance on IRS recovery periods and on FCC prescriptions for outside plant for the cable television industry is misplaced, we do not similarly dismiss the relevance of the financial reporting lives that are used by Ameritech and other telecommunication carriers for SEC financial reporting purposes.

Having considered all the evidence, the Commission finds that the most reasonable forward-looking lives are those at the top of the range proposed by Ameritech Indiana's witness Mr. Marsh. That is, ten years for digital switching and circuit equipment, and fifteen years for outside plant equipment. Ameritech Indiana should recalculate its TELRIC using these figures for its depreciable lives.

C. <u>Fill Factors.</u>

Utilization factors, or "fill" factors, represent an estimate of the proportion that a network facility will be "filled" with network usage. Such factors become important when it is considered that, in a forward-looking methodology, the cost of a specific element should include that portion of demand attributable to that element. Or, as the FCC has explained:

> Per-unit costs shall be derived from total costs using reasonably accurate "fill factors" (estimates of the proportion of a facility that will be "filled" with network usage); that is, the per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a reasonable projection of the actual total usage of the element. Directly

> attributable forward-looking costs include the incremental costs of facilities and operations that are dedicated to the element.

FCC Order, ¶ 682.

The parties have disagreed as to what the FCC meant in the text quoted above. Ameritech has interpreted this statement in a manner to justify a departure from the fill factors it has previously used in its TSLRIC/LRSIC cost studies for retail services. Ameritech's new fill factors (which are mostly lower than those previously used) result in higher costs and thus, higher pricing. All other parties have recommended against the use of Ameritech's new fill factors.

Ameritech. Ameritech witness William Palmer recommends using a "target" fill factor as the network utilization assumption for the TELRIC studies instead of the usable capacity assumptions used in Ameritech's TSLRIC/LRSIC studies. Mr. Palmer defined the target fill factor as the optimal usage level above which point it is more cost effective to add plant and capacity than to increase utilization of the existing plant. Ameritech Indiana Exh. WCP-RN (Palmer Direct), p. 15. Ameritech's target fill factors for most elements are less than the usable capacity.

The "target" fill factors were not, however, the first fill factors considered by Ameritech. Prior to the passage of the Act, Ameritech employed fill factors consistent with its Ameritech Operating Environment (or "AOE"). Ameritech Indiana Exh. WCP-DN (Palmer Direct), p. 29; *see* AT&T Cross Exh. 24. The AOE fill factors, which were used by all Ameritech operating companies, were based upon the "usable capacity" of the elements studied. Sometime after the passage of the Act, Ameritech made a "fresh look" adjustment to usable capacity fills based on its position that usable capacity fills would shrink as the network capacity required for maintenance, testing, and administrative purposes increased due to the rise in unbundling and churn expected in the wake of the Act. *Id.*; Palmer Cross, Tr. M-84. Ameritech then made an additional adjustment to arrive at its "target fill" factor proposal in anticipation of the FCC issuing its cost rules in the FCC Order, which prescribed the use of reasonably accurate fill factors. Palmer Cross, Tr. M-83 to M-84. According to Ameritech, its target fill factor modifications reflected the change in methodology from usable to reasonably accurate fill. Ameritech Indiana Exh. WCP-RN (Palmer Direct), pp. 15-16; Palmer Cross, Tr. M-83 to M-84.

OUCC. The OUCC's witness, Dr. Roycroft, contended that Ameritech had not met its burden of proof in establishing or justifying Ameritech's departure from AOE fill factors. As Dr. Roycroft noted, Ameritech's stated reason for lower utilization levels is that Ameritech expects increased "churn" in the elements used. Dr. Roycroft explained, however, that Ameritech had not produced any studies to support this claim and could not document the "dialogue with Engineers and other subject matter experts" that supposedly justified the departure from AOE fill factors. Public Exh. 1 (Roycroft Direct), p. 29. Dr. Roycroft concluded that it was "highly unlikely" that Ameritech had been using inefficient network utilization assumptions prior to the passage of the Act and the

issuance of the FCC Order. *Id.*, pp. 29-30. Ultimately, Dr. Roycroft recommended that Ameritech use AOE fill factors in its Modified TELRIC cost studies.

AT&T and MCI. AT&T and MCI asserted that the changes in utilization factors which Ameritech proposes here are improper and are inconsistent with the FCC Order and with Ameritech's own TSLRIC/LRSIC methodology as contained in the Ameritech Cost Analysis Resource ("ACAR"). AT&T and MCI urged the Commission to order Ameritech to incorporate the AOE utilization factors contained in the ACAR. The ACAR (AT&T Cross Exh. 24) is the reference document used by Ameritech's cost analysts to construct price floors for services offered by Ameritech using the LRSIC methodology. Palmer Cross, Tr. M-35 to M-36.

AT&T and MCI note that the ACAR's definition of LRSIC contradicts Ameritech's insistence in this case that fill factors contained in the ACAR reflect theoretical utilization levels that do not reflect actual operating conditions. *See* AT&T Cross Exh. 24, Tab 3, p. 3. In fact, AT&T and MCI note that the ACAR defines usable capacity as the "maximum physical capacity of the equipment or resource less any capacity required for maintenance, testing or administrative purposes." *Id.*, Tab 3, p. 4. Thus, AT&T and MCI maintain that the usable capacity fill factors in the ACAR represent the appropriate fill factors to account for administration, maintenance and testing in a forward-looking, most efficient network as determined by Ameritech's own engineering experts.

AT&T and MCI introduced into the record certain documents that suggest that prior to the time Ameritech was called upon to price its network elements to competitors, it employed usable capacity fill factors. They argued that one document, entitled "Ameritech Engineering General Letter AMGLCSI-00168, December 1992, Target Percentage Fill for Digital Switches" showed that Ameritech's internal network engineers had studied and recommended usable capacity fill factors to structure and size Ameritech's network utilization at levels substantially higher than those proposed by Ameritech in the instant cause. AT&T Cross Exh. 27. The letter also indicates that utilization was increased to position Ameritech as a competitive low cost unit provider and to keep a high percentage of usage on its network. Thus, AT&T and MCI assert, Ameritech's own documentation demonstrates that a forward-looking, efficient operation justifies significantly higher fill factors. AT&T and MCI also argue that the FCC Order never authorized the use of actual fill factors, *see* FCC Order, ¶¶ 682, 685, which AT&T and MCI contend are antithetical to a forward-looking, most efficient network.

AT&T witnesses also questioned Ameritech's timing regarding adjustments to the target capacity fill factor adjustment. For example, AT&T witness James Henson points out that Ameritech performed calculations based on the "fresh look" fill factors which gave Ameritech TELRIC UNE prices in late June 1996. AT&T Exh. 1.0 (Henson Direct), pp. 41-43; Palmer Cross, Tr. M-80 to M-84. These "fresh look" fill factors, for feeder and distribution facilities, were reduced again just one month later. Ameritech confirmed that no major new engineering developments occurred during this one-month period. *See* Palmer Cross, Tr. M-92 to M-93. AT&T and MCI also note that Ameritech

began recalculating its TELRIC studies using the target capacity adjustments prior to issuance of the FCC Order.

AT&T and MCI further contend that Ameritech has misapplied the per unit formula contained in the FCC Order. Ameritech contends that if it can calculate the additional number of access lines it expects to service over the period of the study, it can include that investment in its TELRIC calculations. *See, e.g.*, Ameritech Indiana Exh. DJA-RN (Aron Rebuttal), p. 34. AT&T and MCI believe that under the FCC Order Ameritech has two obligations it must meet in order to include additional spare capacity investment in its TELRIC studies. First, according to AT&T and MCI's reading of the Order, Ameritech must substantiate the level of reasonably foreseeable capacity that it includes in that investment number (i.e., how many additional lines are reasonably foreseeable). Second, in calculating its per unit cost, Ameritech must divide that investment figure by a reasonable projection of the sum of the total number of units of that element that the ILEC is likely to provide to requesting carriers and the total number of units of that element the ILEC itself is likely to use in offering its own services. FCC Order ¶ 682. AT&T and MCI conclude that Ameritech has not properly implemented this standard. For example, in its calculation of fills relating to feeder, AT&T and MCI suggest that Ameritech has not used projected working pairs but only current working pairs, resulting in an overstatement of costs. *See* FCC Order ¶ 622. Thus, according to them, the amount of additional capacity in Ameritech's investment figure over the investment related to working pairs is solely determined by application of the fill factor that Ameritech uses in its model. AT&T and MCI note that it is impossible to determine from raw fill factor data how much additional investment is required for spare-related growth unless Ameritech is able to identify what portion of the fill factors comprise that additional capacity. Likewise, AT&T and MCI contend that it is equally impossible to determine the additional capacity required for maintenance, administration and testing. AT&T and MCI note that there is no way to determine what percentage of the investment (over and above the existing investment) is related to growth-related spare capacity and the administration, maintenance and testing capacity required to serve that growth-related spare capacity.

In summary, AT&T and MCI note that by including growth-related spare investment, but not identifying the reasonable projection of usage for which Ameritech was calculating investment, Ameritech has selected only part of the equation set forth by the FCC. According to them, when Ameritech's use of that equation is examined as a whole, it becomes apparent that Ameritech has misapplied those pricing principles and has, therefore, over-estimated its per unit investment projections. AT&T and MCI also opine that the FCC Order requires the removal of growth-related spare capacity related to maintenance, testing and administrative purposes.

Commission Analysis and Conclusion. Lowering the utilization factor, as Ameritech Indiana proposes here, would increase the per-unit costs of UNEs. In support of its target fill factor, Ameritech Indiana maintained that these modifications were necessary due to the significant increase in network capacity it expects will be required for maintenance, testing, and administration. We find, however, that Ameritech Indiana

has failed to justify the reasonableness of its modified "fresh look" and "target capacity" fill factor adjustments. We are satisfied that the AOE fill factors currently in place are more consistent with the TELRIC standard ostensibly adopted by all parties to this cause, and we find Ameritech Indiana's attempt to deviate from these fill factors from its own ACAR model is not justified. Consequently, we find that Ameritech Indiana should use the usable capacity fill factors set forth in the ACAR for the purpose of determining an estimate of the proportion of a facility that will be filled with network usage.

We find persuasive that, for purposes of a TELRIC methodology, the FCC has found that per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a reasonable projection of the actual total usage of the element. *See* FCC Order, ¶ 682.

We do not believe that Ameritech Indiana is in any way harmed by this Commission prescribing the use of the AOE fill factors out of the ACAR. The ACAR, Ameritech's own cost resource, describes the usable capacity fill factors (which are currently used for its TSLRIC/LRSIC studies) as reflecting "the best, most technically efficient resources using the least cost and forward-looking technologies." AT&T Cross Exh. 24, Tab 3, p. 1. While Ameritech Indiana now maintains in this proceeding that the usable capacity fill factors used in TSLRIC/LRSIC studies are inappropriate and must be lowered, the fact remains that Ameritech continues to use the fill factors out of the ACAR in order to conduct TSLRIC/LRSIC studies today. AT&T Cross Exh. 24, Tab 1, p. 1 and Tab 2, p. 1.

We also are troubled by the timing of Ameritech's target capacity adjustment to the unbundled local switching studies. Ameritech has not persuaded us that this target capacity adjustment is warranted and, therefore, we cannot adopt Ameritech's proposal. The record reflects that, following adoption of the Act, in late June of 1996, Ameritech began performing calculations and running economic costing models which produced TELRIC rates. However, just one month later, and prior to adoption of the FCC Order, Ameritech modified the fill factors associated with unbundled loops and local switching by an adjustment that it calls the "target capacity" adjustment. Ameritech could not produce any documentation, similar to the engineering studies that Ameritech had previously used to support usable capacity fill factors, to support these "target" fill factors.

The Commission also rejects Ameritech's assertion that its utilization adjustment is related, at some level, to growth-related spare capacity. Ameritech's proposed adjustment conflicts with the utilization standards found in the FCC Order, according to which we assume that "the reconstructed local network will employ the most efficient technology for reasonably foreseeable capacity requirements." FCC Order ¶ 685. We find this standard persuasive. We further find that it would be inappropriate to include that additional growth-related spare capacity investment in Ameritech's TELRIC studies. It is impossible to determine from the raw fill factor data how much additional investment is required for spare-related growth unless Ameritech is able to identify what portion of its fill factors comprise that additional capacity. Ameritech has not done so. Thus, the

Commission requires that Ameritech Indiana remove growth-related spare capacity from the per unit investment amount, leaving only that spare capacity that relates to maintenance, testing and administrative purposes. This is accomplished by Ameritech Indiana continuing to use the ACAR fill factors.

To the extent that we have adopted positions on cost of capital, economic depreciation lives and fill factors which vary from those used by Mr. Palmer in his calculations of Ameritech's TELRIC, Ameritech should recalculate its annual charge factors using the assumptions adopted herein. Those recalculated annual charge factors should then be substituted as inputs into the TELRIC studies as replacements for the annual charge factors Ameritech has proposed.

5. Shared and Common Costs.

The price of unbundled network elements may include a reasonable and nondiscriminatory allocation of forward-looking shared and common costs. FCC Order, ¶¶ 682, 694. As we discuss in detail below, we adopt the FCC's now-vacated definition of forward-looking common costs as "economic costs efficiently incurred in providing a group of elements or services." 47 C.F.R. § 51.505(c)(1).

Ameritech. In order to identify and designate its shared and common costs, Ameritech retained the accounting and consulting firm of Arthur Andersen (Andersen) and presented the testimony of Mr. Daniel P. Broadhurst, a partner in Andersen's financial and economic consulting services group. Ameritech requested that Andersen analyze and attribute shared and common costs to unbundled network elements, to physical and virtual collocation and to transport and termination (collectively referred to as "UNEs") for the purposes of network interconnection with new entrant carriers. Ameritech also directed Andersen to analyze its total costs to identify costs that are shared among UNEs or common to UNEs and other services. Andersen's task was then to attribute such shared and common costs to individual UNEs based on measures of cost causation, when possible, or accepted measures of allocation when measures of cost causation did not exist. Ameritech Indiana Exh. DPB-NP (Broadhurst Direct), pp. 1-2.

Based on interviews with Ameritech personnel and its analysis of Ameritech's operations, Andersen determined that shared and common costs attributable to UNEs originated primarily from four business units serving wholesale customers of Ameritech: (1) Ameritech Information Industry Services (AIIS), the business unit responsible for providing UNEs and resale services to wholesale customers of Ameritech's local exchange services; (2) Network Services, the business unit that plans, constructs, operates, maintains and manages Ameritech's integrated wireline telecommunications network that is used to provide both retail and wholesale services; (3) Centralized Services (also referred to as AOC/State Administration), consisting of groups within Ameritech that provide centralized services such as information technology, real estate, purchasing, etc. for Ameritech Indiana and other Ameritech entities; and (4) Corporate, the headquarters group that performs functions such as finance, legal, investor relations,

etc. for Ameritech Indiana and other Ameritech affiliates. *Id.*, pp. 4-5.

Mr. Broadhurst used the following definitions for shared and common costs: shared costs are incurred to provide two or more UNEs but are unrelated to products and services that are not UNEs; common costs are incurred to operate the business as a whole and are not directly associated with individual UNEs, products or services or any group thereof. *Id.*, pp. 3-4.

Mr. Broadhurst stated that the FCC specified that shared and common costs are to be forward-looking, and Ameritech concluded that shared and common costs for calendar year 1997 were most consistent with the FCC requirement that they be forward-looking. Because Mr. Broadhurst indicated that Ameritech Indiana had not completed its 1997 budgets at the time Arthur Andersen prepared its study, preliminary 1997 budgets were used. Further, 1996 actual year-to-date expenses were used as a basis for breaking down the 1997 Network Services budget to the level of detail required by Arthur Andersen's analysis. *Id.*, pp. 6-8.

Arthur Andersen conducted interviews with Ameritech personnel and performed analyses to assign 1997 projected costs to seven categories:

1. Volume sensitive costs which were already reflected in TELRIC studies of individual UNEs.

2. Non-volume sensitive costs which were not included in TELRIC studies of individual UNEs.

3. Costs directly attributable to retail services.

4. Costs directly attributable to non-UNE wholesale services.

5. Costs shared among UNEs.

6. Costs shared among wholesale services, including UNEs.

7. Costs common to UNEs, wholesale and retail services.

Costs in categories 1-4 were excluded from shared and common costs. Costs in categories 5-7 were apportioned to UNEs. *Id.*, pp. 11-14.

Shared costs were directly assigned to all UNEs and then attributed to a specific UNE based on the ratio of the extended TELRIC for that UNE to the total extended TELRICs for all UNEs. Common costs from the Network Services, Centralized Services and Corporate units were allocated to AIIS, combined with the AIIS common costs and then attributed to all UNEs. The common costs attributed to all UNEs were then attributed to a specific UNE based on the ratio of the extended TELRIC for that UNE to the total TELRICs for all UNEs. *Id.*, pp. 15-18. *Id.*, pp. 13-14.

AT&T and MCI. AT&T and MCI (AT&T/MCI) maintain that the Arthur Andersen study (the "AA Study") should be rejected due to various legal infirmities related to its basic design and to implementation errors. They argue that any proposed charges for shared and common costs must clear three hurdles: (1) they must be based on a forward-looking methodology (FCC Order, ¶¶ 679 and 694); (2) they can only be added to the TELRIC of UNEs based on a "reasonable allocation" (FCC Order, ¶ 696); and (3) any charge for shared and common costs must not be unduly discriminatory against new entrants (TA 96, § 251(c)(2) and (3)). AT&T/MCI contend that the shared and common costs Ameritech seeks to recover based on the AA Study fail to clear any of these hurdles.

According to AT&T/MCI, the AA Study methodology for identifying and attributing shared and common costs was not forward-looking. They note that the AA Study relied upon Ameritech's projected 1997 costs as reflected in its internal, preliminary budgets, and that in some instances Andersen had to fill gaps in Ameritech's projected budgets by using information from 1996 budgets. Broadhurst Cross, Tr. G-37 and G-38. In AT&T/MCI's view, such costs are not "forward-looking," as that term has specific meaning in the economic sense. AT&T/MCI assert that even if it were proper for the AA Study to use only 1997 projected budgetary information, such costs, in order to be truly forward-looking, would have to exclude one-time expense items which are not likely to reoccur. However, AT&T/MCI observe, Andersen failed to examine the projected 1997 budget data to see if costs were included which would not reasonably be expected to reoccur on an annual basis. AT&T/MCI also claim that taking the next year's operating budget without analyzing whether those costs would be incurred using the latest technologies results in nothing more than a projected embedded cost study, which they assert is specifically prohibited by Section 252(d)(1) of the Act.

AT&T/MCI next note that Andersen did not undertake an evaluation to ensure that the identified shared and common costs were the product of an efficient operation, *i.e.*, efficiently incurred. *See* Ameritech Indiana Exh. DPB-NP (Broadhurst Direct), p. 9. MCI's witness, Dr. Ankum, testified that a forward-looking telecommunications system today could expect costs to be 30 percent below historic levels in which older technology is employed, leading to the conclusion that forward-looking companies have lower shared and common costs. MCI Exh. AHA-D (Ankum Direct), pp. 107-109.

AT&T/MCI also claim that a number of the shared costs directly assigned to UNEs were unreasonable. One such example is the salaries, benefits, and other employee related expenses for personnel in the AIIS business unit whom Ameritech claimed supply services solely for unbundled elements. AT&T/MCI allege that these secondary supervisory costs were developed by Ameritech personnel who arbitrarily mapped out employees in headcount charts. The wages and benefits of the designated employees were then directly assigned to unbundled elements for shared cost purposes. The AA Study workpapers, however, suggest to AT&T/MCI that many of the employees should not have been allocated solely to unbundled elements because they performed functions unrelated to UNEs. Thus, they allege that the wages, benefits and related

expenses for these individuals do not meet Andersen's own definition of shared costs. *Id.*, pp. 134-137.

AT&T/MCI next fault Andersen for not undertaking an in-depth independent review of the direct assignments, amount of dollars in the budgets, and personnel assigned to the various supervisors. Citing to various examples noted in Dr. Ankum's testimony, AT&T/MCI aver that some 23 percent of the wages, benefits, and other associated costs from AIIS were misallocated as shared costs directly assigned to UNEs. Dr. Ankum also reasons that because some supervisors were misallocated to AIIS, the costs associated with preparing workspace for those misallocated supervisors should correspondingly be reduced. *Id.*, pp. 137-38. A final misassignment of costs to UNEs in the AIIS budget, according to witness Mr. Behounek, involved the direct assignment to shared costs of all computer-related expenses for all new AIIS employees, rather than only those employees serving unbundled elements. AT&T/MCI Joint Exh. 3.0 (Behounek Direct), pp. 33-34.

Similar misallocations occurred in almost every business unit according to AT&T/MCI. For example, they contend that various costs from the Corporate business unit budget were incorrectly directly assigned to shared costs for UNEs. The costs directly assigned to UNEs from the Corporate unit came from three departments within the unit: the Corporate Strategy department, the Public Policy department, and the Corporate Legal department. AT&T/MCI contend that the descriptions of the Corporate Strategy and Public Policy expenses reveal no activity to distinguish these expenses for direct assignment to UNEs, and that most of those expenses related to activities other than UNEs. Accordingly, Dr. Ankum recommended such expenses be removed from shared costs and moved to the common cost pool, where they would be shared by all services. MCI Exh. AHA-D (Ankum Direct), p. 139.

AT&T/MCI also contend that the Corporate Legal department costs directly assigned to UNEs are inappropriate and should be removed from the shared cost pool. The bulk of those expenses were outside counsel fees related to arbitrations, statements of generally available terms and conditions, tariff filings and associated cost proceedings, and the resulting litigation. AT&T/MCI contend that it is unreasonable to directly assign the Corporate Legal department expenses to UNEs for a number of reasons. First, these expenses are not forward-looking and are not likely to reoccur in future years. Next, the costs of implementing the Act, particularly the legal costs of implementation, cannot solely be the burden of unbundled elements. A final reason is one of fundamental fairness. AT&T/MCI explain that during the arbitrations to open the market to competition, Ameritech took positions largely viewed as hostile to the new entrants. To make new entrants, who have paid their own legal expenses in the arbitration proceedings, now fund Ameritech's legal expenses is inequitable. Furthermore the intended outcome of Ameritech's legal efforts will be for Ameritech to retain retail market share. For all of these reasons, AT&T/MCI suggest excluding all expenses of the Corporate Legal department from both shared and common costs. *Id.*, pp. 139-42.

The final business unit from which costs were directly assigned as shared costs to

UNEs is the Ameritech Operating Companies (AOC)/State Administration unit, also sometimes referred to as the Central Services business unit. The costs assigned from this business unit emanate from two departments: the Public Policy department and the Legal department. The Public Policy costs included significant amounts for consultant fees (e.g., Arthur Andersen and the Law and Economic Group (Dr. Aron)). Asserting that these consultant fees are one-time expenses related to implementing the provisions of the Act, Dr. Ankum recommended removing them from the shared costs assigned to UNEs. Dr. Ankum suggested reassigning the remaining Public Policy expenses to common costs. For the same reasons that Corporate Legal department expenses should be excluded from recovery as either shared or common costs, AT&T/MCI maintain that the legal expenses associated with AOC/State Administration unit also should be excluded from recovery as either shared or common costs. *Id.*, pp. 145-46.

AT&T/MCI also contend that many of the common costs assigned to UNEs were unreasonable. Andersen, on Ameritech's behalf, engaged in a laborious study to assign common costs to UNEs. AT&T/MCI allege that an examination of the AA Study methodology reveals that both the methodology used to identify common costs and the methodology used to allocate such common costs to UNEs are flawed. The most obvious expenses which should be excluded from common costs, according to AT&T/MCI, include the expenses associated with the Ameritech Senior Golf Tournament, the skyboxes at various sporting arenas, the expenses associated with the Ameritech Cup, the expenses for "In Performance at the White House" and other corporate charitable contributions. *Id.*, pp. 150-151; AT&T Exh. 1.0P (Henson Direct), pp. 52-54. AT&T/MCI reason that such promotional advertising and corporate charitable contributions benefit Ameritech's retail operations and are unrelated to UNEs.

Dr. Ankum also maintained there are misallocations even among the four business units (Network Services, AOC/State Administration, Corporate, and AIIS) which serve as a source of common costs. Some examples of allegedly misassigned expenses include retail expenses related to printing Ameritech's customers bills, retail related expenses for the system that allows Ameritech to establish, maintain and change customers account information, retail costs relating to computer applications to allow Ameritech to bill customers for telephone usage, and expenses related to correction of service order, toll usage and account errors and handling return mail, duplicate billing and special bill processing. MCI Exh. AHA-D (Ankum Direct), pp. 151-152.

AT&T/MCI next challenge the allocation scheme used in the AA Study for the assignment of common costs to UNEs. They argue that because these are common costs, one would assume that these costs would be allocated uniformly so that each Ameritech business activity received a fair and equal share of the general company overhead. The AA Study, however, allocated common costs through a series of ratios or allocation factors. This process became even more complex when Andersen consolidated certain common costs in business units and then reallocated them out to discrete services. The total common costs were then adjusted to exclude costs that are in TELRIC and are then allocated to the AIIS business. Finally, they were further allocated to UNEs within the AIIS business unit. AT&T Cross Exhs. 8 and 18.

The AIIS unit also had its own common costs in addition to those costs allocated to it from Network Services, the AOC/State Administration and the Corporate business units. The AIIS NPS common costs were allocated to UNEs using an allocation factor some 40% greater than the allocation factor for the remaining AIIS common costs. AT&T Cross Exh. 8.

AT&T/MCI argue that neither Ameritech nor Andersen could provide any meaningful explanation as to why this complex allocation system was applied to common costs, other than that is the method used by Ameritech for internal budgeting purposes. While this may be an acceptable methodology for Ameritech internally, AT&T/MCI claim that the allocation method not only is overly complex, but is discriminatory because Ameritech's "new ventures" (a category of non-telephone competitive businesses) received no allocation of common costs. Because of this exclusion, the ratio of non-core to core telephone activities was decreased, thereby increasing the amount of common costs that ultimately were assigned to UNEs. AT&T/MCI contend that this allocation is discriminatory, and they point to the fact that Ameritech Corporation's overseas investments are more than one and a half times greater than its total telephone network costs, and unbundled elements account for only a fraction of these network costs, yet UNEs were assigned more than twice as much of all Corporate common costs as the company assigned to its overseas investments. In sum, AT&T/MCI conclude that if costs are truly common and cannot be assigned by use, then the allocation should be uniform and equal.

Having criticized the methodology by which Ameritech's company-wide pools for shared and common costs were developed in the AA Study, AT&T/MCI then challenge the methodology developed by Andersen to distribute those costs among unbundled elements. Andersen chose to distribute the pools of shared and common costs to individual UNEs by the ratio of the extended TELRIC for the UNE to the extended TELRIC for all UNEs. The principal problem with that approach, according to AT&T/MCI, is that it is critically dependent on the demand forecast for the UNEs, because extended TELRIC is the TELRIC of the UNE multiplied by its projected demand. Ameritech's UNE demand forecasts are suspect, according to AT&T/MCI, because neither Ameritech nor Andersen produced the demand forecasts or presented a witness to explain and support the forecasted demands. AT&T/MCI further contend that the limited demand information available to Andersen is out of date and does not reflect the fact that Ameritech's proposed TELRIC prices are now lower than they were when the demand information was gathered. They argue that the lower TELRIC prices would result in an increased demand for the UNEs, and that without a demand study in the record, it is impossible to adjust the UNE demand levels to reflect the lower TELRIC prices.

AT&T/MCI next allege that charging a fixed price per loop for shared and common costs across all rate groups, as the AA Study did, sets up a barrier to competition by assigning more shared and common costs to loops in the most competitive, least costly areas to serve. Thus, they contend, the AA Study approach could hinder competition in the areas where competition is most likely to begin. AT&T/MCI contend that using a

mark-up over TELRIC pricing methodology for assigning shared and common costs to loops, on the other hand, poses no entry barriers.

In conclusion, AT&T/MCI contend that the AA Study methodology is seriously flawed and, therefore, must be rejected by the Commission. The reasons cited by AT&T/MCI are the combination of (i) virtually complete control over the budgeting process by Ameritech, (ii) the obvious direct financial incentive to report high shared and common costs, (iii) the inability to verify or audit the demand projections and (iv) the lack of a predicate demonstrating that the budgeting process is in fact accurate.

While not advocating the use of the AA Study methodology to assign shared and common costs to UNEs, the expert witnesses for both AT&T/MCI did attempt to make adjustments to the AA Study methodology to bring it closer in line with the requirements of the Act and the FCC Order. AT&T/MCI witness Behounek adjusted the AA Study to incorporate the recommendations of the other AT&T/MCI witnesses, as well as some of his own recommendations. He concluded that Ameritech was entitled to a combined mark-up of 12.2812% for both shared and common costs. AT&T/MCI Joint Exh. 3.0P (Behounek Direct), pp. 36-38 and Exh. BB-06. AT&T witness Henson concluded that a gross 30 percent mark-up fairly captures Ameritech's proposed loading for shared and common costs. Mr. Henson then made a further reduction to remove all retail costs, using the 21% retail discount factor established in the AT&T/Ameritech arbitration proceeding, Cause No. 40571-INT-01. Finally, in an attempt to limit costs to just those forward-looking and efficiently incurred costs, Mr. Henson, relying on Ameritech's own filing in FCC Docket No. 96-98, multiplied the remaining number by 55%. As a result, Mr. Henson recommended a 13.0% mark-up over TELRIC to provide Ameritech with an appropriate contribution from UNEs for its common and shared costs. AT&T Exh. 1.0P (Henson Direct), p. 59.

MCI's shared and common cost witness, Dr. Ankum, took a similar, but not identical approach. He testified that, in his opinion, Ameritech's shared and common costs are overestimated by a minimum of 20%. Taking that, as well as his other recommended adjustment into consideration, Dr. Ankum recommended a shared costs mark-up of 4.99% and a common cost mark-up of 9.94%. Such mark-ups represented the ratio of appropriate shared or common costs divided by the appropriate extended TELRIC for all UNEs. Thus, Dr. Ankum recommended a total shared and common cost mark-up of 12.94%. MCI Exh. AHA-D (Ankum Direct), p. 159.

Based on the testimony of Dr. Ankum, Mr. Henson and Mr. Behounek, AT&T/MCI recommend that the Commission adopt a single shared and common cost mark-up in the range of 12.2% to 13%.

<u>OUCC</u>. The OUCC's witness, Dr. Roycroft, also was critical of the AA Study. He pointed out that Mr. Broadhurst, in discovery, indicated that he had not conducted any audit or other assessment of the reasonableness of the expenses he included in his shared and common costs. Public Exh. 1 (Roycroft Direct), pp. 40-41. Dr. Roycroft contended that Ameritech's charitable contributions and lobbying expenses should not be included

in the common costs allocated to UNEs. He said such expenses should be recovered from Ameritech's shareholders, not its customers. *Id.*, p. 41.

Dr. Roycroft also said that he did not consider the AA Study results to provide a reliable foundation for establishing the correct level of shared and common cost to be included in unbundled network element pricing. *Id.*, p. 42. He contended that the use of 1997 budgeted expenses reflecting the extraordinary event of the implementation of the Telecommunications Act would likely overstate the actual level of shared and common costs Ameritech will incur in years after 1997. *Id.*, p. 43. Dr. Roycroft also testified that the AA Study methodology resulted in a general over-allocation of common costs to unbundled network elements. That, according to Dr. Roycroft, was because the AA Study did not directly assign any shared costs to any business unit other than AIIS. *Id.*, pp. 43-44.

Like the AT&T/MCI witnesses, Dr. Roycroft recommended that all of the Legal and Public Policy expenses of AOC/State Administration business unit be excluded from the shared costs directly assigned to unbundled network elements. *Id.*, p. 47. Similarly, he recommended that the Legal expense from the Corporate business unit be excluded from the shared costs directly assigned to unbundled network elements. He further recommended the costs associated with Operator Services be removed from the common costs attributed to unbundled network elements. *Id.*, p. 49.

With respect to shared and common costs, Dr. Roycroft made the following specific recommendations (*Id.*, pp. 5-7):

- Absent some mechanism to verify that the recovery of Ameritech-wide shared and common costs is consistent across jurisdictions, Ameritech should recover no more than average, Ameritech-wide, shared and common costs from UNEs sold in Indiana.

- The evaluation of shared and common costs should be redone to determine whether the costs included are reasonable. The study of shared and common costs should be structured to avoid inclusion of extraordinary expenses associated with the implementation of the Telecommunications Act of 1996.

- Direct assignment of shared costs should be performed for all business units rather than for Ameritech Information Industry Services (AIIS) alone. Common costs should be recalculated and reallocated after the direct assignment is completed.

- Charitable contributions and the costs of lobbying activities should be removed from the "Corporate Common Costs."

- Given the extraordinary volume of "Public Policy" and "Legal" costs, all of these costs should be removed from the Centralized Services and Corporate shared costs, and from the prices of UNEs. The allocation of common costs to

UNEs should not increase when this removal is performed. Ameritech should resubmit a study that develops a non-extraordinary view of these expenses to be recovered in the prices of UNEs.

- In "Public Policy" shared costs that are included in the prices for UNEs, Ameritech should remove the portion of these costs that are attributable to resale.

- The following expenses should be removed from Network Services common costs: (1) Right-to-Use Fees for Engineering, (2) Higher Level Management—Operator Services, and (3) Support Staff—Operator Services. These costs should be directly assigned.

Commission Analysis and Conclusion . The pricing methodology we have adopted in this Cause permits an amount in addition to the TELRIC of an element to be included in the price Ameritech can charge for UNE. The additional amount is to cover certain "shared" and "common" costs incurred by Ameritech in providing the UNE. Similar principles apply to both the nature and the allocation of shared and common costs, as noted by the FCC:

> . . . under a TELRIC methodology, incumbent LECs' prices for interconnection and unbundled network elements shall recover the forward-looking costs directly attributable to the specific element, as well as a reasonable allocation of forward-looking common costs.
>
> * * *
>
> Directly attributable forward-looking costs also include the incremental costs of shared facilities and operations.

FCC Order, ¶ 682. We agree with the FCC's view that "[b]ecause forward-looking common costs are consistent with our *forward-looking, economic cost paradigm*, a reasonable measure of such costs shall be included in the prices for interconnection and access to network elements." FCC Order, ¶ 694. (Emphasis added.) Thus, shared and common costs must be based on a "forward-looking" methodology and be based on a "reasonable allocation." Moreover, any charge for shared or common costs also must not be unduly discriminatory against new entrants.

Additionally, forward-looking costs must reflect least cost technology and ignore all embedded costs. FCC Order ¶¶ 679, 694. Indeed, "the sum of the direct costs and the forward-looking common costs of all elements will likely differ from the incumbent LEC's historical, fully distributed costs." *Id.* ¶ 698. The FCC's forward-looking, economic cost pricing methodology, which we follow here, applies equally to costs of interconnection and shared and common costs. As to the requirement that all shared and common cost be "reasonably allocated", we agree with the FCC that "[o]ne reasonable allocation method would be to allocate common costs using a fixed allocator, such as a

percentage mark-up over the directly attributable forward-looking costs." *Id.* ¶ 696.

Ameritech proposes a combined mark-up of approximately 25% over TELRIC for shared and common costs. To arrive at that percentage, Ameritech hired Arthur Andersen, its financial accounting firm, to assemble a team of accountants that, in a month's time, sifted through Ameritech's internal budget to find the shared and common costs to be assigned to UNEs.

The AA Study methodology consisted of having Arthur Andersen employees conduct interviews with high level managers in certain business groups within Ameritech. The purpose of the interviews was to ascertain preliminary 1997 internal business budget costs that could be classified as shared costs or considered common costs. Once these two pools of costs were established, the AA Study then apportioned the costs first to all UNEs and then to each type of element to develop a fixed shared and common surcharge per element. The cost projections were done in 1996 as part of Ameritech's standard preliminary budgeting process, including "mapping out" employees and expenses by tiers for cost classification. The largest single Ameritech business entity interviewed (Network Services) did not have available 1997 projections in the lower tiers. To fill the gap, Arthur Andersen used information from 1996 budgets to construct the lower tiers and thus complete the cost allocations. Ameritech Indiana Exh. DPB-NP (Broadhurst Direct), pp. 7-8.

The Commission finds that several of the shared costs allocated to UNEs are unreasonable and in violation of the Act. The AA Study identified several million dollars worth of shared costs that were directly assigned to unbundled elements. The AA Study defined shared costs as costs "incurred to provide two or more UNEs but are unrelated to products and services that are not UNEs." Ameritech Indiana Exh. DPB-NP (Broadhurst Direct), p. 3. Approximately 40% of these shared costs came from the AIIS business unit's 1997 budget. The greatest portion of this amount is for salaries, benefits and other employee related expenses for personnel who, Ameritech asserts, supply services *solely* for unbundled elements.

According to the AA Study, these employee-related expenses were developed by Ameritech personnel who "mapped out" employees by making headcount lists for each manager in the various sections of the AIIS unit. The dollar budgets by management group and the assignment of costs directly to the unbundled elements were made by Ameritech personnel and then included in the AA Study following an interview with an Arthur Andersen employee. No in-depth independent reviews of the direct assignments, the dollars in the budgets or headcounts were conducted by the Arthur Andersen employees.

As pointed out by witnesses for the OUCC and intervenors, however, many of the AIIS employees directly assigned to UNEs were <u>not</u> engaged in work activities <u>solely</u> related to UNEs. Thus, under Andersen's own definition of "shared costs," the wages for such employees were not shared costs to be directly assigned to UNEs.

MCI witness Dr. Ankum proposed several adjustments based on these misallocated salaries. Altogether, Dr. Ankum found that 23.36% of the wages from the AIIS business unit originally identified by Arthur Andersen were improperly assigned to UNEs and should be removed from the shared cost pool. MCI Exh. AHA-D (Ankum Direct), p. 137. He also recommended the Commission order Ameritech Indiana to back out the numerous ancillary costs attributable to these employees improperly designated to UNEs. These other costs include those employees' benefits, as well as the costs of providing their work space. *Id.* at pp.136-138. We find that Dr. Ankum's recommendations are reasonable and should be, and are, accepted.

Finally, the AIIS budget assigned an amount as a shared cost to unbundled elements for computer related expenses for new employees. AT&T/MCI witness Behounek recommended two adjustments to this amount. First, he recommended that the one-time software expenses be amortized over two years to reflect the expected economic life of software assets. Second, the Arthur Andersen workpapers reveal that these funds are directly related to the purchase of computers and software for all of the new AIIS employees, not just the new AIIS employees who are directly assigned to unbundled elements. Mr. Behounek thus recommended the assignment of only that percentage of AIIS employees identified in the AA Study workpapers as incremental to the UNE business of AIIS be assigned to the UNE shared cost pool. AT&T/MCI Joint Exh. 3.0P (Behounek Direct), p. 34. We agree with Mr. Behounek's analysis and, therefore, accept his recommendations.

The shared cost pool directly assigned to UNEs also includes more than $4 million from Ameritech's Corporate business unit. This amount is the sum of the expenses directly assigned to UNEs from three departments within the Corporate department: the Corporate Strategy department, the Public Policy department and the Corporate Legal department. AT&T Cross Exhs. 8 and 17; Broadhurst Cross, Tr. G-101.

The Commission finds no support for the direct assignment as shared costs of these Corporate Strategy and Public Policy expenses. To the contrary, it appears that expenses related to matters other than unbundled network elements are included. For example, the Corporate Strategy department total includes expenses related to an employee whose time is "spent reviewing issues relating to resale and unbundling." MCI Exh. AHA-D (Ankum Direct), p. 138. According to Mr. Broadhurst's definition of a shared cost as one that is related to two or more UNEs but <u>not</u> related to services that are not UNEs, these costs should be excluded from the shared cost pool. Thus, for the reasons set forth in Dr. Ankum's testimony, we find that the Corporate Strategy and Public Policy expenses should be moved from the shared cost pool to the common cost pool, where they will be shared by all services, not just UNEs. *Id.*, p. 139.

A total of nearly $4 million from the Corporate Legal department budget was directly assigned as a shared cost to UNEs. According to Mr. Broadhurst, an Ameritech employee, Mr. Carlson, was responsible for assigning these costs to UNEs. Broadhurst Cross, Tr. G-75 and 76. Mr. Carlson's deposition in Ohio, as well as the AA Study workpapers, indicated that these legal expenses represented Ameritech's counsel fees