

# I. EXECUTIVE SUMMARY

## A. PROJECT OBJECTIVE

This audit was conducted in response to an Order in Docket No. 94-121, in which the Commission stated its intention to perform a focused management and operations review in the fourth year of BellSouth-Kentucky's (BST-KY) Price Regulation Plan (PRP). In Case No. 94-121 (Order) dated July 20, 1995, the Commission authorized BST to operate under a price regulation plan (PRP). The PRP was structured to satisfy five broad objectives:

- Cap BST's basic residential service rates and protect customers of BST's monopoly services from significant rate increases.
- Maintain minimum BST service quality standards.
- Provide BST with incentives to continue investing in new technologies and services to satisfy customer demands.
- Allow BST to focus its efforts on enhancing productivity and efficiency of its operations.
- Permit BST the flexibility to price competitive services.

At the time of the Order, the Commission was concerned that BST have enough regulatory flexibility to adequately prepare itself for local competition. The Commission was also concerned that certain necessary structural and operational changes be made to ensure the continued provision of high quality services to all customers and the availability of new services. Subsequent events in the telecommunications industry have shown these concerns to be appropriate.

As defined in the Order, this management audit should:

- Review BST's investment decisions, service levels, and financial performance.
- Examine BST's productivity trends.
- Assess the competitive telecommunications marketplace.
- Evaluate BST's strategic planning, network planning, marketing programs and overall operational planning under the PRP.

The specific objectives of this audit are to:

- Evaluate BST's price regulation plan in terms of whether it allows the necessary adjustments in an increasingly competitive environment.
- Determine whether the plan is structured properly going forward in view of the 1996 Telecommunications Act and certain Commission Orders.

The scope of this audit is limited to an assessment of BST's performance under the PRP and to prepare specific recommendations that either modify PRP requirements and/or address BST's management policies supporting their performance under the PRP. The objectives of the audit DO NOT include an evaluation of BST's compliance with the 1996

Telecommunications Act or related Commission Orders other than Case No. 355 and Case No. 360.

This chapter summarizes the overall results, as well as the recommendations arising from the review. Detailed findings and recommendations are presented in later chapters of this report.

## **B. AUDIT APPROACH**

### **BACKGROUND**

The audit was conducted during the period of April 1999 through October 1999, with most on-site field work and interviews completed by July 1999. In order to maintain conformity and ease of historical comparison, the data and statistics cited in the report were gathered as of year end 1998.

A total of five consultants from Vantage, plus a Project Administrator, were involved in the audit and contributed to the final report. In addition, the Kentucky Public Service Commission Management Audit Branch was involved in all aspects of the audit. Virtually all interviews were attended by a representative of the Management Audit Branch who was then able to use this knowledge in reviewing the Draft Report. The in-depth involvement of the Management Audit Branch will be of great value in the future when it is called upon to provide direction in any ongoing regulatory proceedings.

### **AUDIT STEPS**

Prior to beginning field work, BST-KY management, the Management Audit Branch, and Vantage Consulting project managers met to refine the scope of the audit and to clarify procedures for submitting interview and information requests. Field work commenced with a one-day orientation conducted by BST-KY management and initial interviews. After the orientation phase, Vantage consultants determined that the preliminary work plan submitted in the proposal accurately reflected the requirements of the project.

The on-site field work phase lasted approximately three months. Throughout this phase, Vantage consultants conducted a total of approximately 35 interviews and field visits, and submitted 140 information requests. The field visits, interviews, and information request responses formed the basis of the factual information provided in this report.

At the end of the field work, the Vantage team held a verification session with the Management Audit Branch and BST-KY management to review preliminary findings and conclusions and apprise them of progress and issues. During this meeting, consultants provided oral descriptions of the findings and conclusions reached, followed by feedback from BST-KY to better clarify positions.

After all interviews and verifications were complete, Draft Report Chapters were developed and submitted to the Management Audit Branch for review and approval. Once reviewed and approved by the Management Audit Branch, BST-KY was given 10 working days to

provide comments. After comments were received from BST-KY, a Final Draft Report was prepared for additional review and comments by both the Management Audit Branch and BST-KY. These comments were incorporated where appropriate, and the Final Report was produced.

The report is organized in the following manner in order to provide a logical presentation of the information and detail:

- *Chapter I - Executive Summary*, provides a brief synopsis of the report, as well as a listing of each recommendation made, its relative priority, and potential for quantifiable cost savings where appropriate.
- *Chapter II - History of Price Regulation Plan*, provides summaries of the PRP plans for Kentucky, other BellSouth states, and other non-BellSouth utilities across the country.
- *Chapter III - Significant Regulatory, Structural and Technical Changes*, illustrates significant technical and regulatory changes that have occurred during the period that the PRP was in place.
- *Chapter IV - BellSouth Performance During PRP Program*, contains the analysis, conclusions, and recommendations resulting from our review of BST-KY's four years of operation under the PRP. This was the *Tier 1* analysis called for under the Request for Proposal.
- *Chapter V - Assessment of PRP Structure*, is an analysis of the structure of the current PRP with recommendations for changes. This analysis includes a review of Total Factor Productivity (TFP), service categories, service category pricing formulas, evaluation of PRP objectives, and ongoing PRP objectives.
- *Chapter VI - Stakeholder Impact From PRP*, provides a general discussion of the impact PRP has and will continue to have on various stakeholders.
- *Chapter VII - Platform Towards Deregulation*, summarizes the platform of activities that need to be undertaken by BST-KY to achieve the objectives discussed in the previous chapters.
- *Chapter VIII - Appendix*, includes a glossary of terms associated with the telephone industry and PRP activities in particular.

## **C. OVERALL SUMMARY**

### **BST-KY PRP RELATIVE TO INDUSTRY**

BellSouth Telecommunications has implemented PRPs in all nine of its region states. BST-KY was the first of the states to complete the implementation. In addition, there are

numerous other telephone utilities across the country that have implemented similar plans. In comparing Kentucky to the other BellSouth states and the rest of the industry, we noted that BST-KY was the first of the BellSouth states to implement its plan and that it had the highest productivity factor of all BellSouth states and one of the highest productivity factors in the country.

There have been significant regulatory and legislative activities within the telecommunications industry since the advent of the BST-KY PRP. These include the Telecommunications Act of 1996, the FCC Interconnection Order, and Universal Service issues. In addition, major changes in the make-up of the industry have also taken place, including, convergence or the coming together of technologies necessary for provision of telecommunications services, a broadening of the number of competitors, and the addition of large numbers of CLECs. Many changes are technology driven. Along with loosening regulatory constraints, technology is allowing non-traditional competitors, such as wireless providers, voice and fax over IP providers, and cable (COAX and satellite) to begin competing directly with BST-KY.

## **A PARADIGM CHANGE MAY BE REQUIRED**

Anyone familiar with telecommunications recognizes the fundamental shifts which are occurring in technology and in market players. In our analysis of the industry, we made some key observations concerning the industry and its regulation on a going-forward basis:

- The Commission must prepare for and understand markets and services outside their direct regulatory control.
- BellSouth through its interaction with the Commission, must prepare itself for the problems that competition may bring.
- The total role of BellSouth in state economic development must be considered in any evaluation of BellSouth's performance in a state.
- The argument that competition does not exist, because of low penetration of access lines, is specious and does not recognize the realities of the modern telecommunications environment.
- The residential POTS customer with no enhanced services and little long distance usage is not likely to see any noticeable reduction in rates as a result of competition. This is both ironic and problematic in that these very customers are the ones where media attention continues to focus when discussing competition. They are also the customers that for the foreseeable future will require some form of regulatory protection.

Based on the analysis, we recommended closer work between BST-KY and the KPSC in addressing competition at the residential level and in opening greater dialogue between the KPSC and BST-KY and its competitors. We feel this is critical in order for the KPSC to adequately address issues in a highly fluid environment.

## **BELLSOUTH RESULTS UNDER THE PRP**

In our review of the PRP results for the last four years, we made a number of observations and reached one major conclusion. Overall, BST-KY has met all of its obligations in implementing and performing under the PRP. We found no instances where reliability suffered as a result of the PRP or where management made poor decisions with regard to financial or operating issues.

BST-KY's financial performance was outstanding during the PRP period. Revenues increased significantly, largely due to additional access lines and to increased demand for calling features by customers. Expenses, on the other hand, were carefully controlled. Decreases in staffing during the first three years of the program resulted in increased rates of return for the Company. While these returns exceeded past ROE target levels, one must recognize that they are meaningless under a PRP and, in fact, point to the success that has been achieved.

In performing our review of BST-KY's operational performance, we tried to understand the transition BST-KY and the industry is undergoing. In particular, we considered BST's business plan projections, which show the current versus projected service levels and revenues. For example, in 1998, BST-KY had 73% of the local service market with a projection that in 2002, this level would be reduced to 39%. (Almost all major commercial businesses in Louisville have alternate suppliers right now.) On the other hand, data, equipment, managed network service, and long distance revenues would all increase proportionately.

As to reliability, our review addressed all areas of operation and measures of performance and found, with few exceptions, adequate to good performance. We did make recommendations in this area. We noted that certain of the service measures required to be reported under the PRP are arcane and should be reviewed and either removed or modified.

Our review of BST-KY's strategic planning showed that it has adapted to the new telecommunications environment.

## **STRUCTURE OF THE PRP**

Our overall assessment of the PRP during the last four years concluded that it was effective, but now needed changes to reflect the industry transition to competition. The first and one of the major issues was the productivity factor. Our consultants conducted a study of Total Factor Productivity to determine its history, proper application, and relevance at this time in the industry transition. A major conclusion of Vantage was that the productivity factor, as currently used, should be eliminated or phased out. In developing an alternative to the productivity factor, we recommend that the KPSC should eliminate the TFP index and allow rates to be capped by inflation. Part of the recommendation provides the option of establishing a fund based upon the elimination of the TFP index over an identified transition period, for which BST-KY will be directed to earmark for future investment commitment or allocation.

Our review of the service categories suggests that there is no basis for redefining the three existing categories. However, we do recommend that BST-KY should review the services contained in the non-competitive service category, and based upon the KPSC standards, submit a petition to the KPSC for their re-classification to the competitive category.

Our review of service category pricing formulas indicated that BST-KY has not filed any tariffs or entered into any CSAs which have requested prices below LRIC, and that BST-KY has appropriately utilized CSAs.

Another issue related to tariffs that we addressed was presumptive validity, which is a concept that while not a problem to date, could become one in the future. Here we recommend that the PRP regulations allow for a reasonable level of presumptive validity.

In our review of the PRP objectives, we conclude that the original set of objectives be continued, but that two additional objectives be added. These include permitting all BST-KY retail rates to move towards incremental cost or market price, and ensuring that the potential introduction of competition to all markets in Kentucky is not hindered by the PRP.

## **OBJECTIVES GOING FORWARD**

Our last audit chapter provides a platform of activities to be undertaken by the BST-KY and the KPSC to insure that competitive objectives are forwarded, not hindered by the PRP. Here we conclude that the Kentucky state-wide wholesale UNE price structure, in conjunction with BST-KY's subsidy laden retail rate structure, inhibits the successful transition to a deregulated telecommunications marketplace. We recommend a focused effort to eliminate implicit/explicit subsidies from BST-KY's retail rates. We also recommend that the issues of rate re-balancing be reassessed by BST-KY and the KPSC and that together with other involved parties, an effort be made to move forward with a limited rate re-balancing.

## **D. SUMMARY OF RECOMMENDATIONS**

The following summary of recommendations provides key information in each of the columns. Column one provides the recommendation number. The roman numeral refers to the chapter of the report, and the number is the sequential number of the recommendation in the chapter. The second column provides the recommendation description, taken directly from the report, and the reference to the specific finding(s) that supports the recommendation. Column three provides a priority for the recommendation. This is the consultant's judgment as to which recommendations the initial effort should address. High, medium, and low are used to differentiate between recommendations. Notwithstanding these priorities, all recommendations are considered important. Column four provides an assessment of the quantification potential, or likely savings, to be generated from the recommendation. Most recommendations address improved customer service operations or strategic position, but are not readily quantifiable. Although additional savings may be possible as a result of implementing some of these strategic and operations types of recommendations, an estimate of their cost effectiveness cannot be made at this time because of the difficulty in arriving at such values.

## SUMMARY OF RECOMMENDATIONS WITH PRIORITIES

<b>Recommendation Number</b>	<b>Recommendation Description</b>	<b>Priority</b>
<i>III-R1</i>	The Commission needs to develop a formal plan for how it plans to deal with competition at the residential level.	Medium
<i>III-R2</i>	The Commission needs more open dialog with BellSouth and other competitors.	Medium
<i>IV-R1</i>	The Out of Service repair service standard should be changed to 36 hours from 24 hours.	Medium
<i>IV-R2</i>	Service standards should be revised to include only those measures providing valuable data in today's environment.	Medium
<i>IV-R3</i>	The Commission should be prepared to revisit the remaining service standards after the industry has "resettled."	Low
<i>V-R1</i>	The KPSC should eliminate the TFP index.	High
<i>V-R2</i>	Change the non-competitive service category pricing formula to allow for price increases at inflation.	High
<i>V-R3</i>	BST-KY should review the services contained in the non-competitive service category and, based upon the KPSC standards, submit a petition to the KPSC for their re-classification to the competitive category.	High
<i>V-R4</i>	Change the PRP regulations to allow for a reasonable level of presumptive validity.	Low
<i>V-R5</i>	The KPSC should maintain the five current objectives of the PRP. However, two new objectives should be added.	Medium

<b>VII-R1</b>	The BST-KY should work with the KPSC to undertake several proceedings with the aim of eliminating implicit/explicit subsidies from BST-KY's retail rates, establishing de-averaged recurring UNEs and modifying non-recurring UNEs.	High
<b>VII-R2</b>	Vantage recommends that the issues of rate re-balancing be reassessed by BST-KY and the KPSC and, that together with other involved parties, an effort be made to move forward with a limited rate re-balancing.	Medium

## II. HISTORY OF PRICE REGULATION PLAN

### A. SUMMARY OF KENTUCKY PRP

*Exhibit II-1* provides a summary of the BST-KY PRP and *Exhibit II-2* shows other BST States PRP. These summaries are intended to provide a general overview for the reader. For specific details, please refer to the actual order or BST's annual filings.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit II-1  
BST-KY PRP Summary**

	<b>BST-KY Summary</b>
<b>Proceeding/Status</b>	BST-KY proposed price regulation plan 3/94. Hearings conducted in price regulation docket 4/95. Order issued 7/20/95 adopting price regulation plan with modifications.
<b>Initial Term/Renewal/Review</b>	No term limit. By 7/20/99, BST-KY is required to file analysis of productivity results over the four-year period and projections for any changes in factors of productivity in the future.  Management audit will be conducted in the fourth year after the date of the Order. Audit shall include review of investment decisions, service levels, and financial performance under price regulation to determine if adequate service has been maintained.
<b>Inflation Index</b>	GDP-PI.
<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	GDP-PI minus 4% when inflation $\leq 8\%$ 1/2 GDP-PI when inflation $> 8\%$ Applies to Non-competitive services and to Interconnection services.
<b>Rate Caps</b>	3-year cap on Residence and until USF established.
<b>Rate Case</b>	Prices were adjusted based on 12.5% ROE resulting in \$28.9 million reduction.
<b>Rate Reductions</b>	Touch-Tone: \$3.7M Access Charges: \$9.2M Toll: \$1.3M Zone: \$8.8M Grouping: \$5.9M \$28.9M

<b>Service Category Descriptions</b>	Non-competitive: Residence and business basic local exchange service plus some discretionary services. Interconnection: Access services typically of a wholesale nature and not usually sold to end users. Competitive: All other services.
<b>Basic/Non-Competitive Service Category Pricing Rules</b>	3-year cap on residence and continued until viable and acceptable universal service fund is implemented. <u>Inflation</u> <u>Productivity</u> 0-8%                                      4% >8%                                      1/2 GDP-PI <ul style="list-style-type: none"> <li>• Allowed price increase cannot exceed PRI change annually.</li> <li>• Increases cannot be deferred &amp; can be taken any time during the year.</li> <li>• Required decreases must be implemented upon PRI change.</li> <li>• 10% increase limit on individual services.</li> </ul>
<b>Interconnection Category Pricing Rules</b>	Mirror interstate switched access rates effective 7/1/95 and on continuing basis. Adjust based on non-competitive rules.  Rates for all intrastate switched access services cannot exceed the FCC interstate rate for the same service. If there is no similar service in interstate arena, the pricing rules in the non-competitive category will apply. Rates effective upon 30 days notice.
<b>Non-Basic/Competitive Category Pricing Rules</b>	Company sets prices based on market factors. Cost studies required for all price changes in competitive category. Changes are effective upon 30 days notice.
<b>Service Reclassification Requirements</b>	Company to file notice to reclassify service. Reclassification is presumed valid within 30 days if no action taken by Commission. If suspended, Commission will complete review procedures within 90 days.
<b>New Service Definition and Rules</b>	New service is function, feature, capability or combination of these previously not offered. BST-KY will propose appropriate category. Service will be effective upon 30 days notice.  Commission retains full statutory suspension procedures if new service is contested.
<b>Tariff Requirements</b>	Company will continue to file tariffs for all services. Tariff filings will include information to comply with pricing rules. BST must file cost study with any proposed change to demonstrate that the price is above long run incremental costs.
<b>Customer Notification</b>	Company determined; will comply with existing law.
<b>Price Changes Due to Governmental Action</b>	Not included in Order.

<b>Financial Reporting</b>	Company shall file routine quarterly and annual financial reports. Company may produce income statements in accordance with GAAP, but should maintain current USOA accounts and structure. BST-KY will file biennial review of its progress toward objectives, including a customer satisfaction analysis and technology assessment.
<b>Depreciation</b>	BST-KY shall set its own depreciation rates. Company shall file copies of its FCC depreciation filings. The Commission will monitor depreciation decisions and interact with FCC to assure assets are depreciated in timely manner.
<b>Service Quality Requirements</b>	Company will provide monthly reports of Commission required measurements as well as EXCEL results. BST-KY's summary of monthly service objectives should identify exchanges that do not meet minimum service standard for any month. If performance levels for an exchange fall below the minimum service objectives for two consecutive months, BST-KY should submit report setting forth the specific action taken or planned to correct its performance.
<b>Infrastructure Requirements</b>	No additional infrastructure requirements included.
<b>Commission Authority</b>	Price regulation is an agreement between Commission and Company to set and adjust prices based on proposed rules rather than based on earnings. Commission retains authority as set forth in rules and statutes.
<b>Competitive Safeguards Examples:</b>  <b>Cost Allocation</b> <b>Cross Subsidy</b> <b>Imputation</b> <b>Price Floors</b>	<p>Rates for Interconnection and Non-basic services shall equal or exceed LRIC unless price is intended in good faith to meet equally low price of a competitor. In such exceptions, the Company must file cost study and evidence to support that competitor is already charging a rate below the Company's LRIC of providing the service.</p> <p>Imputation Standard: Requires that each rate band by time-of-day for calls of average distance and duration exceed the traffic sensitive switched access rate plus the rate for billing and collection. (Imputation rule established by previous Commission Order.)</p>

## B. SUMMARY OF OTHER BELLSOUTH STATES PRP

### Focused Review of the Price Regulation Plan BellSouth Telecommunications, Inc. - Kentucky

#### Exhibit II-2 Other BST States PRP Summary

	ALABAMA
<b>Proceeding/Status</b>	Plan filed 2/2/95. Industry stipulation filed 5/17/95 recommending price regulation and certain local competition rules. Enabling legislation enacted 6/20/95. Commission issued order adopting modified Stipulation effective 9/20/95.
<b>Initial Term/Renewal/Review</b>	No term limit. Review of price regulation/local competition procedures and impact on rate payers no later than third anniversary date (9/20/98). On 10/5/98, Commission postponed review for up to three years.
<b>Inflation Index</b>	GDP-PI.
<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	Efficiency factor of 3.0%. GDP-PI - 3.0% minus any service quality penalties.  Formula applied to Basic Category.
<b>Rate Caps</b>	5-year cap on Basic Category. Individual residential service prices cannot be increased by more than the adjusted GDP-PI (GDP-PI minus 3.0% minus service quality penalties). Intrastate switched access rate elements capped at interstate switched access rates. One year cap on all services.
<b>Rate Case</b>	Rates in effect on 7/1/95 after most recent Point-Of-Test and rate reductions outlined below will be starting rates under the plan.
<b>Rate Reductions</b>	Reduce intrastate switched access to 8/1/95 interstate levels, plus an additional reduction of one cent. Reduce switched access 1/2 cent on 7/1/96 and 7/1/97 and 1/4 cent on 7/1/98 and 7/1/99 for two ends of access. Other rate reductions include: 7/1/95 - \$10.2M Touch-Tone 7/1/96 - \$15.3M Res. & Bus. Regrouping 7/1/97 - \$10.1M ACS, Grouping, Bus. 7/1/98 - \$11M MTS, ACS, Res. 7/1/99 - \$11M MTS, ACS, Bus.

<b>Service Category Descriptions</b>	Basic: Residence & Business local exchange services including ACS. Interconnection: Switched access and local interconnection. Non-Basic: All services other than Basic and Interconnection.
<b>Basic Service Category Pricing Rules</b>	5-year cap on all Basic services. Thereafter, increases limited in the aggregate to the change in GDP-PI, less a 3.0% efficiency factor, less any penalties related to service quality standards. Individual residential service price increases limited to the change in GDP-PI minus 3.0% minus any service quality penalties.
<b>Interconnection Category Pricing Rules</b>	For the first 5 years of the plan, switched access rates are tied to stipulated reductions (see Rate Reductions above). After 5 years, the rates are further capped at the 1999 intrastate rate levels or the interstate levels, whichever is the lowest. Local interconnection charges will be developed through a workshop conducted by the PSC.
<b>Non-Basic or Other Category Pricing Rules</b>	The aggregate prices for all services can increase a maximum of 10% in a given year. No increases in the first 12 months of the plan.
<b>Service Reclassification Requirements</b>	Transfer of service between categories effective no less than 30 days from filing.
<b>New Service Definition and Rules</b>	New services effective on 30 days notice even with intervention or investigation by Commission. If no decision after 60 days following filing, tariff is effective on a continuing basis. Period can be extended by the Commission either on its own motion or at the request of an interested party for a period not to exceed 60 days, for a total of 120 days.
<b>Tariff Requirements</b>	Company will continue to file tariffs for all services unless otherwise de-tariffed. Price decreases and promotional offerings effective no less than 15 days from filing. Tariffs to expand list of CSA authorized services effective 30 days after filing. Filings for decreases, promotional offerings or expansion of CSA approved list may be suspended to a 60-day effective date. Price increases effective on 30 days notice, but Commission can extend to 60 days.
<b>Customer Notification</b>	Company determined; will comply with existing law.
<b>Price Changes Due to Governmental Action</b>	The financial impact of governmental mandates, both state and federal, which apply specifically and/or disproportionately to, and have a major impact on telecommunications companies, may be recovered through an adjustment to prices for Basic, Interconnection and/or Non-basic services. Major impact is one which exceeds 2% of total intrastate regulated revenues in the preceding calendar year.

<b>Financial Reporting</b>	Company will provide Commission with financial results in the form of a monthly Alabama income statement. Other financial reports will be provided, as required by the Commission.
<b>Depreciation</b>	Commission approval not required for BST depreciation rates.
<b>Service Quality Requirements</b>	Four service quality standards will be used to adjust the efficiency factor: Latest 12 months calculations for: 1) Overall trouble report rates, 2) Trouble report rates for individual wire centers, 3) Held applications, 4) Receipt-to-final status in 36 hours. Each standard missed increases efficiency factor by 0.2%. If all four missed, maximum impact increases efficiency factor to 3.8%. Service quality standards reported monthly.
<b>Infrastructure Requirements</b>	No specific requirements, but the Commission will conduct a workshop on new technologies and expanded services. All local providers are required to develop networks and capabilities to support emerging technology, multimedia services, expanded services and the benefits of the "information super highway" in both urban and rural areas.
<b>Commission Authority</b>	Price regulation in no way diminishes the Commission's right or responsibility to regulate BST and oversee its operations. Prices charged to customers become the financial focus of the Commission rather than the earnings of BST.
<b>Competitive Safeguards Examples:</b>  <b>Cost Allocation</b> <b>Cross Subsidy</b> <b>Imputation</b> <b>Price Floors</b>	Prices for any new or existing service shall equal or exceed LRIC unless specifically exempted by the Commission based on public interest concerns, or BST, in good faith, prices the service to meet the equally low price of a competitor.  Imputation Standard: The price floor for each service shall equal the total LRIC of the non-essential elements of the service plus the LEC's tariffed rates for essential elements utilized by the competing providers.

	<b>FLORIDA</b>
<b>Proceeding/Status</b>	Legislation opening local franchise and establishing price regulation framework enacted 6/17/95, effective 7/1/95. BST's election of price regulation became effective 1/1/96. BST is required to comply with the 1/94 stipulation terms including earnings sharing.
<b>Initial Term/Renewal/Review</b>	No term limit. Statute specifies certain reports that Commission and OPC must provide to legislature regarding the development of competition and results of alternative framework.

<b>Inflation Index</b>	GDP-PI.
<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	Basic: Inflation minus 1%.  Network Access: Inflation not to exceed 3%.
<b>Rate Caps</b>	5-year cap (until 1/1/2001) on Basic services for LECs with more than 3 million lines. 3-year cap (until 1/1/99) on Basic services for other LECs. 3-year cap on multi-line business, PBX, Centrex, hunting. 3-year cap on Network Access Svs.
<b>Rate Case</b>	Rates in effect on 7/1/95 were used to initiate the plan.
<b>Rate Reductions</b>	Reduce switched access by 5% each October beginning 10/1/96 until at parity with 1994 interstate rates.
<b>Service Category Descriptions</b>	Basic: Flat rate residence and single line business; end user access to certain services.  Local Interconnection: Not defined.  Network Access: Access to local network.  Non-basic: All services other than Basic, Local Interconnection and Network Access.
<b>Basic Service Category Pricing Rules</b>	Basic services capped until 1/1/2001 for LECs with more than 3 million access lines. Thereafter, may be adjusted by inflation minus 1%.
<b>Interconnection Category Pricing Rules</b>	Reduce switched access by 5% annually until at parity with 1994 interstate rates. Thereafter, adjust by inflation not to exceed 3% annually. All other Network Access is capped for three years and then adjusted by inflation never to exceed 3% annually. Local Interconnection rates are negotiated between parties or established by Commission if unable to negotiate.
<b>Non-Basic or Other Category Pricing Rules</b>	Price increases for Non-Basic categories may not exceed 6% annually until there is an alternate local provider in the exchange, at which time price increases may not exceed 20% annually.  3-year cap on multi-line business, PBX, NARS, hunting.
<b>Service Reclassification Requirements</b>	LEC can petition for removal of regulation if circumstances warrant.

<b>New Service Definition and Rules</b>	Not addressed in legislation.
<b>Tariff Requirements</b>	Tariff requirements for Basic services are not specified in statute other than LEC may adjust prices on 30 days notice once in any 12-month period. LEC will continue to file tariffs for Network Access and Non-basic services. LEC may change prices for Non-basic services on 15 days notice. LEC may increase rates upon 30-days notice and decrease upon 7 days notice for Network Access services. Changes to terms and conditions for Network Access services are presumed approved on 15 days notice.
<b>Customer Notification</b>	Not addressed in legislation.
<b>Price Changes Due to Governmental Action</b>	LEC can petition for increase to Basic rates if circumstances change, but cannot recover costs of distance learning network specified in bill unless associated with COLR. LEC can petition for cost recovery through access charges of government mandates or increase in federal or state income tax. A company shall decrease Network Access rates to reflect decreases in federal or state income tax.
<b>Financial Reporting</b>	Not specified in legislation.
<b>Depreciation</b>	Company shall not be required to seek approval of depreciation rates. However, depreciation rates effective 12/31/94 will be used in calculating earnings available for sharing for BST through 12/31/97.
<b>Service Quality Requirements</b>	Commission to maintain oversight of service quality.
<b>Infrastructure Requirements</b>	State Education Technology Committee established to develop a needs assessment report describing the overall advanced telecommunications services needed for education, libraries, video conferencing, hospitals & access to Internet. Report to be filed w/Governor, House & Senate by 3/1/96, describing advanced telecommunications services to be delivered by 1/1/99. Eligible facilities (schools, univ., hospitals, libraries, etc.) must submit technology needs requests by 7/1/97 to the Department of Management. If no competitive bids received to provide services, the carrier of last resort (COLR) shall provide the advanced telecommunications services. Penalties apply if the entity awarded the bid or the COLR does not perform as specified in contract.

<b>Commission Authority</b>	Pricing rules are specified in statute. Considerable authority is provided to Commission to resolve interconnection, resale, price change disputes.
<b>Competitive Safeguards Examples:</b>  <b>Cost Allocation</b> <b>Cross Subsidy</b> <b>Imputation</b> <b>Price Floors</b>	<p>Price for Non-basic service shall cover the direct costs of providing the service and shall, to the extent a cost is not included in the direct cost, include as an imputed cost the price charged to the competitor for the monopoly component used by competitor in the provision of its same or functionally equivalent service.</p> <p>Imputation Standard: Legislation requires imputation of originating and terminating switched access on a conversation minute of use basis for MTS, WATS and 800 Service. For high volume toll services there is a crossover formula that will allow for imputation of one end of switched access plus one end of special access.</p>

	<b>GEORGIA</b>
<b>Proceeding/Status</b>	Senate Bill 137 opening local franchise and establishing price regulation framework enacted 4/19/95. Effective 7/1/95. BST's Notice of election of price regulation was effective 8/5/95.
<b>Initial Term/Renewal/Review</b>	No term limit.
<b>Inflation Index</b>	GDP-PI.
<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	Annual adjustment not to exceed the greater of 1/2 change in GDP-PI when GDP-PI >3% or GDP-PI minus 2%.
<b>Rate Caps</b>	5-year cap on Basic Services.
<b>Rate Case</b>	Rates in effect upon election became starting rates under the plan.

<b>Rate Reductions</b>	<p>Reduce switched access rates to parity with interstate. Intrastate rates can be no higher than interstate. The rates for switched access shall be negotiated in good faith between the parties.</p> <p>On 12/19/95 Commission approved further reduction in switched access effective 7/1/96. Reduction of \$9.7 million (to \$0.035 per minute) resolved AT&amp;T petition to reduce switched access rates.</p>
<b>Service Category Descriptions</b>	<p>Basic: Residence and single-line business, Touch-Tone.</p> <p>Other: All services other than Basic.</p>
<b>Basic Service Category Pricing Rules</b>	5-year cap on Basic rates. Subsequent increases tied to inflation formula.
<b>Interconnection Category Pricing Rules</b>	No separate category for interconnection services. Included in Other Services Category. See Rate Reductions above.
<b>Non-Basic or Other Category Pricing Rules</b>	LEC can set rates for all other local exchange services on a basis that does not unreasonably discriminate between similarly situated customers; provided that rates are subject to a complaint process for abuse of market position in accordance with rules to be established by the Commission.
<b>Service Reclassification Requirements</b>	Not addressed in legislation.
<b>New Service Definition and Rules</b>	Not addressed in legislation.
<b>Tariff Requirements</b>	Tariffs required for all services. Interim tariff filing requirements ordered on 6/8/95. Tariff filings will be presumed valid and become effective 30 days after filing, unless suspended, revised or denied by Commission. Tariffs for new service or rate decreases must include a numerical demonstration that the prices are above total service long-run incremental costs.
<b>Customer Notification</b>	Not addressed in legislation.
<b>Price Changes Due to Governmental Action</b>	Not addressed in legislation.
<b>Financial Reporting</b>	Required to file quarterly reports on infrastructure commitment.
<b>Depreciation</b>	Company shall not be required to seek approval for its depreciation rates.

<b>Service Quality Requirements</b>	The Commission is authorized to adopt reasonable rules governing service quality.
<b>Infrastructure Requirements</b>	Electing company with 2 million access lines is required to commit \$500M annually for 5-years toward infrastructure. PSC to review after 3-years to reduce commitment or continue.
<b>Commission Authority</b>	Includes the authority among other things to: <ul style="list-style-type: none"> <li>- adopt rules governing certification</li> <li>- establish and administer a Universal Access Fund</li> <li>- adopt service quality rules</li> <li>- resolve LEC service complaints</li> <li>- approve and, if necessary, revise, suspend or deny tariffs</li> <li>- establish rules and methodologies for cost allocation</li> <li>- enable number portability.</li> </ul>
<b>Competitive Safeguards Examples:</b>  <b>Cost Allocation</b> <b>Cross Subsidy</b> <b>Imputation</b> <b>Price Floors</b>	LECs are prohibited from engaging in anti-competitive acts including price squeezes, price discrimination, predatory pricing or tying arrangements. Commission is authorized to establish reasonable rules and methodologies for performing cost allocations among a company's services.  Imputation Standard: Requires imputation of originating and terminating switched access on a conversation minute of use basis for MTS, WATS and 800 Service. For high volume toll services, there is a crossover formula that will allow for imputation of one end of switched access plus one end of special access. Imputation standard established in previous Commission Order.

	<b>LOUISIANA</b>
<b>Proceeding/Status</b>	On 3/5/96, the Commission adopted a stipulation and settlement agreement that closed an earnings investigation, adopted local competition rules, terminated a proceeding investigating reengineering costs and benefits and adopted a price regulation plan. The effective date of price regulation is 4/1/96.
<b>Initial Term/Renewal/Review</b>	6-year term. Formal reviews scheduled after the third year and during the sixth year of the plan.  Commission issued Order on 4/13/99 completing three-year review. Order extends the cap on Interconnection category for two additional years (subject to hearings). Order also

	noted 1) current rates are just and reasonable, 2) no changes in service quality measurements are required 3) LPSC will continue to focus on benefits of competition, and 4) provision of service to Mink and Shaw/Blackhawk communities to be evaluated in Universal Service Dkt.
<b>Inflation Index</b>	GDP-PI.
<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	GDP-PI minus 2.5% for Basic Services category.
<b>Rate Caps</b>	5-year cap on Basic Services category.  3-year cap on Interconnection Services category.
<b>Rate Case</b>	Settled per terms of stipulation and settlement agreement.
<b>Rate Reductions</b>	\$9.0M one-time credit to residence and business customers. \$70M in rate reductions as follows (specific services to be determined): 4/1/96           \$23.4M 4/1/97           \$23.3M 4/1/98           \$23.3M
<b>Service Category Descriptions</b>	Basic: Residence and single line business basic local exchange services.  Interconnection: Services that allow a provider to interconnect with networks of other providers.  Non-Basic: All other services.
<b>Basic/Non-Competitive Service Category Pricing Rules</b>	5-year cap on Basic Category; thereafter, adjust based on change in GDP-PI minus 2.5%. Individual service may not increase more than 10% in a twelve-month period.
<b>Interconnection Category Pricing Rules</b>	3-year cap on individual services in Interconnection Services category. After the cap expires, individual services may not increase more than 10% in any twelve-month period.
<b>Non-Basic/Competitive Category Pricing Rules</b>	Individual service may not increase more than 20% in twelve-month period.
<b>Service Reclassification Requirements</b>	Service category classification report to be filed each July 1. Proposals for reclassification are to be included.

<b>New Service Definition and Rules</b>	New service is a service function, feature or capability, or combination of these, not offered as of 3/31/96. Service may be effective on 10 days notice. Affected party may intervene, but intervention will not delay effective date if tariff is accepted by Staff.
<b>Tariff Requirements</b>	Company will continue to file tariffs for all services. Tariff changes may be effective on 10 days notice. Affected party may intervene, but intervention will not delay effective date if tariff is accepted by Staff.
<b>Customer Notification</b>	Procedures in effect will continue under price regulation.
<b>Price Changes Due to Governmental Action</b>	Not addressed.
<b>Financial Reporting</b>	Selected financial data on intrastate Company basis to be filed on a semi-annual basis.
<b>Depreciation</b>	Company is not required to seek regulatory approval for its depreciation rates. Rate increases based on increased depreciation expenses are prohibited.
<b>Service Quality Requirements</b>	Company will continue to provide service quality measures currently monitored under earnings sharing plan.
<b>Infrastructure Requirements</b>	Not addressed.
<b>Commission Authority</b>	Unchanged.
<b>Competitive Safeguards Examples:</b>  <b>Cost Allocation</b> <b>Cross Subsidy</b> <b>Imputation</b> <b>Price Floors</b>	Price floor of TELRIC for all services unless exempted by Commission or unless Company, in good faith, prices a service below TELRIC to meet equally low price of a competitor (subject to any imputation requirements).  Imputation Standard: Requires imputation of originating and terminating switched access on a conversation minute of use basis for MTS, WATS and OCP. Added to switched access charge are non-access costs, direct costs and facility costs. No imputation requirements in the expanded area. (Imputation rules established by previous Commission Order.)

	<b>MISSISSIPPI</b>
<b>Proceeding/Status</b>	Commission issued Order on 11/1/95 approving price regulation ("PREP") as stipulated to by BST and MPSC Staff. PREP effective 1/1/96.
<b>Initial Term/Renewal/Review</b>	Plan to be effective 1/1/96 through 12/31/01. Formal reviews scheduled at 1/1/99 to determine if modifications should be made and 7/1/01 to determine if plan should be continued, modified or discontinued.
<b>Inflation Index</b>	N/A.
<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	After 3-year cap, beginning 3/1/99, PREP requires Basic revenues to decrease 1% per year through end of plan.
<b>Rate Caps</b>	3 year cap on Basic category
<b>Rate Case</b>	Not required
<b>Rate Reductions</b>	Rate reductions total \$33.62M over six years. Reduce switched access to interstate level as of 1/1/96 and cap at parity over life of plan. Eliminate Touch-Tone over 3 years and Subscriber Line Charge over 4 years. Reduce zone mileage charges over life of the plan. Rate regrouping will be permitted on an annual basis irrespective of the 3 year cap.
<b>Service Category Descriptions</b>	Basic: Residence and business basic local exchange services. Interconnection: Access to local and toll network. Other: All other services.
<b>Basic/Non-Competitive Service Category Pricing Rules</b>	3 year cap on all Basic services; reduce Basic revenues thereafter by 1% per year beginning 3/1/99.
<b>Interconnection Category Pricing Rules</b>	Reduce intrastate switched access rates to parity with interstate on 1/1/96 and cap at parity. All other rates set by the company according to market factors. Only one rate increase per rate element per year.

<b>Non-Basic/Competitive Category Pricing Rules</b>	Company sets prices based on market factors. Individual rate elements cannot increase more than 20% annually. Only one increase per rate element per year.
<b>Service Reclassification Requirements</b>	Company to file notice to reclassify service. PSC shall review request within 30 days. If PSC neither approves nor suspends request, the reclassification is deemed approved. If PSC suspends the request, PSC review to be completed in 120 days. If PSC takes no action within 120 days, reclassification is implemented.
<b>New Service Definition and Rules</b>	New service is function, feature or capability not currently offered. New services assigned to the appropriate category. Service will become effective upon 30 days notice.
<b>Tariff Requirements</b>	Company will continue to file tariffs for all services. Tariff filings will include information to conform to pricing rules. Detailed information concerning the cost of the service shall be provided upon request of the Commission or the MPUS.
<b>Customer Notification</b>	Company determined; will comply with existing law.
<b>Price Changes Due to Governmental Action</b>	Financial impact of governmental mandates both state and federal applying specifically and/or disproportionately to and having a major impact (+/-) on telecommunications companies, may be adjusted through a change in Basic service category rates. The Company may request the Commission to adjust those rates. Major impact is one which exceeds 2% of Basic service category revenues from prior year.
<b>Financial Reporting</b>	Company shall provide Commission and Public Utilities Staff with quarterly and annual income statements and additional reports or data upon request of the Commission or MPUS.
<b>Depreciation</b>	The Company shall set its own depreciation rates under price regulation with quarterly reports to the Commission. In setting initial rates for interconnection or in setting rates for resale of local service and in establishing the initial cost of local service under a universal service fund, the depreciation rates in effect prior to the effective date of PREP will be used.

<b>Service Quality Requirements</b>	Three performance indicators will be used to monitor service quality; consumer and small business customer satisfaction, network trouble report rate, and troubles cleared at 36 hours. Penalties could reduce Basic category revenues equal to .2% for customer satisfaction, .1% for trouble report rate and .1% for troubles cleared at 36 hours, should objectives not be attained.
<b>Infrastructure Requirements</b>	None.
<b>Commission Authority</b>	The Commission will continue to review tariff filings and maintain oversight of service quality. Service quality beyond that measured and penalized or other significant adverse impacts not in the public interest are grounds to initiate a proceeding to address such concerns.
<b>Competitive Safeguards</b>  <b>Examples:</b>  <b>Cost Allocation</b> <b>Cross Subsidy</b> <b>Imputation</b> <b>Price Floors</b>	Rates for new and existing services shall equal or exceed LRIC unless price is intended in good faith to meet equally low price of a competitor, or specifically exempted by Commission based on public interest concerns, or special promotions are offered not to exceed 180 days.  Imputation Standard: Retail services shall be priced such that price is sufficient to recover the contribution that company earns from access or interconnection services plus its own incremental cost of supplying the retail service.

	<b>NORTH CAROLINA</b>
<b>Proceeding/Status</b>	HB 161 passed by Legislature 4/5/95 and effective 7/1/95 opens local franchise and requires Commission to adopt alternative regulation with no earnings regulation. BellSouth filed price regulation plan on 10/4/95. Stipulation reached with Public Staff on 1/17/96. NCUC approved plan with modifications effective 6/24/96.
<b>Initial Term/Renewal/Review</b>	No term limit. Review in advance of 5 years from effective date.
<b>Inflation Index</b>	GDP-PI.

<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	Basic: GDP-PI - 2%. Interconnection: GDP-PI - 3%. Non-Basic 1: GDP-PI - 3%.
<b>Rate Caps</b>	3-year cap on Residence service. Indefinite cap on Toll Switched Access.
<b>Rate Case</b>	Not proposed.
<b>Rate Reductions</b>	Stipulation proposes \$60 million reduction by 3rd anniversary, \$15M when effective and at each anniversary. Eliminate Touch-Tone by 1st anniversary of the Plan and eliminate Originating CCLC by the 2nd anniversary of the Plan. Remaining rate reductions applied to toll switched access services.
<b>Service Categories Descriptions</b>	Basic: Residence and Business basic local service. Toll Switched Access: Intrastate Switched Access. Interconnection: All Access services except Toll Switched Access. Non-Basic 1: All services not included in other categories. Non-Basic 2: Centrex, B&C Services.
<b>Basic Service Category Pricing Rules</b>	Business prices, and Residence after the 3-year cap, can be adjusted in the aggregate by GDP-PI minus 2%. Rate element increases limited to one increase annually, not to exceed GDP-PI plus 3%.
<b>Interconnection Category Pricing Rules</b>	Prices can be adjusted in the aggregate by GDP-PI minus 3%. Rate element increases limited to one increase annually, not to exceed GDP-PI plus 7%.  Switched Toll Access is a separate category. In the aggregate, prices are capped at the prices in effect after the ordered rate reductions. (OCCL to be eliminated by 2nd anniversary of the plan)
<b>Non-Basic Category Pricing Rules</b>	Prices in the Non-Basic 1 Category, can be adjusted in the aggregate by GDP-PI minus 3%. Rate element increases limited to one increase annually, not to exceed GDP-PI plus 17%. No price change limits for Non -Basic 2 Category services.

<b>Service Reclassification Requirements</b>	Stipulation includes procedures for classification of new services and reclassification of existing services.
<b>New Service Definition and Rules</b>	A regulated function, feature, capability or combination of these that is not offered by BST as of the effective date of the Plan. Tariffs establishing terms, conditions and rates for new services are presumed valid and effective 14 days after filing unless suspended by Commission (not to exceed 45 days).
<b>Tariff Requirements</b>	Tariffs will be filed for all services in the five categories. Tariffs that change terms and conditions, increase rates, restructure rates or introduce a new service are presumed valid and will be effective 14 days from filing unless PUC disapproves, modifies, or otherwise suspends tariff (not to exceed 45 days). A tariff to restructure rate can be suspended an additional 30 days. Commission may investigate whether price increases are consistent with Plan and whether terms and conditions and restructures are consistent with public interest. Tariffs reducing rates are effective and presumed valid 7 days from filing, unless PUC suspends tariff (not to exceed 45 days).
<b>Customer Notification</b>	Company to provide notice by bill insert or direct mail to affected customers of any price increase at least 14 days before rates increase.
<b>Price Changes Due to Governmental Action</b>	With Commission approval, the Company may adjust the prices of any service(s) due to the financial impacts of governmental actions that have a specific impact on the telephone industry. Commission will approve if: <ul style="list-style-type: none"> <li>• gov't action has been correctly identified;</li> <li>• financial impact has been accurately quantified;</li> <li>• proposed rates cover only financial impact of action;</li> <li>• rates are applied to appropriate class or classes of customer;</li> <li>• adjusted rates in public interest.</li> </ul>
<b>Financial Reporting</b>	File the financial surveillance reports currently filed with the Commission.
<b>Depreciation</b>	Company shall determine and set its depreciation rates.

<b>Service Quality Requirements</b>	Retain existing Service Quality Requirements.
<b>Infrastructure Requirements</b>	Not addressed.
<b>Commission Authority</b>	The Commission retains oversight of service quality, complaint resolution and compliance by the Company with all elements of the price regulation plan.
<b>Competitive Safeguards</b>  <b>Examples:</b>  <b>Cost Allocation</b> <b>Cross Subsidy</b> <b>Imputation</b> <b>Price Floors</b>	The price for any individual rate element offered shall equal or exceed its LRIC unless: 1) exempted by commission based on public interest, or 2) BST in good faith prices the service to meet the equally low price of a competitor.  Imputation Standard: Bundled Local exchange service and competitive service rates must include tariffed rate of unbundled function.

	<b>SOUTH CAROLINA</b>
<b>Proceeding/Status</b>	Consumer Price Protection Plan filed on 3/28/95. Hearings held 9/95. Decision approving plan with modification was issued 12/29/95.  Plan became effective 1/30/96.  On April 19, 1999, the South Carolina Supreme Court reversed the Circuit Courts Decision that approved BellSouth's Consumer Price Protection Plan. On May 4, 1999 BellSouth filed a Petition for Rehearing with the Court on the grounds that the Court overlooked or misapprehended certain matters of fact and law. The Petition is pending before the Court.  The description below outlines the plan as approved by the Commission on 3/28/95.
<b>Initial Term/Renewal/Review</b>	No term limit.
<b>Inflation Index</b>	GDP-PI.

<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	GDP-PI - 2.1%.  To be applied to Basic services after cap expires and applied to Interconnection Services.
<b>Rate Caps</b>	5-year cap on Basic Category.  3-year cap on switched access.
<b>Rate Case</b>	Earnings investigation was conducted 1994; a \$42.2 million prospective rate reduction was ordered based on 12.75% ROE.
<b>Rate Reductions</b>	BST proposed \$16.9M reduction in earnings investigation; \$42.2 million ordered as follows:  \$12M - Switched Access \$5M - IntraLATA Toll \$7.3M - Hunting Charges \$5.1M - Hunting Application Changes \$1.3M - DID \$3.4M - PBX Trunks \$8.1M - Local Rates
<b>Service Categories Descriptions</b>	Basic: Residence and business flat rate service, PTAS, PBX Trunks.  Interconnection: Access to local and toll network.  Non-basic: All services other than Basic and Interconnection.
<b>Basic Service Category Pricing Rules</b>	5-year cap on all Basic. Thereafter, adjust by GDP-PI minus 2.1%. Increases to an individual service limited to GDP-PI plus 5% annually.
<b>Interconnection Category Pricing Rules</b>	3-year cap on switched access. Other Interconnection services, and switched access after cap expires, may be adjusted based on GDP-PI minus 2.1%.
<b>Non-Basic Category Pricing Rules</b>	Company sets prices. Increase to individual service is limited to 20% in a 12-month period.
<b>Service Reclassification Requirements</b>	Not addressed.

<b>New Service Definition and Rules</b>	New service is function, feature or capability not currently offered. Tariff shall become effective at end of notice period, but no sooner than 14 days.
<b>Tariff Requirements</b>	Company will file tariffs for all services. Tariff filings will include information to show compliance with pricing rules. Changes to terms and conditions to be effective upon 14 days notice; increases to be effective upon date specified in tariff, but in no event earlier than 14 days notice; decreases to be effective upon 7 days notice.
<b>Customer Notification</b>	Company to provide notice of any proposed price increase through newspapers and through bill inserts.
<b>Price Changes Due to Governmental Action</b>	Not addressed.
<b>Financial Reporting</b>	Company shall file a quarterly combined income statement for South Carolina.
<b>Depreciation</b>	Company shall not be required to seek regulatory approval of its depreciation rates.
<b>Service Quality Requirements</b>	Company to file service results in compliance with Commission rules.
<b>Infrastructure Requirements</b>	Not addressed.
<b>Commission Authority</b>	Commission retains authority with regard to Company's price for services, service quality, complaint resolution and compliance with plan.
<b>Competitive Safeguards</b>  <b>Examples:</b>  <b>Cost Allocation</b> <b>Cross Subsidy</b> <b>Imputation</b> <b>Price Floors</b>	Prices for all services shall equal or exceed LRIC unless a service is priced below its cost to meet public interest goals. Any other service priced below LRIC will be considered by the Commission on a case by case basis.  Imputation Standard: Requires imputation of originating and terminating switched access on a conversation minute of use basis for MTS, WATS and 800 Service. The average revenue per minute of use must exceed average switched access revenue per conversation minute of use. For high volume toll users there is a crossover formula that allows the imputation of one end of switched access plus one end of special access.

	<b>TENNESSEE</b>
<b>Proceeding/Status</b>	<p>HB 695/SB891 enacted and effective 6/6/95. Statute opens local franchise and establishes price regulation framework. BST filed application for price regulation 6/20/95.</p> <p>Commission conducted rate investigation and issued order on 1/23/96 for BST to reduce rates by \$56.3M effective 3/1/96. Order appealed; rate reductions and effective date of price regulation stayed by Court. On 10/1/97, the Court vacated the Commission's 1/23/96 Order finding that the Commission should have approved the price regulation plan based on 6/6/95 rates. The Court remanded the case to the TRA with directions to approve price regulation. On 6/15/98 TN Supreme Court denied TRA and CAD application for review.</p> <p>On 10/27/98, TRA approved BST's Price Regulation Plan, effective October, 1995.</p>
<b>Initial Term/Renewal/Review</b>	No term limit.
<b>Inflation Index</b>	GDP-PI.
<b>Inflation Formula Including Any Productivity Offsets/Inflation Thresholds</b>	Annual adjustments for each category capped in the aggregate at the lesser of GDP-PI - 2% or 1/2 GDP-PI.
<b>Rate Caps</b>	Basic Services and Call Waiting capped until 12/01/02.
<b>Rate Case</b>	PSC ordered rate reduction of \$56.3M based on their findings in earnings investigation. Court found earnings to be below the authorized ROR range and remanded to the TRA. No reduction required.
<b>Rate Reductions</b>	<p>Side agreement on intrastate switched access to reach parity with interstate switched access rates.</p> <p>PSC ordered \$56.3M reduction. Court vacated Order and remanded to TRA. TRA's 10/27/98 decision eliminated requirement to reduce rates.</p>

<b>Service Categories Descriptions</b>	<p>Basic: Residence and Business basic local services.</p> <p>Non-Basic: Services not defined as Basic.</p> <p>Interconnection: Provides interconnection with networks of other providers. Interconnection is subcategory of Non-basic.</p>
<b>Basic Service Category Pricing Rules</b>	<p>Basic capped until 12/01/02. Thereafter, rates are to be adjusted according to the inflation formula. In no event shall basic residential service increase in any one year more than the % change in GDP-PI.</p>
<b>Interconnection Category Pricing Rules</b>	<p>Inflation formula applies to rate increases for the subcategory as a whole.</p> <p>Side agreement to reach parity with interstate switched access rates.</p>
<b>Non-Basic Category Pricing Rules</b>	<p>BellSouth has the authority to adjust non-basic rates so long as rate changes are reductions or are revenue neutral within the category (12/1/98 - 12/1/99). As of 12/1/99, prices may be adjusted in the aggregate in accordance with the inflation formula.</p> <p>Call Waiting capped until 12/01/02.</p>
<b>Service Reclassification Requirements</b>	<p>TRA can exempt a service or group of services from regulation.</p>
<b>New Service Definition and Rules</b>	<p>The maximum rate for any new Non-basic service first offered after the effective date of this act shall not exceed the stand-alone cost of the service.</p>
<b>Tariff Requirements</b>	<p>Company will file tariffs for all services unless exempted by the TRA.</p>
<b>Customer Notification</b>	<p>Not addressed.</p>
<b>Price Changes Due to Governmental Action</b>	<p>Not addressed.</p>
<b>Financial Reporting</b>	<p>Not addressed.</p>
<b>Depreciation</b>	<p>Company shall not be required to seek regulatory approval of its depreciation rates.</p>

<b>Service Quality Requirements</b>	Not addressed.
<b>Infrastructure Requirements</b>	LECs required to complete funded FYI requirements.
<b>Commission Authority</b>	In addition to any other jurisdiction conferred, the TRA shall have the original jurisdiction to investigate, hear and enter appropriate orders to resolve all contested issues of fact or law arising as a result of the application of this Act.
<b>Competitive Safeguards</b> <b>Examples:</b> Cost Allocation Cross Subsidy Imputation Price Floors	Imputation Standard: The price floor for competitive services shall equal tariffed rates for essential elements utilized by competing providers plus the total LRIC of the competitive elements of the services. When shown to be in the public interest, the PSC shall exempt a service or group of services provided by the incumbent LEC from the requirements of the price floor.

### C. SUMMARY OF PRP IN NON-BELLSOUTH STATES

The following, *Exhibit II-3*, provides a brief summary of the elements of regulations in a number of other non-BellSouth states.

#### Focused Review of the Price Regulation Plan BellSouth Telecommunications, Inc. - Kentucky

##### Exhibit II-3 Non-BellSouth States PRP Summary

State	Company	Type Regulation	Term	Major Plan Characteristics
Alaska (Large Telcos)		ROR	Open	Streamlined intervals for increases up to 6%. Flexibility to cut rates and introduce promotions to meet competition.
Arizona	USW	ROR	Open	Some services flexibly priced to meet competition.
Arkansas	SBC	Price Regulation	Open	SBC elected price regulation contained in 1997 law. Basic rates and switched access are capped at $\frac{3}{4}$ GDP-PI, however,

State	Company	Type Regulation	Term	Major Plan Characteristics
				<p>basic rates deregulated in any competitive local exchange. Non-basic service rates deregulated. 1997 law under court challenge. Law allows that if at any time following three-year anniversary of price regulation election another provider offers basic local exchange or switched access service within the electing company's local exchange area, the electing company may set its own rates in the same manner as competitive services are set.</p>
California	SBC	Price Regulation		<p>Price cap index suspended in 1995. PUC continued suspension in 1998 Order as of 1/1/99, but did not eliminate it. PUC indicated it expects permanent elimination at next review. Prior to suspension, productivity offset was 4.5%. In addition, Commission suspended but did not eliminate sharing of earnings effective 1/1/99. Rate cap on basic residence continued until 2001. Exogenous (Z Factor adjustments) recovery eliminated. SBC must continue to file annual earnings for review in April of each year. Commission eliminated depreciation reviews and approvals effective 1/1/99.</p>
Colorado	USW	Price Regulation	5 Years from effective date.	<p>Stipulation verbally adopted 2/2/99. Plan includes the ability to price retail services flexibly between price floors and price ceilings. USW may make filing to change price ceilings on any service except</p>

State	Company	Type Regulation	Term	Major Plan Characteristics
				residential and business local exchange service which is capped for the duration of the plan. Customer specific contracting authority granted. USW may bundle services into a new service with initial tariff establishing the price ceiling, after which price changes are accomplished through a revised price list on 14 days notice. Service quality measures established with penalties in the form of bill credits when measurements not met. USW agrees to a series of revenue reductions, foregone rate increases, and required investment as part of stipulation.
Connecticut	SNET	Price Regulation	Open	Noncompetitive services indexed to GDP-PI, however, levels don't increase unless inflation is 5% or more, at which time, levels can rise at about ½ rate of inflation. Competitive services not capped.
Delaware	BA	Price Regulation	3/01.	Basic services subject to GDP-PI minus 3%. Competitive services flexibly priced. March 1998 plan extended to March 2001 with same parameters.
D.C.	BA	Price Regulation	Open	Basic exchange services and access frozen until 2000. Other basic services indexed to GDP-PI minus 3%. Discretionary services limited to 15% increase per year. Competitive services not regulated.
Hawaii	GTE	ROR	Open	Traditional rate of return regulation

State	Company	Type Regulation	Term	Major Plan Characteristics
Idaho	USW	ROR/ Deregulation	Open	Basic local exchange services and five or less business lines are still under ROR. All other services are deregulated.
Illinois	Ameritech	Price Regulation	Until at least 10/01.	Residential rates capped for duration of plan. Other non-competitive services indexed to GDP-PI minus 4.3% minus service quality penalties and exogenous changes. Plan has four baskets: 1) residential; 2) business; 3) wholesale (carrier); and 4) Other (private lines, operator services, etc.). Upward pricing flexibility limited to 2% above the price cap index. Access is capped at interstate. Intrastate toll excluded from plan. Competitive services flexibly priced. Can declare services competitive and have removed from price cap. Service quality goals contained in plan.
Indiana	Ameritech	Price Regulation	Interim	Interim plan replaces price cap plan that expired in 1997. Interim plan uses 1.9% inflation with 6.5% productivity factor (FCC's factor) to effectively reduce basic local business and residence rates by 4.6%. Permanent plan not yet established.
Iowa	USW		6 Years.	Plan adopted 9/98. Initial basic service prices reduced on average by 3% on effective date of plan. Average intrastate switched access prices reduced to 12/31/97 average interstate level. Other than switched access, basic prices can increase on annual basis through 2000 based on GDP-PI minus a 2.6% productivity factor. Inflation

State	Company	Type Regulation	Term	Major Plan Characteristics
				rate and productivity factor may be modified after 2000. Price increases can be accumulated but not for more than 3 years. Accumulated price increases limited to 6%. Non-basic services include those not in basic and not regulated. Prices are those in effect on effective date of plan and new services will be classified as non-basic. Plan also includes an infrastructure and modernization commitment.
<b>Kansas</b>	SBC	Price Regulation	Open	Plan approved September 1998 setting up three categories of services: 1) residence and single line business and Touch-Tone, (excludes USF assessments) where prices are capped until 1/2000 except for increases allowed as part of rate rebalancing. Afterward cap prices can be adjusted based on GDP-PI minus 2.3% +/- exogenous factors; 2) Switched access, which is capped based on 1997 levels and subject to revenue neutral rebalancing; 3) Miscellaneous services, where prices can change up or down based on formula GDP-PI minus 2.3% +/- exogenous factors. Kansas law allows Commission to deregulate price of any service if an alternative provider is offering comparable service. Toll prices will be deregulated when 1+ intraLATA is available throughout USW's service territory in Kansas.
<b>Maine</b>	BA	Price Regulation	1999	All services are under GDP-PI minus 4%. Penalties are

State	Company	Type Regulation	Term	Major Plan Characteristics
				applied for poor service. In March 1998, Commission approved a rate rebalancing settlement that will cut access charges by 75% and raise local rates by \$3.50 per line per month by June 1999. This will result in an overall revenue reduction of \$50M.
<b>Maryland</b>	BA	Price Regulation	Open	Plan contains six categories of services: 1) Basic Residence; 2) Basic Business; 3) Access; 4) Discretionary; 5) Competitive; and 6) Miscellaneous services and elements. Categories 1, 2 and 3 are capped until 12/99. Category 4 and categories 1, 2 and 3 after cap expiration are subject to GDP-PI minus rolling 3-year average change in CPI +/- an adjustment for exogenous factors. No service can increase more than 10% per year.
<b>Massachusetts</b>	BA	Price Regulation	2001	Basic residence service frozen until 2001. All other services are subject to GDP-PI minus 4%.
<b>Michigan</b>	Ameritech	Price Regulation	12/00	Noncompetitive services (residence and business access lines, local usage) are subject to the Detroit area CPI minus 1%. Competitive services are not rate regulated. All Telcos are under legislative mandate to bring rates to cost by 2000.
<b>Minnesota</b>	Ameritech	Price Regulation	2003	Basic local service and access charges are capped for the five-year term of the plan. No rate increases allowed on price capped services except to cover exogenous cost changes occurring after 2000 because of federal or state government

State	Company	Type Regulation	Term	Major Plan Characteristics
				actions. Local rates will be reduced by \$120M over five years and access charges will be cut \$180M in escalating steps through 2003. Long distance companies will have to pass on all access savings. Toll and most vertical services can be changed on 20 days notice. Rates for fully competitive services, including most digital data services, are deregulated. New service quality standards for installation and repair of specialty business and high speed data services are added to existing standards.
Missouri	SBC	Price Regulation	Open	Basic service rates are frozen until 12/99 after which they are subject to a formula to be determined during 1999. Formula will be based on changes in CPI minus TS (change in telephone service) or GDP-PI minus a productivity factor established by FCC. A company can seek PSC authority to use GDP-PI and apply a factor different from FCC. Access is capped at 150% of interstate rates. Non-basic services rates can be raised by up to 8% per year. Beginning in 2001, SBC can petition to deregulate any service facing effective competition.
Montana	USW	ROR/ Deregulated Services	Open	Noncompetitive services are under ROR, however, company can match competitors where local competition is emerging. Flat rate residence to increase \$1.35 on 10/98 and \$1.60 on 7/99. Low income support customers are not increased. Business rates were combined

State	Company	Type Regulation	Term	Major Plan Characteristics
				into a single rate group effective 10/98 which resulted in a decrease of approx. \$2.88 for most business customers. Access charges to be reduced by \$1M on 7/99. All other services are under a rate freeze until Jan. 2000. Allowed to rebalance long distance by increasing short haul and decreasing long haul rates. Company to allow customers to have both flat and measured service in the same household.
Nebraska	USW	Deregulation	Open	Retail rates are deregulated, however, PSC can roll back excessive increases. Any size increase is okay if it is revenue neutral. Local rate regulation is eliminated in areas where competitors operate. Commission approved rate rebalancing, however, need PSC approval for increase in 1FR. On 1/20/99 the Commission approved tariff filing to raise residential first line rates by \$1.80 and decrease prices of intrastate long distance, switched access and Custom Choice. USW to step up promotion of Lifeline, Link-Up and measured service options.
Nevada	SBC	Price Regulation	1999	Basic services are capped through life of the plan. Non-basic service rates can increase 5% per year up to a cumulative of 20%. Competitive services have full pricing flexibility.
New Hampshire	BA	ROR	Open	
New Jersey	BA	Price Regulation	1999	Residence rates are frozen through 1999. Other services

State	Company	Type Regulation	Term	Major Plan Characteristics
		w/Sharing		are subject to GNP-PI minus 2%. Some competitive services are not regulated. Earnings over 13.7% are shared 50/50 with ratepayers.
New Mexico	SBC	ROR	Open	All services are subject to ROR, however, toll prices subject to competition can move according to a banded rate schedule.
New York	BA	Price Regulation	2000	Basic services are frozen through the life of the plan. Non-basic services are subject to GDP-PI minus 4%. Competitive services are market priced.
North Dakota	USW	Price Regulation	Open	Basic services and access services are subject to changes in GDP-PI with no offset. Non-basic services are deregulated.
Ohio	Ameritech	Price Regulation	1/9/01.	Basic service rates are frozen until 2000. All other services are subject to GDP-PI minus 3%. Virtually no upward pricing flexibility available. Ameritech agreed to up front rate cuts of \$34M in basic services and \$2M in access by 2000.
Oklahoma	SBC	ROR	Open	All services subject to ROR, however, company can file to de-tariff services facing competition.
Oregon	USW	ROR	Open	USW returned to ROR from price regulation in 1996 due to poor service quality. Currently working on legislation to get relief. Most recent rate case results are under appeal.
Pennsylvania	BA	Price Regulation	1999	Basic service rates are frozen through 1999, however, decreases are required if GDP-PI falls below 2.9%. Other services are subject to GDP-PI

State	Company	Type Regulation	Term	Major Plan Characteristics
				minus 2.93%. Competitive services are flexibly priced.
Rhode Island	BA	Price Regulation	2001	Noncompetitive services rates are subject to lesser of CPI or 6%. Other noncompetitive services are subject to lesser of 5% or twice CPI. Competitive services are not rate regulated.
South Dakota	USW	Price Regulation	Open	Basic rates are capped at current levels. Access charges are frozen unless a change is cost justified. Rates for all other services are deregulated. A rebalancing program is tied to service quality such that USW may raise local service rates to cost-based cap levels by year end 1999 if quality levels are maintained. This program was suspended by a 1998 law that prohibits raising local rates above January 1998 levels except by act of the legislature.
Texas	SBC	Price Regulation	Open	Basic rates are frozen until 1999 after which they are subject to CPI minus a PUC established productivity factor. Discretionary services can increase up to 10% per year and competitive services can be market priced anywhere above cost. Plan could be reviewed by legislature in 1999 session. Buy-ins include installing digital upgrades by 2000 and offering discounted broadband services to schools, libraries and hospitals.
Utah	USW	Price Regulation	Open	All services are capped until EOY 2000 after which all services are subject to a price cap indexed to inflation by a method to be determined by the Commission. Although

State	Company	Type Regulation	Term	Major Plan Characteristics
				service rates are capped, some increases associated with 1/98 ordered rate rebalancing which shifts about \$22M from business, toll and access to residential local service.
<b>Vermont</b>	BA	ROR	Open	BA filed a "price point" plan on 2/12/99.
<b>Virginia</b>	BA	Price Regulation	Open	Basic service rates are frozen until 2001. Other noncompetitive services (and basic rates after 2001) are subject to ½ GDP-PI. Competitive services are flexibly priced.
<b>Washington</b>	USW	ROR	Open	USW came under ROR in 1994 when incentive regulation plan expired. USW can petition to de-tariff competitive services. In January 1998, Commission approved \$58.8M increase raising residential service by \$2.00 per month (to \$12.50) and business by \$1.60 to (\$26.60). In addition, Commission instituted a \$50 cash payment to customers for missed appointments (customer service guarantee). USW working on legislation to provide relief from rate of return regulation.
<b>West Virginia</b>	BA	Capped Services	2001	Basic service rates are frozen, access charges are capped and competitive service rates are deregulated (no service yet classified in this category). Plan extended to 2001 with network investment commitment, school technology grant program and \$6M reduction in business rates. No earnings restrictions.
<b>Wisconsin</b>	Ameritech	Price Regulation	6/30/99	Noncompetitive services (residence primary lines, 1-3

State	Company	Type Regulation	Term	Major Plan Characteristics
				business lines and local usage) are subject to GDP-PI minus 3%. Virtually no upward pricing flexibility available. Competitive services flexibly priced. Review scheduled for mid-1999. Recently, consumer group has asked PSC to cut rates by \$45M and regulate more optional services, such as Call Waiting and Directory Assistance.
Wyoming	USW	Price Regulation	Open	Residential basic exchange rates are capped except for increases needed under rate rebalancing program intended to bring local rates to cost by year end 1998. Non-basic and competitive services can be market priced as long as they remain above cost.

#### D. FINDINGS AND CONCLUSIONS

While this chapter is primarily intended to provide backgrounds on the evolution of PRP within the industry, there are some comparisons that can be made between the BellSouth programs.

*II-F1*     The PRP plan in Kentucky was the first to be placed in service among the nine BellSouth States.

The implementation of PRP was undertaken simultaneously in almost all nine states. However, the plan was first approved in Kentucky on July 20, 1995. This is somewhat important because the results of the Kentucky decision influenced BellSouth in the other jurisdictions.

We did not review the actual records in the other jurisdictions regarding how the Efficiency Factors were set. However, a review of the table below, *Exhibit II-4*, shows that Kentucky was higher than any other state.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit II-4  
Summary of BellSouth PRP Elements**

State	Effective Date	Inflation Index	Efficiency Factor	Rate Cap Years
Kentucky	7/20/95	GDP-PI	4.00%	3 yrs.
Georgia	8/5/95	GDP-PI	2.00%	5 yrs.
Alabama	9/20/95	GDP-PI	3.00%	5 yrs.
Tennessee	Oct-95	GDP-PI	2.00%	7 yrs.
Florida	1/1/96	GDP-PI	1.00%	5 yrs.
Mississippi	1/1/96	N/A	N/A	3 yrs.
South Carolina	1/30/96	GDP-PI	2.10%	5 yrs.
Louisiana	4/1/96	GDP-PI	2.50%	5 yrs.
North Carolina	6/24/96	GDP-PI	2.00%	3 yrs.

**II-F2** In addition to the nine programs in place within the BellSouth States, there are 28 other Price Regulation Plans identified in other jurisdictions within the United States.

A review of *Section C* of this chapter identifies the types of regulation in place in the non-BellSouth states. While this list is not necessarily comprehensive, it does show how PRP has become the predominant regulatory mechanism for telephone utilities.

A review of how residential or non-competitive services are addressed relative to efficiency factors shows:

- Twenty-one programs have rates that are frozen or capped during the current period.
- Maine has an efficiency factor of GDP-PI minus 4%, the same as Kentucky.
- In Indiana, an interim plan uses 1.9% inflation with 6.5% productivity factor (FCC's factor) to effectively reduce basic local business and residence rates by 4.6%. Permanent plan not yet established.
- Eight states have efficiency factors that are below that of Kentucky or are a percentage of the GDP-PI.

### III. SIGNIFICANT REGULATORY, STRUCTURAL AND TECHNICAL CHANGES

#### A. REGULATORY AND LEGISLATIVE ACTIVITY

In this section, a brief description of regulatory and legislative activities which have occurred since the implementation of the PRP are described.

##### TELECOMMUNICATIONS ACT OF 1996

This sweeping Federal legislation was intended to provide the framework for opening local competition. It describes the obligations which local exchange carriers have with respect to resale, number portability, dialing parity, access to rights-of-way, the obligations of a local exchange carrier for Section 252, Procedures for Negotiations, Arbitration and Approval Agreements associated with requests for interconnection, unbundled access, resale and collocation. The provisions for an arbitrated agreement between an incumbent local exchange carrier and another carrier were detailed, including the associated responsibilities of the State Commission.

A broad requirement detailing the pricing standards for interconnection and network element charges was provided. It stated that the charges should be based on cost, without reference to a rate-of-return or other rate-based proceedings, be nondiscriminatory, and include a reasonable profit.

The procedures to review Universal Service requirements are also detailed. The FCC was directed to refer to a Federal-State Joint Board a proceeding to recommend changes required to implement Universal Service. Universal Service principles were established as well as individual state authority regarding their universal service funding requirements.

Another major piece of the legislation spoke to the requirements for Bell Operating Company entry into InterLATA services (Section 271). In particular, two tracks for the RBOC to petition were defined: presence of a facility-based competitor and no interconnection requests. Additionally, a competitive checklist set of requirements for the RBOC to satisfy was established.

Other issues related to affiliate relations, joint marketing, and manufacturing were discussed. Another section of the legislation (*Section 301*) dealt with cable reform.

##### FCC INTERCONNECTION ORDER

This Order was the FCC's effort at establishing the operational rules to effect the implementation of the Telecommunications Act of 1996. It defined the specific interconnection rules and addressed the concept of "technically feasible."

The requirements for UNEs were detailed and the specific unbundling requirements were defined. Collocation issues and standards were established. Finally, the pricing of

interconnection and UNEs was defined. The FCC defined the appropriate pricing standard to be based upon Total Element Long Run Incremental Cost (TELRIC) including a component of common cost. De-averaging of UNE costs was also discussed. The second pricing issue resolved was resale pricing. A detailed account-by-account methodology was described for computing the wholesale discount value. Other issues associated with wholesale service, such as promotions, discounts, cross-selling, below-cost pricing and provisioning were discussed.

## **UNIVERSAL SERVICE**

At the Federal level, the issue of the High Cost Fund continues to be unresolved. Significant differences exist between members of the Federal-State Joint Board. In its May 7<sup>th</sup>, 1997 Order, the FCC defined supported services, defined criteria for designating eligible carriers, and determined the allocation between state and federal funding. The formula for determining support amounts was based upon a revenue benchmark approach. The revenue benchmark, which included local service, vertical service and Inter/Intra state access revenues, was subtracted from the forward looking cost. However, the appropriate model definition was not provided, as the model to be used was still being debated along with the definition of critical model input parameters. Finally, the FCC determined the funding split as federal 25% and state support at 75%. These proposals were met with much criticism. As such, the FCC (based upon input from the state members of the Joint Board) referred back to the Joint Board for additional discussion issues related to the determination of the support level and the federal/state contribution levels.

The Joint Board's Second Recommended Decision significantly modified earlier FCC actions. Essentially, the support level was now being set upon a national average cost benchmark, which would be between 115 and 150% of the national weighted average cost per line. The contribution levels also were significantly modified. Federal support would only be provided to the extent that a state was unable to support high cost areas through its own efforts.

No final decisions related to cost model selection, model input parameters, and structure of the Federal High Cost Fund have yet been made.

The Commission issued on May 22, 1998, an Order stating that the Kentucky Universal Service Fund (KUSF) would begin January 1, 1999. This Order was predicated upon a revenue benchmark approach using the HAI model, with specified input variable values, as the determinant of the forward-looking cost. Based upon the indecision at the Federal level, the Commission, in an Order dated August 7, 1998, delayed implementation of the high-cost support until July 1, 1999. However, it did retain the earlier date for implementation of the low-income support of the KUSF. Then, in an Order issued November 16, 1998, the Commission defined the surcharge amount \$.05 that each ILEC, CLEC and wireless carrier could bill monthly per access line to fund the estimated low income fund size of \$1 million. The fund is known as the Kentucky Lifeline Support.

A credit of up to \$10.50 for eligible customers is available in which \$3.50 is funded by the Kentucky Lifeline Support and \$7.00 is supported by the federal USF.

As of this report, the Commission has not yet established a high-cost fund mechanism. Until the FCC resolves the federal issues, states will not have clear policy paths to follow.

## B. INDUSTRY STRUCTURAL CHANGES

This task assessed the changing competitive markets in Kentucky in light of rapid technological innovation and deployment and regulatory changes, and evaluated BST's response in terms of its strategic, network, marketing, and operational plans and decisions. Of particular interest, is the impact of Kentucky regulation and the Telecommunications Act on planning and decision making.

This task presented the greatest challenge of the *Tier 2* review in that it required a determination of the very meaning of competition as a baseline. This was no menial task nor is it academic. There are numerous factors at work in the telecommunications environment at the present time that challenge the traditional view of competition in the local exchange market. Some of the very real questions that Vantage grappled with throughout the review included:

- Does competition mean that the market is open to competition or that competitors have actually entered the market?
- What defines "market" for purposes of competition?
  - Does facility based competition to any one area of customers served by an ILEC mean that competition exists in that market segment?
  - Does competition in the Louisville business market mean that all business markets in the BST-KY service territory have competition?
- Does the opportunity for competition that has not been acted upon by CLECs mean that there is no competition?
- Do alternative technologies, most notably wireless at this point in time, qualify as competition?

## CONVERGENCE

Convergence refers to the coming together of technologies necessary for provision of telecommunications services. Video over copper, voice over IP, Internet over cable and satellite, the distinctions are becoming very blurred. Increasingly, convergence also means the mergers and combinations of companies providing the various services. Market participants can no longer be labeled as wireless, cable, ISP, local exchange or inter-exchange. The speed of this convergence is nothing short of phenomenal.

The following changes have taken place in the industry structure just during the course of this review:

- AT&T acquired TCI and MediaOne giving AT&T access to 26 million homes via cable lines.

- BellSouth acquired an interest in Qwest. Less than two weeks later, Qwest announced a planned acquisition of US West (which was being sought by Global Crossings and who was also pursuing Frontier). Qwest ultimately merged with US West, while Global Crossings merged with Frontier.
- AOL formed a strategic alliance with DIRECTV®, which among other things, provides AOL a high-speed delivery mechanism for broadband Internet services.
- Bell Atlantic has announced a planned acquisition of GTE, which has direct implications for Kentucky.
- SBC appears to have cleared regulatory hurdles in Illinois, which will allow it to acquire Ameritech. (SBC had previously acquired PacTel.)

The AOL alliance provides a good example of not only industry convergence, but also technology and service convergence. Only a few years ago, AOL was a value-added ISP providing services to primarily the home market through the Public Switched Telephone Network (PSTN). Now AOL is offering numerous services through various alliances and with multiple delivery mechanisms.

The alliance with DIRECTV® provides AOL a mechanism of providing interactive AOL TV and high-speed Internet access. AOL also has partnerships with Bell Atlantic and SBC to deliver DSL broadband connectivity to its members. According to Bob Pittman, President and CEO of AOL:

*"Through this alliance [with DIRECTV®], along with the partnerships we've forged with telecommunications companies, we now have the ability to offer best-of-breed services ranging from long distance telephone and broadband access to interactive TV and dial-up connectivity at attractive package prices to our members--making AOL even more central to their daily lives."*

This example was chosen because it highlights several important themes of the modern telecommunications environment.

- Partnerships and alliances may include companies that continue to compete in certain areas even while partnering on particular service offerings or facility sharing. This is not new (witness the IXC and ILECs), but it is becoming visible.
- Focus is shifting to the service being provided, not the facilities that are used to deliver the service.
- The future of telecommunications lies in packaged offerings or "one stop shopping". These bundled packages will be assembled in all manner of ways using different technologies and often combining offerings from various companies seamlessly bundled under one umbrella.
- Companies are willing to cannibalize their own service offerings allowing the market and the customer to decide what technology will "win".

The telecommunications industry of tomorrow will see relatively fewer providers who are capable of offering a total package of telecommunications services (long distance, local, vertical services, cellular or PCS, paging, video) all bundled under one bill. Indeed this is

happening today as Sprint offers reduced rates on Earthlink, AT&T can bundle long distance landline, wireless (analog, digital cellular or PCS) and other services on one bill.

## COMPETITORS

During the original consideration of the PRP, there was considerable testimony concerned with the issue of whether BellSouth was experiencing competitive pressure or even whether such pressure would ever really exist. Vantage did not concern itself with the state of competition at that time, other than for trending. However, that competition has now arrived in Kentucky is a certainty. The Vantage tasks were to attempt and determine the impact that the price regulation plan has had on competition, and determine what, if any, changes to the plan would forward the Commission's goal of competition.

In order to determine these factors, the state of competition must be determined as well as trends. Even this task has become increasingly complex and difficult. The fact that competition has arrived means that all inclusive data is no longer available. This is for several reasons:

- CLECS and CAPS are not required to provide the information that is available from BellSouth.
- Companies are increasingly wary of divulging any information which may make its way to a competitor. This makes benchmarking and other comparisons almost impossible.
- The definition of competition itself is changing to include a multitude of new products, services and delivery mechanisms.
- Much of the competition is coming in the form of new products and services (primarily data). This means that market losses by BellSouth are often invisible and take the form of lost opportunities rather than stolen customers.

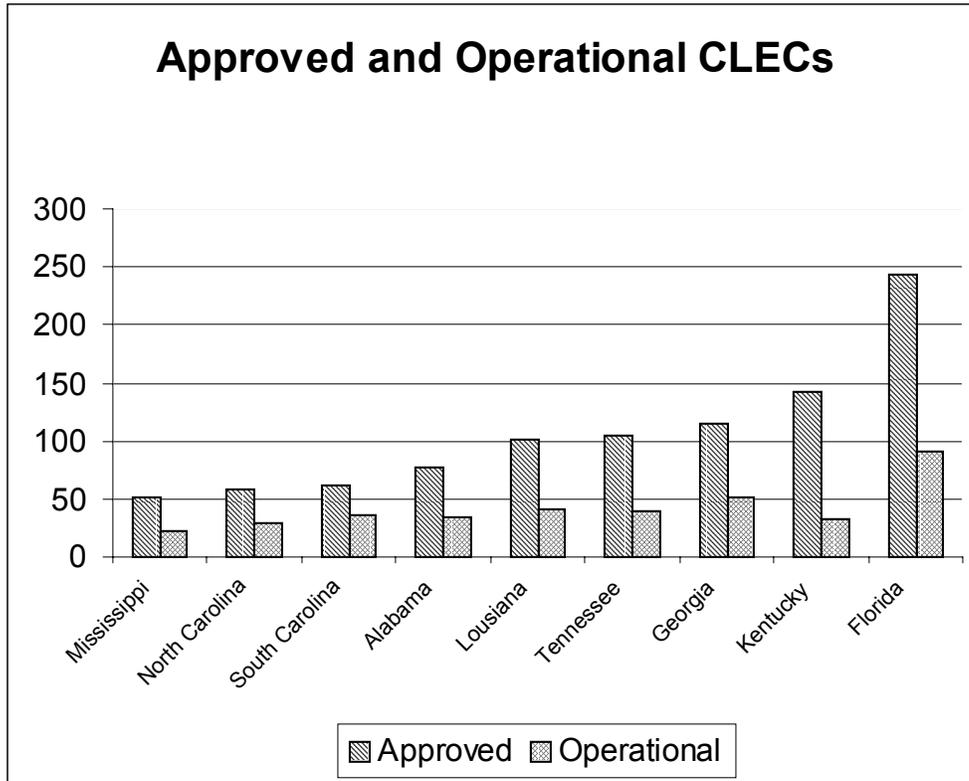
Even with these limitations, Vantage felt it critical to make some determination on the state of competition in Kentucky and to compare that to other states.

## APPROVED AND OPERATIONAL CLECS

As of January 1999, nearly 1,000 CLEC approvals had been granted for Wireline Service in the nine BellSouth states.<sup>1</sup> Kentucky had approved 143 CLECs and another 14 applications were pending. As shown in the following exhibit, the number of approved CLECs does not necessarily correspond to operational CLECs. Kentucky has the second highest number of approved CLECs in the nine-state territory at 143, but the lowest number of operational CLECs at only 22. *Exhibit III-1*, below, shows approved and operational CLECs in the BellSouth states.<sup>2</sup>

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit III-1<sup>3</sup>  
Approved and Operational CLECs**



Even the number of operational CLECs can be misleading in terms of the extent of competition in a state since many target only high revenue customers or special applications (ISPs, campus facilities etc). For example, Florida has nearly three times the number of operational CLECs as Kentucky. However, this can not be interpreted to mean that Florida has more widespread competition.

## **FACILITIES**

Kentucky has the lowest number of resold lines in the nine-state region. As of April 1999, Kentucky had 35,928 resold lines. The distribution of these lines is shown in *Exhibit III-2*, below:

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit III-2<sup>4</sup>  
Kentucky Resold Lines**

	Number	Percent of Total
Business Lines	17,244	48.0
Residential Lines	17,132	47.7
ISDN	176	.5
PBX (trunks)	1,193	3.3
Multiservice Lines	127	.4
Private Lines/Data Circuits	56	.2

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The mix of resold lines in Kentucky shows slightly fewer residential resold lines than the other eight BellSouth states, as shown below in *Exhibit III-3*.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit III-3<sup>5</sup>  
Percent of Resold Lines In BellSouth Region (Excluding Kentucky)**

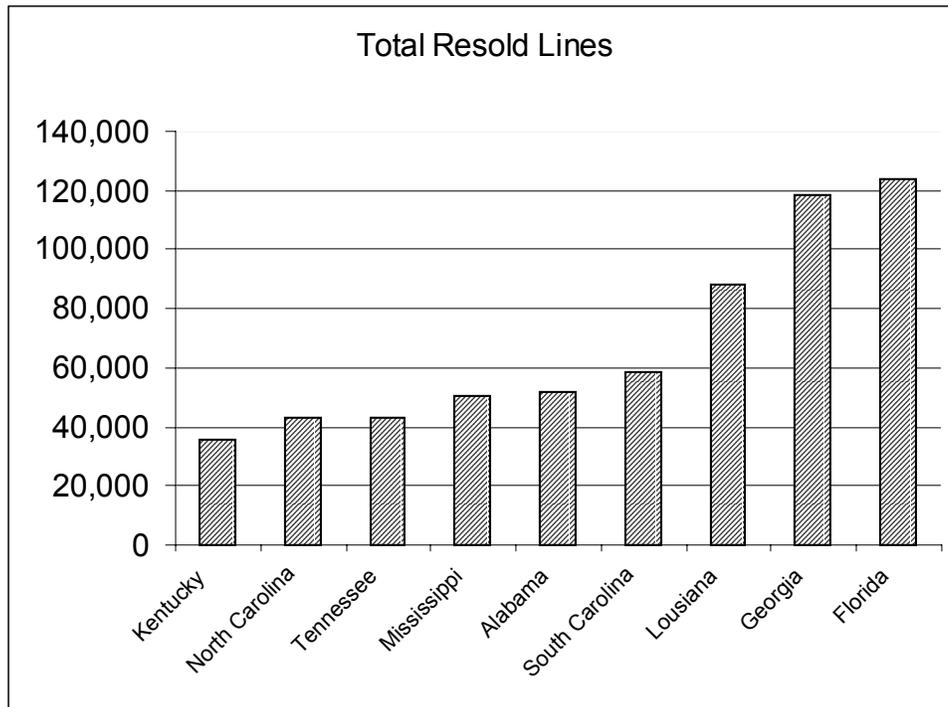
Type of Resold Line	Percent of Total resold Lines
Business Lines	37.8
Residential Lines	58.5
ISDN	0.3
PBX(trunks)	2.3
Multi-service Lines	0.6
Private Lines/Data Circuits	0.5

---

As shown in *Exhibit III-4*, below, Kentucky has the fewest number of resold lines of any BellSouth state. The reasons for this are not entirely clear. There are other anomalies such as Alabama having more resold lines than Tennessee or North Carolina. It is our conclusion that the resale market is still so small that any analysis based on comparative state numbers is misleading.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit III-4<sup>6</sup>  
Total Resold Lines**



## CLEC GROWTH

Competition is evident from CLECs many of which are experiencing tremendous growth. The vast majority of this growth has been in the business markets. Despite the growth in CLECs, they still represent a small percentage of total access lines. This is because of the small base upon which their growth has been built. (basically starting from zero) The V.P. of Data and Internet Product Management at e.spire had this to say about CLEC growth:

*"The new competitive carriers, such as **e.spire**, are like the grains of rice; starting out very small, but then doubling, tripling, even quadrupling in size in a remarkably short period of time. In fact, CLEC industry revenue has doubled every year since the [Telecom Act](#), and is expected to continue doubling for the next several years at least.*

*At my own company, our revenue grew by a factor of six last year alone, and as a result, we won the distinction of being named the "fastest growing network company in the industry" by [Network World Magazine](#)."<sup>7</sup>*

At the end of 1998, new phone entrants controlled 2.7 million access lines or 1.7% of the market. This is up from 1.7 million access lines or one percent of the market a year earlier. The FCC estimates that the number will exceed 4 million access lines by the end of 1999.<sup>8</sup> (To be consistent, Vantage has used the term "market" as used in the referenced document. However, as we will point out, "market", in fact, constitutes vastly different customers, technology and competitors.)

### **Hyperion (Adelphia)<sup>9</sup>**

Hyperion is a regional CLEC operating in the Eastern United States and Canada. Hyperion is a subsidiary of Adelphia Cable, one of the largest cable TV companies in the U.S. with more than 1.3 million subscribers in 13 eastern states. Hyperion provides phone service in 22 networks in 11 states, including Kentucky. In Kentucky, Hyperion operates in Louisville and is constructing network facilities in Lexington. Through agreements with fiber optic network providers, Hyperion interconnects much of its 22 markets with first- and second-tier cities in the eastern U.S.

In a press release announcing agreements with several fiber optic providers, Hyperion listed benefits and opportunities to local business communities served by its expanded network.

*"First, it allows Hyperion to efficiently and cost-effectively access under-served third tier markets and provide them with the latest on fiber optic communications. The network also provides Hyperion with the enabling architecture to extend service offerings to include data applications such as IP, ATM and Frame Relay. Additionally, it provides Hyperion with the foundation for an Internet backbone."*

In Kentucky, Hyperion is thought to serve the largest private sector employer in the state, Humana, located in downtown Louisville. BellSouth provides no telecommunications services to the Humana building.

### **ICG Telecom Group**

ICG Telecom is part of the ICG Communications family, which includes Canadian and U.S. Companies. ICG Telecom is headquartered in Denver, where the company first began offering competitive telecommunications to the business markets in 1991. ICG offers competitive local exchange telecommunications services via a fiber-optic network. ICG offers local, long distance, data services and enhanced telephony in Colorado, California, Texas, the Ohio Valley, and parts of the Southeastern U.S., including Kentucky. ICG Telecom has been primarily a CAP until recently.

In addition to ICG Telecom, ICG also has at least two other telephony related companies operating in the U.S. Fiber Optic Technologies provides network design, installation, maintenance and support of IT and communications systems for large businesses. ICG Satellite Services provides satellite based voice, data and video transmission services through teleports in Atlanta, Denver, Los Angeles, and New York. ICG Satellite Services also operates a maritime telecommunications network and VSAT (very small aperture terminal) private data networks.<sup>10</sup> The Satellite Services Division was sold during August 1999, but the sale was not expected to be finalized until after completion of this report. On

September 5, 1999, as this report was being prepared, ICG announced the sale of its fiber optic unit to ACG Communications.

ICG Telcom's stated mission is:

*"to become the leading, state-wide CLEC in markets served by bringing the benefits of advanced communications technology and world-class services to an audience once held captive by the incumbent local exchange carriers."<sup>11</sup>*

ICG would apparently leverage its relationship with long distance carriers. ICG Telecom has operated primarily as a "carriers carrier", providing services to resellers and IXCs. ICG Telecom currently has a network in Louisville. Within the BellSouth territory, it also operates in Atlanta, Birmingham, Charlotte, and Nashville. Networks are under development in Greensboro and Winston-Salem. As of August 1999, ICG had announced no plans to offer residential local exchange service.

### **e.spire**

e.spire, headquartered in Maryland, operates its network in 23 states offering fiber, switched services and or ATM. e.spire offers data availability in 47 of the 48 contiguous states.<sup>12</sup> As of the fourth quarter of 1998, e.spire was thought to have more than 70 miles of self-healing fiber SONET ring technology in Louisville. The SONET ring passed the hospital district, Federal reserve building and the East End, e.spire was expanding its network to the areas around the University of Louisville and the Louisville Airport.<sup>13</sup>

e.spire focuses on the business market with targeted services offered through a bundled package. A prominent service promoted by e.spire is the Platinum service, which is an integrated T-1. Platinum service includes local, long distance, 800 service (inbound), Internet and data services. The local service under this plan provides flat rate pricing and includes several custom calling features, including call hunting, call waiting, call forwarding, and three-way conferencing. Customers can also add voice and data circuits under this plan with no additional charge (up to the capacity of the T-1).<sup>14</sup>

### **Case Study – A Residential Facility Based CLEC**

While it sometimes seems that all of the competition in telecommunication to date has been focused on large businesses, there are some instances of small, facility-based CLECs pursuing the residential customer. During the course of this study, one of the Vantage consultants had the opportunity to sign up for residential service with a CLEC. Vantage took advantage of this fortuitous timing and arranged interviews with the CLEC. The company does not operate in the BellSouth service territory, which hopefully provided more open and revealing interviews than might have been the case with a direct competitor of BellSouth.

By no means do we suggest that the operation described in the following is representative of CLEC competition in the future or indicates competition. The purpose of the case study is to describe for the reader how a successful, if small, facility-based CLEC can operate in the post-TA96 environment.

King's Deer Telephone is a small CLEC which currently serves Monument, Colorado and portions of Colorado Springs. They are the exclusive provider of service to one subdivision (King's Deer) of 150 homes. Ultimately, the subdivision will have 530 homes and a golf course. The minimum lot size in King's Deer subdivision is 2.5 acres. With a golf course and certain natural terrain features that prevent development, the area is relatively low density. The home prices in King's Deer range from \$350,000-\$700,000. Despite the relative affluence of the market, US West was not willing to install upgraded facilities and had categorized the new development as rural.<sup>15</sup>

The CLEC also serves the immediate surrounding area of Monument, Co. Monument is a rapidly expanding area in northern El Paso county. The communities are being spurred by easy access to both Denver and Colorado Springs. Many of the newcomers to the area are two income families with one family member working in each of the cities. The CLEC had 10% penetration or 630 homes out of 6,300 in Monument and the surrounding area as of June of 1999. Their goal is 30 percent market penetration by EOY 1999.

The King's Deer subdivision is served exclusively with CLEC facilities. In this subdivision, the CLEC uses no UNEs and no resale. US West has no facilities in this subdivision. They operate in the subdivision with deep fiber.<sup>16</sup> They go within 2-3k feet of homes with fiber and then go copper the rest of the way. They carry the signal to electronics which are collocated in a US West MUX hut. They then carry via King's Deer fiber on to their 5ESS switch in Colorado Springs.

The CLEC just signed an agreement with a local neighborhood through a homeowners association to also provide facilities based phone service with a guarantee of 30 percent of the homes. This neighborhood is older and has US West facilities as well. Consumers in this neighborhood will have a choice. The CLEC is an affiliate of the local cable company (Tri-lakes cable) and lays in coax at the same time as the phone lines. This is interesting because they are coming in with fiber in the loop and then providing cable and phone via coax and twisted copper.

The surrounding area is served via resale exclusively at this point. The plan is to eventually take these lines at the US West switching office, transport them via their collocated electronics to their switch down in more urban Colorado Springs.

King's Deer Telephone also is running services in Colorado Springs to several apartment complexes. Again, it was unclear as to whether they would sell "wholesale" to the complex like some electric and gas utilities do or if they are going to try and pick up service one by one from the tenants.

## **IXCs as CLECs**

Following the Telecommunications Act of 1996 and the resulting arbitration, it appeared that competition for residential customers in the local phone network would come from the IXCs. Sprint, MCI (now MCI WorldCom) and AT&T all appeared to be the most likely early competitive entrants into the local phone market due to their experience, capital resources and prominence in arbitration proceedings.

It should come as no surprise to any student of the industry that local competition from the IXCs has not yet materialized. AT&T has seemingly chosen to enter the facilities based marketplace through cable rather than the PSTN. Sprint and MCI, in addition to merging, are focusing on the LD and wireless market as well as providing services to mid-market and large customers. It is only after the major IXCs have the opportunity to sell totally bundled services to residential customers and RBOC OSS Systems are fully open that residential customers will see competition. Also, IXC's are disencumbered to enter local markets as their very entry creates RBOC competition in the long distance market.

## Non-traditional Competition

No discussion of competition would be complete without addressing competition coming from non-traditional sources. At the present time, these non-traditional competitors consist primarily of wireless service providers with cable appearing on the brink of becoming a very real alternative on a widespread basis.

## Wireless

While wireless service is not quite ubiquitous, it is approaching that level in many states. Wireless for purposes of this review consists of analog cellular, digital cellular, and digital PCS. Before discussing the competitive aspects of wireless service, the following is a brief description of the three primary wireless technologies.

*Analog cellular* has been in widespread use since the early 80's and service is now available in 90-95 percent of the United States. Analog cellular transmits voice over continuous radio waves at frequencies in the 800 MHz range. Analog cellular has few data applications and has the additional disadvantage that calls can be heard over scanners and service theft is possible.

*Digital cellular* uses the same approximate frequency range as analog cellular, but uses technologies called CDMA (Code Division Multiple Access) or TDMA (Time Division Multiple Access) to transmit the digital signal. Nextel uses a TDMA technology called iDEN that allows both digital and two-way radio service. Until recently, digital cellular was primarily found in the larger metropolitan areas. The Web sites of AT&T and Sprint would indicate that the service is being rapidly expanded. Digital cellular has the advantage that it can also operate as an analog phone if outside a digital cell. Other advantages over analog cellular are that digital cannot be heard over scanners, the service is very difficult to steal, service quality (clarity) is generally better, capacity is greater meaning fewer busy signals, and finally, messaging and paging is available usually as an option.

*Digital PCS (Personal Communications Service)* transmits at frequencies around 1900 MHz using CDMA, TDMA and GSM (Global System for Mobile Communications). Like some digital cellular phones, some PCS phones can also be used with analog cellular systems. These phones are referred to as dual-mode. PCS phones that can also operate over the digital cellular network are also available. These phones are referred to as dual-band. PCS is still primarily found in urban areas and the handsets are more expensive. Advantages beyond that of digital cellular include a larger system capacity and more options features including alphanumeric paging, e-mail, and Internet and Intranet access.

Wireless is a current viable alternative to landline voice service in those areas where it is available. As to whether a viable alternative constitutes competition is discussed elsewhere in our report. However, there is no question that wireless (both analog and digital cellular and PCS) can serve not only as adjuncts to landline telephony, but can function as a replacement. This is at least tacitly acknowledged by the FCC. In its Order on Universal Service, wireless carriers can be declared as eligible telecommunication carriers and receive Universal Service support. Also, they do not have to be the primary line into the house. According to an article in the *New York Times*, *Anderson Consulting* predicts that cellular phones will achieve "25 to 35 percent displacement" of wired telephones in five-to-seven years.<sup>17</sup> Competition has also driven down prices of both wireless service and hardware. According to *point.com*:

*"There's never been a better time to buy wireless service. With four-to-seven major wireless carriers in every major city competing for customers, competition has pushed airtime prices down by at least one-third and sometimes much more--during the last 18 months."*<sup>18</sup>

While cellular service has been competing with landline service for some time, PSC is becoming increasingly competitive for not only voice but data services. These services compete for the residential as well as the business customer. PSC competes not only on a standalone basis for voice, but offers the customer the opportunity to obtain bundled services as well. Not only is PCS becoming increasingly competitive as an alternative to landlines, but the competition among PCS providers is increasing. The following is a sampling of both cellular and PCS offerings available to residential customers. As with other sections of the report, we present these with the caveat that the costs and service plans are changing so rapidly that we fully expect changes between the report preparation and issuance dates.

Sprint offers PCS plans that start as low as \$29.99 per month with 120 minutes up to 1000 minutes for \$99.99 per month. These rates apply to all calls made on the Sprint network with roaming and long distance applying to calls made off network. These plans all include the following:

- Voice mail
- Numeric paging
- Caller ID
- Call Forwarding
- Call Waiting
- Three-way calling
- DA
- OS
- Basic 911

Text messaging is offered as an option as are numerous other features heretofore not considered part of telecommunications, such as roadside assistance.

AT&T also offers numerous wireless plans. One of the more interesting is Digital One Rate (DOR), which is offered in the following plans:

- 600-minutes \$89.99 a month
- 1000-minutes \$119.99 a month
- 1400- minutes \$149.99 a month

The DOR plan allows for the use of the wireless phone anywhere on the extensive AT&T wireless systems for the same price with no roaming or additional long distance charges. As with the Sprint plans, AT&T offers numerous vertical features with the plan, although many of those features are only available in PCS areas, and the phone can be used for voice service over analog cellular and digital cellular. AT&T also offers PCS plans for as low as \$24.99 for 100 minutes.

AT&T also offers a service called Personal Network, which is an example of bundling. Personal Network allows the residential customer to combine wireless, long distance and Internet on one bill with potential cost savings based on plans and service. In addition, the plan allows for on-line billing with various sorting capabilities.

### **Voice and fax over IP**

During the course of the study, voice over Internet Protocol (VoIP), fax over IP (FoIP), and voice and fax over IP (V/FoIP) were seemingly moving from discussion and business Intranet applications into widespread implementation. This technology again illustrates the phenomenal speed with which the industry is changing. This section had to be almost continuously updated during the review in the summer 1999, because of the almost daily announcements of new products, technology and alliances. Again, Vantage fully anticipates that the VoIP and V/FoIP environment will have changes after completion of the draft report in September 1999 and its finalization. This is the environment in which BellSouth is now operating and which Commissions must be prepared for.

A sample of real world V/FoIP, currently available is the August 1999 offering from excite.com. Any user with Internet access can get FREE voice mail and fax service up to 60 messages per month just by signing and obtaining a user ID with excite.com (also free). The service requires that callers dial a toll free number (1-888-excite2) and then enter a 10-digit "extension" code. Vantage tests indicate that the voice quality of this voice mail service is very good. Other Internet portals are offering voice "chat " as this report goes to press.

### **Cable (COAX)**

Perhaps the most visible competition in the local network is from cable. Not only the long anticipated entrance of cable modems into the fray, but from the mergers and alliances which have taken place. More specifically, the purchase of cable giant TCI by AT&T. The purchase gives AT&T the potential entry into 33 million U.S. homes via the Coax cable already installed by the cable company.<sup>19</sup>

According to Kinetic Strategies Inc. which publishes Cable Datacom News, more than one million households in the U.S. and Canada now subscribe to cable modem services. Approximately 70 percent of these are in the U.S. According to the same source, 32 million households have access to cable modem service.<sup>20</sup>

In addition to providing high speed data transfer, cable has the capability of providing voice communications using only a fraction of the available bandwidth. Despite its promise, cable telephony faces significant requirements for capital in order to upgrade the network. The industry will need to spend \$15 billion by 2003 to reach 57% of cable homes and will need to spend an estimated \$31 billion to reach 100%.<sup>21</sup>

### **Cable (Satellite)**

Satellite television offers the potential of providing not only digital entertainment, but also high-speed Internet services. As an example, in June of this year, AOL and Hughes Electronics Corporation announced a strategic alliance. The intended outcome of the alliance is to:

*"...accelerate subscriber growth and revenue-per-subscriber for Hughes' DIRECTV® television entertainment service and DirecPC® satellite-based broadband Internet delivery system, as well as extend the reach of America Online's developing AOL TV interactive television and high-speed AOL-Plus services."*<sup>22</sup>

This alliance brings access to 16 million AOL and CompuServe members in the U.S. AOL gains access to the seven million DIRECTV® customers for AOL TV services. The alliance will make AOL-Plus broadband service available via the satellite network by early 2000. The current technology for this service uses a standard telephony uplink with a satellite broadband download. The download is touted to be as much as 14 times faster than a standard 28.8 Kbps analog modem. These services directly compete with DSL and ISDN service offerings which provide high-speed capacity.

### **Technology Competition**

In *Exhibit III-5*, below, we have summarized some of BellSouth's service offerings that are coming under or are under competitive pressure.<sup>23</sup>

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit III-5<sup>24</sup>  
Technology Competition**

<b>Product/Services and Technology Summary<sup>25</sup></b>				
<b>Product/Service</b>	<b>Basic rate ISDN BRI</b>	<b>Primary Rate Interface PRI</b>	<b>Frame Relay</b>	<b>ATM</b>
Target Markets (Bold Indicates primary market)	<b>Large Customer</b> Mid-Market Small Business Consumer	<b>Large Customer</b> Mid-Market Small Business	<b>Large Customer</b> Mid-Market Small Business	<b>Large Customer</b> Mid-Market Small Business
Market Competition	Large Customer Mid-Market Small Business	Large Customer Mid-Market	Large Customer Mid-Market	Large Customer
BellSouth facilities used to provide service	ISDN Equipped CO DSL Access Line	ISDN Equipped CO Copper or fiber DS1 line. ISDN Network Termination	At least one Central Office in the Network Serving Area must be a Frame Relay switch. (Ascend/Cascade 9000 switch.) Customer connections may be provided over fiber or copper depending on speed. Interoffice facilities are direct fiber or fiber rings. Digital Cross Connect for speeds less than 1.536Mbps. All Frame Relay switches are connected via DS1 to BST Network Administration System (in Atlanta)	At least one Central Office within a Network Serving Area must house an ATM switch. (ATM CBX 500 switch) Customer connections may be provided over fiber or copper depending on speed. Interoffice facilities are direct fiber or fiber rings. All ATM switches are connected via DS1 to BST Network Administration System (in Atlanta)
Special Customer Facilities Required	Requires ISDN capable customer premise equipment.	ISDN CPE. CPE, Network Termination and Exchange Termination (ISDN CO) must match exactly in configuration and protocol.	Broadband Exchange Line Frame Relay Service Customer Connection Broadband Exchange Line Extension if outside the Network	Broadband Exchange Line ATM Customer Service Connection Broadband Exchange Line Extension if outside the Network Serving Area

Primary Kentucky Competitors	Hyperion e.spire Community Telephone*	AT&T MCI ICG Hyperion e.spire Community Telephone*	AT&T MCI ICG ICI e.spire Community Telephone*	AT&T MCI e.spire
How do competitors provide service?	Facilities based and resale. Unbundled provision requires 2 wire ISDN port, 2-B Channels, 1- D Channel and the 2 wire ISDN loop.	PRI equivalent is offered almost exclusively through CLEC switches, wires and terminating equipment although it is available for resale. Can be offered through a combination of unbundled elements and CLEC facilities. This would require a 4-wire DS1 digital loop and 4-wire ISDN DS1 port.	Through CLEC facilities or by purchase of unbundled local loop and transport elements combined with CLEC Frame Relay switch.  Frame Relay is available for resale.	Through CLEC facilities. ATM switches may be collocated at BellSouth Co.'s or elsewhere. ATM is available for resale.
Notes	BRI offered to both business customers (IBS) and residential (IRS). IBS allows special channel configuration. There is no mileage limitation on BRI and it is compatible over subscriber line carrier systems.		Frame Relay available at 56 Kbps, 64 Kbps, 128 Kbps, 1.536 Mbps, 44.210 Mbps. Fractional connections available at 128 Kbps and 1.536 Mbps. ATM and Frame Relay are connection oriented packet-switched technologies.	ATM available at 1.536 Mbps, 44.210 Mbps, 149.760 Mbps and 599.040 Mbps. ATM and Frame Relay are connection oriented packet-switched technologies.

<b>Product/Services and Technology Summary</b>				
<b>Product/Service</b>	<b>ADSL</b>	<b>Centrex</b>	<b>Megalink</b>	<b>Lightgate</b>
Target Markets (Bold Indicates primary market)	ADSL is marketed to Network Service Providers (NSPs) who sell the service to their customers.	<b>Large Customer</b> <b>Mid-Market</b> Small Business	<b>Large Customer</b> Mid-Market Small Business	<b>Large Customer</b> Mid-Market
Market Competition	Large Customer Mid-Market Small Business Consumer	Competition for both Centrex replacement of PBX and for PBX trunks in all of the above markets.	Large Customer Mid-Market	Large Customer Mid-Market
BellSouth facilities used to provide service	BellSouth provides ADSL to the NSP via in service facilities and ATM service and appropriate transport.	Provided via central office via station lines. Customer Provided Equipment apparatus provides access from Co. to local and long distance networks.	Megalink local and interoffice facilities at 1.544 Mbps. Although not technically facilities, MegaLink also requires various services in the terminating Co.	Fiber optic single mode cable. Optical multiplexing terminals at each end of facilities. May require D4 channel banks and circuit specific plug-in equipment for certain customer requested services.
Special Customer Facilities Required		Customer Provided Equipment station apparatus to terminate station line facilities.	Customer Provided Equipment to digitize and encode functions and to provide switching and multiplexing.	None.
Primary Kentucky Competitors	BellSouth.net provides ADSL.** Competitors are BlueStar and DSL.net..	AT&T ICG Hyperion e.spire Community Telephone* Southeast Telephone*	ICG Hyperion e.spire These three CLECS offer DS0,DS1 and DS3 level service.  Numerous other smaller CLECs offer similar private line services in Eastern and Western Kentucky.	ICG Hyperion e.spire These three CLECS offer DS0,DS1 and DS3 level service. AT&T partner with CLECs. Numerous other smaller CLECs offer similar services in Eastern and Western Kentucky.
How do competitors provide service?	NSPs collocate in BellSouth CO and buy loops from BST or a CLEC.	PBX is provided by customer premises equipment. Centrex can be provided by combining 2 wire analog loop	Available for resale. Can be provided with UNEs. Requires 4 wire DS1 loop and the 4 wire interoffice transport..	Available for resale. UNEs would require a BFR. Louisville CLECs offer primarily through their own facilities.

	CLECs can also provide ADSL using two and four-wire UNEs. ADSL is not available for resale.	and CLEC switch. Also available for resale.	Louisville CLECs offer primarily through their own facilities. Eastern and Western Kentucky CLECs provide through their own services.	
Notes	Intermedia cable company offers cable modems as an alternative to ADSL.		Allows for various configurations at the customer request.	LightGate is offered in two asynchronous capacity sizes; a single DS3 capacity offering 28 DS1 channels or 672 voice grade channels or a three DS3 capacity with up to 84 DS1 channel or 2016 voice grade channels.

\*Western Kentucky competitor

\*\* Fast Access

The technologies summarized above also represent the areas where revenue and customer growth is expected in the future.

### **Kentucky Information Highway (KIH)<sup>26</sup>**

The KIH is a statewide integrated communications and information network using a digital network for high speed, high capacity delivery of voice, data and video transmissions. The Commonwealth of Kentucky entered into a 10-year contract in 1995 for the KIH, with BellSouth as the prime contractor. BellSouth, along with 19 other local exchange companies and Qwest/LCI International, teamed to develop and implement the network.

The goal of the KIH is to provide access to public information, educational resources, health resources and agency provided services in urban and rural locations. The KIH does this by supporting educational and healthcare initiatives across the state, linking local communities to the state capital, and providing expanded access to Internet service providers.

#### **KIH Facilities and Rate Structure**

The KIH partners have deployed a fiber optic backbone, 12-Frame Relay and 6 ATM switches for delivery of KIH services. KIH charges are distance insensitive so schools in outlying areas pay the same rates as schools in urban areas. A simplified rate structure consists of an on ramp in every county. An access fee is billed for the portion of the network from the end user's premise to the servicing wire center.

#### **KIH Service Delivery**

KIH has taken part in a number of diverse and innovative telecommunications solutions in Kentucky. Some of these include:

- The Model County project which provides communications connections between local offices and state governments agencies. Applications utilized include Internet access, e-mail, and file transfer.
- The Kentucky Tele-Linking Network (KTLN) is a voice, video, and data network that has been expanded throughout the state using KIH for connectivity. KTLN links schools, colleges, universities and public and private agencies for delivery of services. Every district school office in the state is linked back to the Department of Education in Frankfort.
- Empower Kentucky is a broad based effort that will use KIH and other resources to improve the efficiency and delivery of state government services to constituents.

- The Workers Information SysTem (TWIST) Project is an automated social services case information system. Programs include child protection, foster care, adoption, juvenile and adult protection. The information is available 24 hours per day/7 days per week. Information is stored and retrieved over the KIH Frame Relay network
- The Cabinet for Health Care Services (CHS) is involved in a redesign of the Local Health Network to eliminate redundant data collection and provide shared access. All public health care facilities will connect to KIH for such data as birth and death certificates, immunization records, lab tests, patient demographics etc.

### **KIH Accolades**

The KIH has recently received several awards. The KIH was nominated for the Computerworld Smithsonian Award and inducted into the Smithsonian's National Museum of American History on April 12,1999. The award is based on utilization of new information age tools to extend the benefits of technology to society. KIH also won a 1999 Recognition Award for Outstanding Achievement in the Field of Information Technology from NASIRE, which represents Chief Financial Officers of the States. The award was in the category of Public-Private Partnerships.

### **FINDINGS AND CONCLUSIONS**

*III-F1*     The Commission must prepare for and understand markets and services outside their direct regulatory control.

The future of telecommunications has broadened far beyond just the services provided by the LECs through twisted copper. As we have pointed out, customers (including residential customers) will or already have access to telecommunications services through the ILEC public switched network, V/FoIP, cable modem, and wireless services. In many cases, customers will have access to services from all these delivery mechanisms from multiple competing providers.

The future will hold considerable uncertainty for the customer. They will look to the Commission for guidance and complaint resolution. History has shown that many customers will not understand the changes taking place in the industry. To this day, many customers do not understand the difference between their long distance carrier and the local phone company. This confusion will be magnified many fold as customers encounter bundled services, the same service offered through different technologies, and one provider offering services, heretofore, always considered separate. (For example, cable and phone service from one company.)

*III-F2*     The Commission must be prepared for the problems that competition may bring.

A significant issue that came out of our case study of King's Deer Telephone was the potential replacement of one facility monopoly with another. In a dense urban residential area, this problem is not a major concern because facilities could be built out with relative ease if residents wished to be provided alternative service. However, in a more rural and

less populated area, if a CLEC were to have the only facilities in place, then the problem is much larger. This is an example of an issue that has never even arisen in the past. The Commission must prepare for such issues as:

- Can the ILEC forego its obligation as carrier of last resort if a CLEC is serving an entire area with its facilities?
- How will USF and Lifeline funds be distributed?
- How can the Commission ensure service quality from CLECs? Even with regulations to require reporting, how will the Commission enforce such regulations?
- Slamming and cramming continue to be a problem with long distance charges. What is to suggest that local competition will be spared this problem? If anything, the problem may be magnified.
- How can the Commission be sure that customers receive credit when switching from one carrier to the next during a billing cycle? BellSouth and the large IXCs (soon to be CLECs) will, undoubtedly, provide credits as part of ongoing business practice, but what of CLECs who lose customers back to BellSouth?
- Billing issues have been major problems with Telcos in the past. The large IXCs and RBOCs have resolved these, but how can the Commission control the multitude of billing formats, cutoff, procedures etc. that could potentially face the customer?

There is no good answer to many of these and other potential problems because they have not yet been faced. Also, many of these problems may be beyond the Commission's jurisdiction, which may only serve to further confuse the ratepayer. Fortunately, there is time to prepare for the details of the problems that will be encountered.

***III-F3***     The total role of BellSouth in state economic development must be considered.

BellSouth (and most other RBOCs) makes a number of contributions to the economy of the state beyond their obvious payroll and infrastructure contributions. In a new competitive environment, many of the CLEC's will not be willing or able to make these same contributions. Vantage is not making the argument that BellSouth or any other competitor should receive regulatory favoritism as a result of social contributions. However, the extent of the contributions to the state cannot be ignored. *Exhibit III-6*, below, summarizes BellSouth contributions over the 1995-1999 period.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit III-6<sup>27</sup>  
Contributions By Category (\$000)**

Year	Cash	Memberships	Voluntary Payments		
			General Company Benefit	Specific Organization Benefit	Stimulation of Business
1995	564	171	238	28	46
1996	560	214	273	4	22
1997	559	153	244	1	76
1998	582	154	265	0	63
1999	238*	60**	81*	0*	16*

\*Through 8/15/99.

\*\*Through 8/17/99.

This says nothing of the Telecommunications Research Center or the Kentucky Information Highway. The Kentucky Information Highway (KIH) is a statewide digital network for high-speed, high capacity delivery of voice, data, and video transmissions. The KIH was discussed in more depth in the main body of this chapter. BellSouth has also been a major contributor to business development efforts including the Telecommunications Research Center on the University of Louisville's Shelby Campus and the Paducah Information Park.

**III-F4**     The argument that competition does not exist because of low penetration of access lines is specious.

The number of access lines served by competitors of BellSouth (or any ILEC), is often used as an argument that competition does not exist in the state or in any state in the U.S. This is misleading and points more to the economics of providing service in an unregulated environment than it does to the openness of markets to competition.

Full blown competition with multiple providers using multiple technologies has not yet entered the residential marketplace because of a multitude of factors. Cable modems and Section 271 approval should shortly change this situation. Competition has benefited the business market first because these customers offer higher revenue per facility cost. Wireless service is not just a supplement, but a very real alternative to landline service. Wireless data services remain costly because of end user equipment, but the cost of wireless voice service has dropped appreciably.

In fact, competition is far too broad a term. Each market and category of service must be looked at separately in terms of competition. The large business customer most certainly has seen competition at the "local" level. Medium and smaller businesses are beginning to

see competition primarily for high-speed access and multiple lines. Some smaller businesses that happen to reside in buildings served by CLEC facilities (such as on a fiber ring) may also be seeing competition. The term "may" is used because there is no reasonable means of obtaining reliable information on the extent of competition. The unregulated competitors are not required to file such information.

**III-F5** The residential POTS customer with no enhanced services and little long distance usage is not likely to see any noticeable reduction in rates as a result of competition.

Competition will come to the residential Kentucky customer, but not all customers will benefit from the competition in terms of reduced rates or even enhanced services. This is especially true for the rural customer (or perhaps more appropriately the customer in low density areas) for whom the cost of providing phone service is greater than the revenue under current regulatory pricing.

Just as pure economics have determined that business customers would be the first to see telephony competition, so too will economics determine that high usage residential customers are the first to see advantages of competition. Opportunities for competitors to profit in the residential marketplace come from the bundling of multiple services. Those customers who utilize not only voice, but some additional combination of Internet, high usage long distance, wireless, paging, and cable television provide the immediate targets of opportunity for the competitors in the residential market. For example, Qwest announced in August that it would give "free" Internet access to customers who sign up for special long distance services.<sup>28</sup> As previously noted, Sprint offers reduced rates on bundled long distance and Internet service.<sup>29</sup> Ironically, the recent heated competition in long distance rates for residential customers may mean even less opportunity for reductions with bundled services as revenues are being driven out of the long distance component.

## RECOMMENDATIONS

**III-R1** The Commission needs to develop a formal plan for how it plans to deal with competition at the residential level. (Refer to Findings III-F-1 and III-F2.)

This plan would include:

- Service guidelines to be applied equally to CLECs and ILECs.
- Means of disseminating information to new competitors.
- Plans for dealing with service complaints on non-regulated companies.
- Education plans for Commission staff to enable them to function efficiently in the new environment.

**III-R2** The Commission needs more open dialog with BellSouth and its competitors. (Refer to Findings III-F3 and III-F4.)

The Commission should work with not only BellSouth, but also the IXC's, the CLECS, cable, wireless providers, and others to identify potential problems and resolve them in a cooperative manner.

## IV. BELLSOUTH PERFORMANCE DURING PRP PROGRAM

### A. FINANCIAL PERFORMANCE

This section of the BellSouth Telecommunications - Kentucky Report details the revenue and expense changes from 1995 through 1998 to show an overall perspective of BST-KY financial performance. This section analyzes:

- Revenue and Expense Activity
- Asset Depreciation
- Employee Changes
- Access Line Growth
- Capital Investment

### REVENUE AND EXPENSE ANALYSIS

#### Revenues

*IV-F1*     Increased revenues result from additional access lines and increased demand for calling features by customers.

Revenues are increasing most significantly in the largest revenue category, Local Service Revenue. In 1998, Local Service Revenue comprised 81% of total revenues for BellSouth-Kentucky (Intrastate revenues only). *Exhibit IV-1* shows the amount of Local Service Revenues, as compared to the other revenue categories.

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#### Focused Review of the Price Regulation Plan BellSouth Telecommunications, Inc. - Kentucky

##### Exhibit IV-1<sup>30</sup> 1998 Revenues by Category

Revenue Category	Amount	Percent
Local Service Revenue	\$469,645	81%
Network Access Revenue	\$48,882	8%
Unidirectional Long Dist. Revenue	\$4,110	1%
Long Dist. Private Network Revenue	\$34,171	6%
Miscellaneous Revenue	\$28,042	5%
Uncollectible Revenue	\$4,827	(1)%

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Local Service Revenue has increased approximately \$75 million, from 1995 to 1998, as shown in *Exhibits IV-2* and *IV-3*. The other revenue categories are flat or decreasing, as

shown in *Exhibit IV-2*. In 1996 over 1995, and 1997 over 1996, the decreases in the other revenue categories almost completely offset the increases in Local Service Revenue, as shown in *Exhibit IV-2*, increasing .89% and 1.18%, respectively. In 1998 versus 1997, total revenue increased by 3.99% representing more than \$20 million.<sup>31</sup>

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-2<sup>32</sup>  
1995-1998 Revenue and Percent Changes  
(\$ in 000's)**

(\$000s & %)	1995	% 96vs95	1996	% 97vs96	1997	% 98vs97	1998
Local Service Revenue	394,150	6.51%	419,823	5.78%	444,105	5.75%	469,645
Network Access Revenue	49,217	-7.18%	45,681	7.91%	49,296	-0.84%	48,882
Unidirectional Long Dist. Revenue	6,350	-9.92%	5,720	-12.57%	5,001	-17.82%	4,110
Long Dist. Private Network Revenue	62,772	-17.04%	52,076	-17.40%	43,016	-20.56%	34,171
Miscellaneous Revenue	38,498	-16.53%	32,133	-35.31%	20,786	34.91%	28,042
Uncollectible	(4,566)	-9.05%	(4,153)	6.72%	(4,432)	8.91%	(4,827)
Total Revenue	546,421	0.89%	551,280	1.18%	557,772	3.99%	580,023

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In 1996, Local Service Revenue increased by approximately \$26 million (6.51%) from 1995. This increase was offset by other decreases and total revenues increased by less than the increases in Local Service Revenue, approximately \$4.9 million (0.89%). In 1997, Local Service Revenues increased approximately \$24 million (5.78%) but, again, was offset by other decreases and total revenues increased by a lesser degree, approximately \$6.5 million (1.18%). In 1998, Local Service Revenue increased approximately \$26 million and total revenue increased approximately \$22 million.<sup>33</sup>

*Exhibit IV-3* takes the Local Service Revenue category and details the component increases and decreases of that account.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-3<sup>34</sup>  
Local Service Revenue Detail  
(\$ in 000's)**

	1995	% 95 v 96	1996	% 96 v 97	1997	% 97 v 98	1998
5001: Basic Area Revenue	241,893	1.07%	244,482	7.34%	262,420	3.93%	272,748
5002: Optional Extended Area Revenue	20,657	29.12%	26,672	22.89%	32,776	16.23%	38,095
5003: Cellular Mobile Revenue	0	-	0	-	0	-	0
5004: Other Mobile Service Revenue	16	0.00%	16	12.50%	18	0.00%	18
5010: Public Telephone Service	11,990	-1.91%	11,761	-68.81%	3,668	-100.00%	
5040: Local Private Line Revenue	15,708	12.66%	17,696	15.85%	20,500	24.01%	25,423
5050: Customer Premises Revenue	3,688	4.47%	3,853	-1.61%	3,791	-5.75%	3,573
5060: Other Local Exchange Revenue	100,679	14.54%	115,316	4.85%	120,907	7.33%	129,767
5069: Other Local Exchange Revenue Settlements	27	0.00%	27	-7.41%	25	-16.00%	21
<b>Summ of 5001 - 5069:</b>	<b>394,658</b>	<b>6.38%</b>	<b>419,823</b>	<b>5.79%</b>	<b>444,105</b>	<b>5.75%</b>	<b>469,645</b>

\* Public Telephone was deregulated in 1997 and moved to another account for part of 1997 and 1998.

The largest dollar increase, approximately \$31 million from 1995 to 1998, is noted in the Basic Area Revenue category. This increase is driven by the increase in access lines, 199,000 since 1995 or a 17% increase. The next largest increase is in the Other Local Exchange Revenue category. This category is comprised of the Complete Choice features or Custom Calling features, such as Caller ID and Call Waiting.<sup>35</sup>

### Number of Calls

The number of calls has been increasing steadily since 1995, as shown in *Exhibit IV-4*. Total Local Calls increased 4.5% from 1995 to 1998. IntraLATA Toll Calls increased 29.4% and total interLATA Toll Calls increased 27% during the same time period. Interstate, interLATA Toll increased 28.9%, 1995 to 1998, and 8.1% from 1997 to 1998. Intrastate interLATA Toll increased 20.9%, 1995 to 1998, and 7.9% from 1997 to 1998. The largest number of calls in 1998 is in the Total Local Calls category at 4,689,495,000.<sup>36</sup> *Exhibit IV-5* shows the percentage change in the number of calls by category. The category with the largest number of calls, Total Local Calls, shows a flat percent change of 3.87%, 0.13%, and 0.47% for 1995 versus 1996, 1996 versus 1997, and 1997 versus 1998. The largest percent change is an increase of 22.54% 1996 versus 1997 in the intraLATA Toll Calls. The changes for the previous and subsequent year in this category are more flat, increasing 4% and 1.56%, respectively.<sup>37</sup>

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

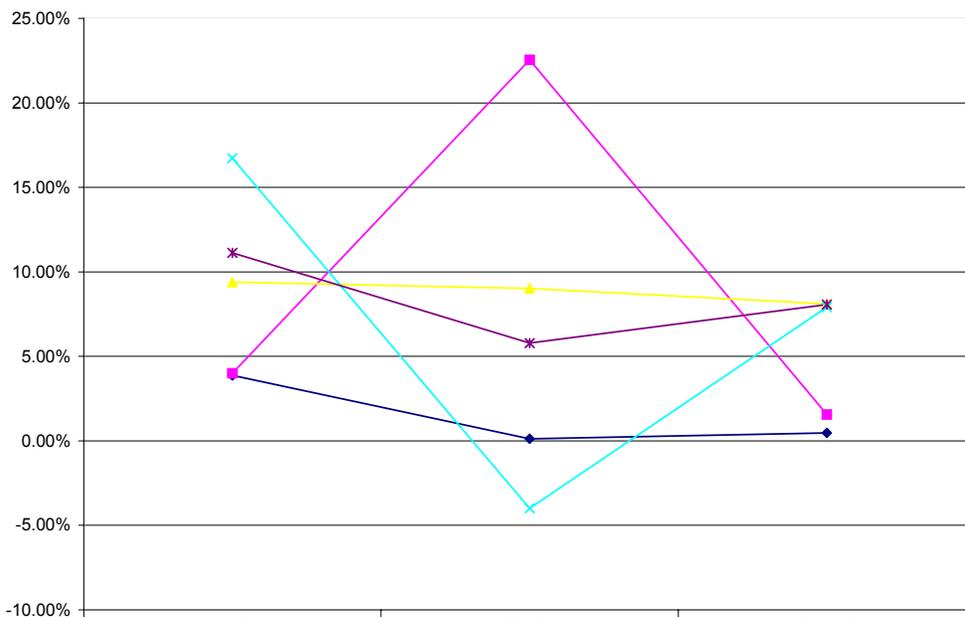
**Exhibit IV-4<sup>38</sup>  
Number of Calls and Billed Minutes  
(Amounts in 000's)**

	12/31/95	% 96v95	12/31/96	% 97v96	12/31/97	% 98v97	12/31/98	% 98 v 95
Calls								
Local	4,487,999	3.9%	4,661,683	0.1%	4,667,587	0.5%	4,689,495	4.5%
IntraLATA Toll	136,757	4.0%	142,226	22.5%	174,290	1.6%	177,007	29.4%
InterLATA Toll, Interstate	303,989	9.4%	332,547	9.0%	362,525	8.1%	391,910	28.9%
InterLATA Toll, Intrastate	94,038	16.7%	109,764	-4.0%	105,380	7.9%	113,725	20.9%
Total InterLATA Toll Calls	398,027	11.1%	442,311	5.8%	467,905	8.1%	505,635	27.0%
InterLATA Toll, Interstate	2,914,367	9.5%	3,191,324	8.6%	3,465,538	6.7%	3,696,851	26.8%
InterLATA Toll, Intrastate	844,071	22.2%	1,031,308	16.4%	1,200,813	15.4%	1,386,260	64.2%
Total InterLATA Toll Calls	3,758,438	12.4%	4,222,632	10.5%	4,666,351	8.9%	5,083,111	35.2%

As number of calls have increased, so have the number of billed minutes, as shown in *Exhibit IV-4*. Total interLATA Toll Calls Billed Minutes increased 35.2% from 1995 to 1998, and 8.9% from 1997 to 1998. Intrastate interLATA Toll Minutes increased 64.2% from 1995 to 1998 and 15.4% 1997 to 1998, easily the category with the largest increase.<sup>39</sup> *Exhibit IV-6* shows a decline in the percentage increases, but each year represents an increase over the previous year. In the case of interLATA Intrastate Toll Minutes, these increases are 22.18%, 16.44%, and 15.44% for 1995 versus 1996, 1996 versus 1997, and 1997 versus 1998, respectively. In total, interLATA Toll Minutes increased by approximately 12%, 11%, and 9%, respectively, for the same time periods.<sup>40</sup>

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-5<sup>41</sup>  
Percent Change in the Number of Calls**

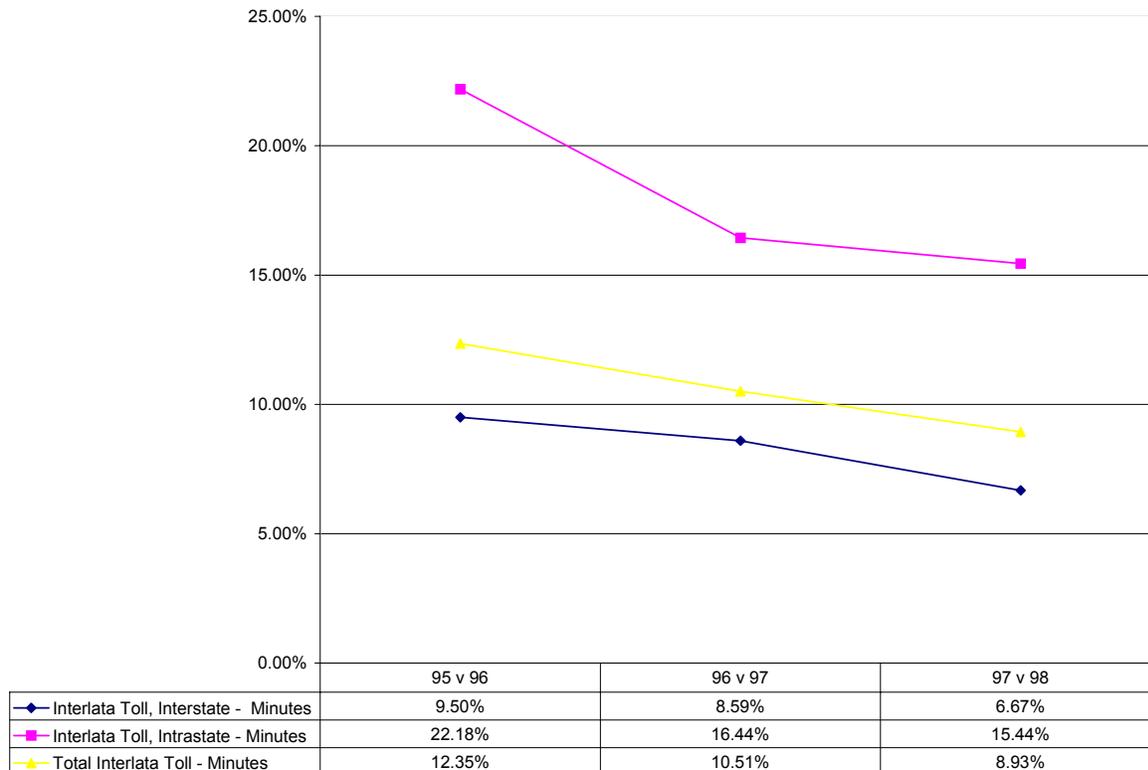


	95 v 96	96 v 97	97 v 98
◆ Total Local Calls	3.87%	0.13%	0.47%
■ Intralata Toll Calls - #	4.00%	22.54%	1.56%
▲ Interlata Toll, Interstate - #	9.39%	9.01%	8.11%
✕ Interlata Toll, Intrastate - #	16.72%	-3.99%	7.92%
✱ Total Interlata Toll Calls - #	11.13%	5.79%	8.06%

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-6<sup>42</sup>**

**Percent Change in the Number of Billed Minutes**



## Expenses

Total operating expenses and taxes swing around year to year from 1995 to 1998, as shown in *Exhibit IV-7*. They increase by approximately \$3 million, 1996 over 1995, decrease by approximately \$17 million, 1997 over 1996, and decrease again by approximately \$0.5 million 1998 over 1997. The leading expense categories in dollar amounts are *Depreciation and Amortization*, *Customer Operations – Services*, *Corporate Operations – General and Administrative*, and *Operating Taxes*. These categories comprise 69% of the total operating expenses and taxes category in 1998, 67% in 1997, 67% in 1996, and 62% in 1995. A comparison of the increases and decreases in these largest categories is depicted in *Exhibit IV-8*.<sup>43</sup>

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-7<sup>44</sup>  
Operating Expenses and Taxes  
(\$ in 000's)**

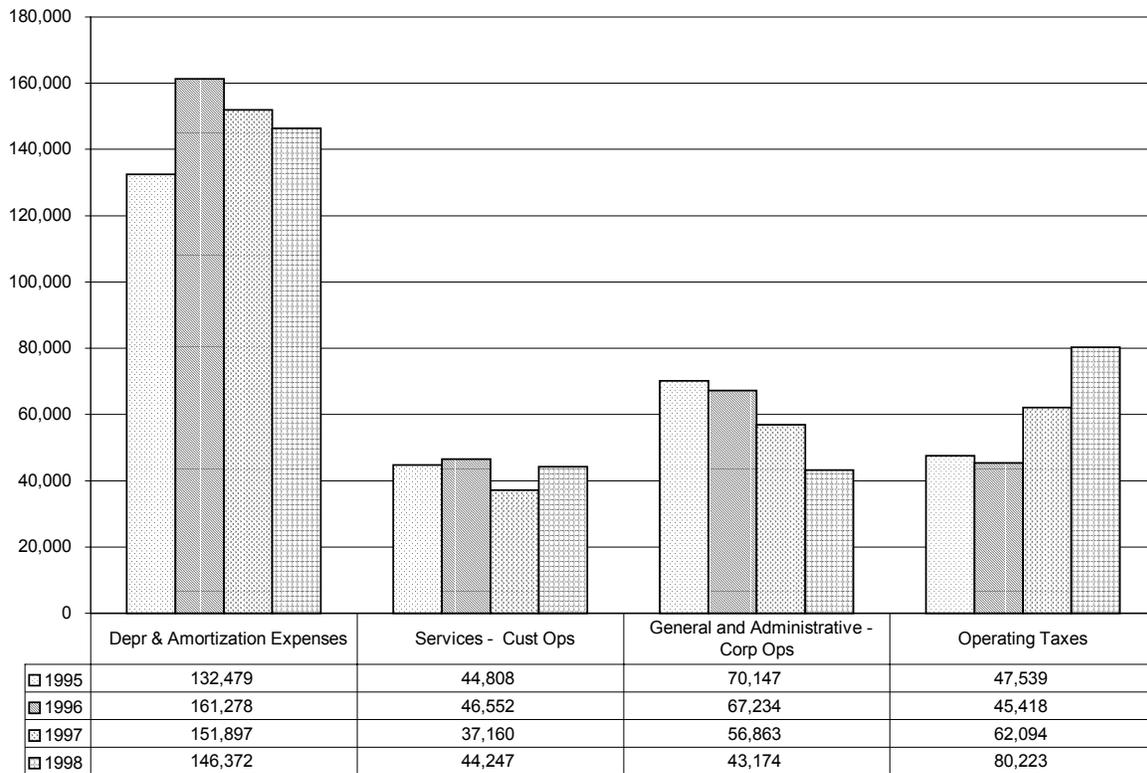
	1995	% 95 v 96	1996	% 96 v 97	1997	% 97 v 98	1998
Network Support Expense	997	-9.33%	904	-25.11%	677	-86.41%	92
General Support Expense	25,951	-13.66%	22,405	-15.95%	18,831	-6.54%	17,600
Central Office Switching Expense	19,532	-15.54%	16,497	8.30%	17,866	-4.57%	17,049
Operator System Expense	357	-14.01%	307	242.02%	1,050	-62.57%	393
Central Office Transmission Expense	6,951	-2.09%	6,806	-4.16%	6,523	-9.80%	5,884
Inf. Orig./Term. Expense	5,615	-31.50%	3,846	-2.34%	3,756	4.18%	3,913
Cable and Wire Facilities Expense	36,401	-2.63%	35,442	1.25%	35,886	4.23%	37,403
Other Prop, Plant, & Equip. Expense.	238	72.27%	410	-54.63%	186	207.53%	572
Network Operations Expense	38,074	-16.22%	31,897	0.40%	32,024	-21.01%	25,296
Access Expense	23,616	-35.36%	15,266	1.96%	15,565	-1.03%	15,405
Depr. & Amortization Expenses	132,479	21.74%	161,278	-5.82%	151,897	-3.64%	146,372
Marketing - Cust. Ops	18,191	8.23%	19,688	-14.80%	16,774	3.93%	17,434
Services - Cust. Ops	44,808	3.89%	46,552	-20.18%	37,160	19.07%	44,247
Executive and Planning - Corp Ops	2,286	0.48%	2,297	-26.08%	1,698	95.76%	3,324
General and Administrative - Corp Ops	70,147	-4.15%	67,234	-15.43%	56,863	-24.07%	43,174
Prov. for Uncollect. Notes Rec. - Corp. Ops	0	-	0	-	0	-	0
Other Operating Expenses	(153)	-114.38%	22	-150.00%	(11)	-154.55%	6
Operating Taxes	47,539	-4.46%	45,418	36.72%	62,094	29.20%	80,223
<b>Operating Expenses and Taxes</b>	<b>473,029</b>	<b>0.68%</b>	<b>476,269</b>	<b>-3.66%</b>	<b>458,839</b>	<b>-0.10%</b>	<b>458,387</b>

*Exhibit IV-8* shows that Depreciation and Amortization are clearly the largest single expense categories. The large increase 1995 to 1996, and subsequent decreases 1996 through 1998, reflects the asset life changes approved in the PRP. (See next section for additional details.)

*Exhibit IV-8* also shows significant decreases in *General and Administrative - Corporate Operations* reflecting decreased personnel 1995 through 1997. The personnel decrease also shows, to a lesser extent, in *Service - Customer Operations* category with a large decrease 1996 to 1997. *Service - Customer Operations* hit a low in 1997 of approximately \$37 million and increased to approximately \$44 million in 1998, while *General and Administrative - Corporate Operations* has steadily decreased from a 1995 high of approximately \$70 million to a 1998 low of approximately \$43 million.<sup>45</sup>

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-8<sup>46</sup>  
Major Expense Categories  
(\$ in 000's)**



**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-9<sup>47</sup>  
Employee and Compensation Changes**

	1995	1996	1997	1998	Total
Total Employees	2,675	2,403	2,203	2,344	
Total Compensation	\$131,901,464	\$126,301,040	\$107,423,960	\$103,919,093	
Average Compensation per employee	\$49,309	\$52,560	\$48,763	\$44,334	
Employee Increase/(Decrease)		(272)	(200)	141	(331)
% Employee Increase/(Decrease)		-10.2%	-8.3%	6.4%	
Compensation Increase/(Decrease)		(5,600,424)	(18,877,080)	(3,504,867)	(27,982,371)
% Compensation Increase/(Decrease)		-4.2%	-14.9%	-3.3%	

**IV-F2** Numbers of employees decreased from 1995 to 1997 and then increased in 1998, while total compensation decreased almost \$28 million over the four-year time period.

*Exhibit IV-9*, above, shows that the number of employees decreased 10.2%, from 1995 to 1996, and 8.3% from 1996 to 1997, and then increased 6.4% from 1997 to 1998. In total, employees decreased by 331 from 1995 to 1998. Total compensation decreased from 1995 to 1998 from \$132 million to \$104 million. The largest decrease in compensation occurred in 1997 of almost \$19 million. Average compensation per employee fluctuated around \$48,000 and \$52,000, 1995 through 1997, and decreased to \$44,000 in 1998.<sup>48</sup>

### **Asset Depreciation**

**IV-F3** Depreciation expense for BellSouth Telecommunications - Kentucky increased in 1996 and then reduced to lower levels in following years.

As part of the PRP, BellSouth Telecommunications - Kentucky was allowed to re-estimate and reduce asset lives to more realistic lengths considering environmental and technological changes. Asset lives in the past were approved by the PSC, but not at this time. The asset life re-estimate had the effect of accelerating total depreciation. As a result, depreciation expense for BellSouth Telecommunications - Kentucky jumped up in 1996, increasing 22% over the previous year, as shown in *Exhibit IV-8*.<sup>49</sup> From 1995 to 1996, depreciation expense increased almost \$30 million. Depreciation expense for the following two years decreased approximately \$10 million and \$6 million, respectively, as shown in *Exhibit IV-10*.<sup>50</sup>

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-10<sup>51</sup>  
Depreciation Expense**

	1995	1996	1997	1998
Depreciation and Amortization Expense	132,479,000	161,278,000	151,897,000	146,372,000
Dollar Increase/(Decrease)		28,799,000	(9,381,000)	(5,525,000)
Percentage Increase/(Decrease)		21.7%	-5.8%	-3.6%

Depreciation expenses increased substantially with the approved asset life adjustment in the PRP and then reduced to more normal levels, as shown in *Exhibits IV-8 and IV-10*.

Depreciation is calculated using a remaining life formula. This calculation is performed using the asset value at 100%, minus the Asset's Reserve, minus the Asset's Future Net Salvage, all divided by the Asset's Average Remaining Life. The formula is self-correcting with each component included at its current level when the calculation is made.<sup>52</sup>

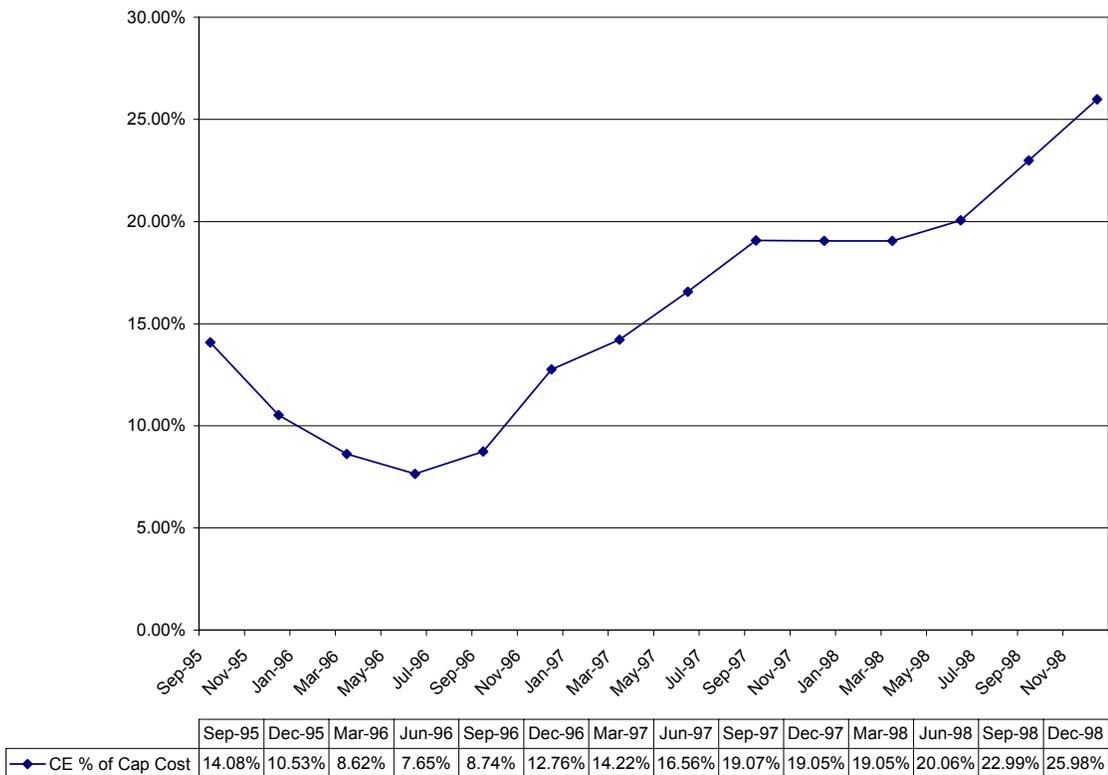
The Director of Capital Recovery was charged with determining the appropriate depreciation levels for BellSouth-Kentucky assets. His area, including four managers and ten support staff, conducted depreciation studies and financial studies to this end. He determined the appropriate depreciation rates and levels, including economic life and salvage rates. Depreciation is reviewed and recalculated on an ongoing, annual basis.<sup>53</sup>

### **Rate of Return**

*Exhibit IV-11, Common Equity Percent of Capitalization Cost, Exhibit IV-12, Net Operating Income, and Exhibit IV-13, Rate of Return on Shareholder's Common Equity*, each have the same general shape showing the same general trend. From 1995 to 1998, each of these figures or ratios shows a start at a middle range, a decrease into the middle of 1996, and then a gradual increase to the end of 1998. Each of these charts has an income component that reflects BellSouth - Kentucky's reduction in personnel and related expenses, decreasing depreciation expense (giving increasing income results year after year), and increased revenues in the local service revenue category. Each of these components were discussed above in the Revenue and Expenses section.

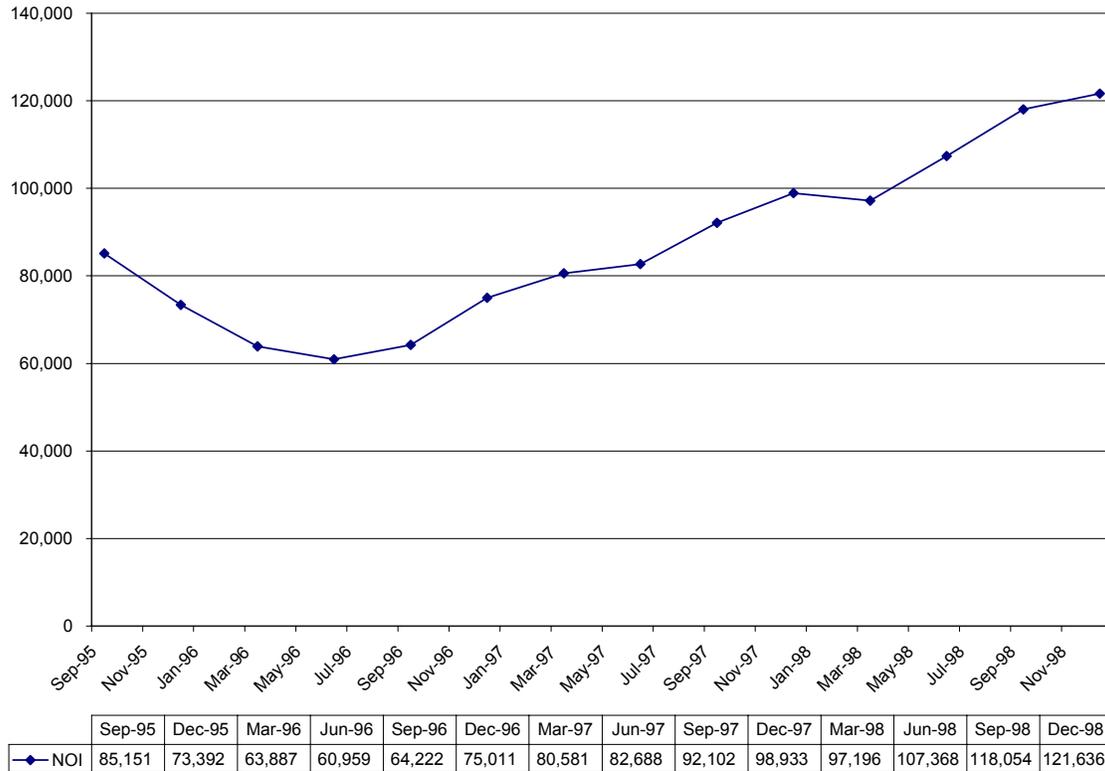
**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-11<sup>54</sup>  
Common Equity Percentage of Capital Cost**



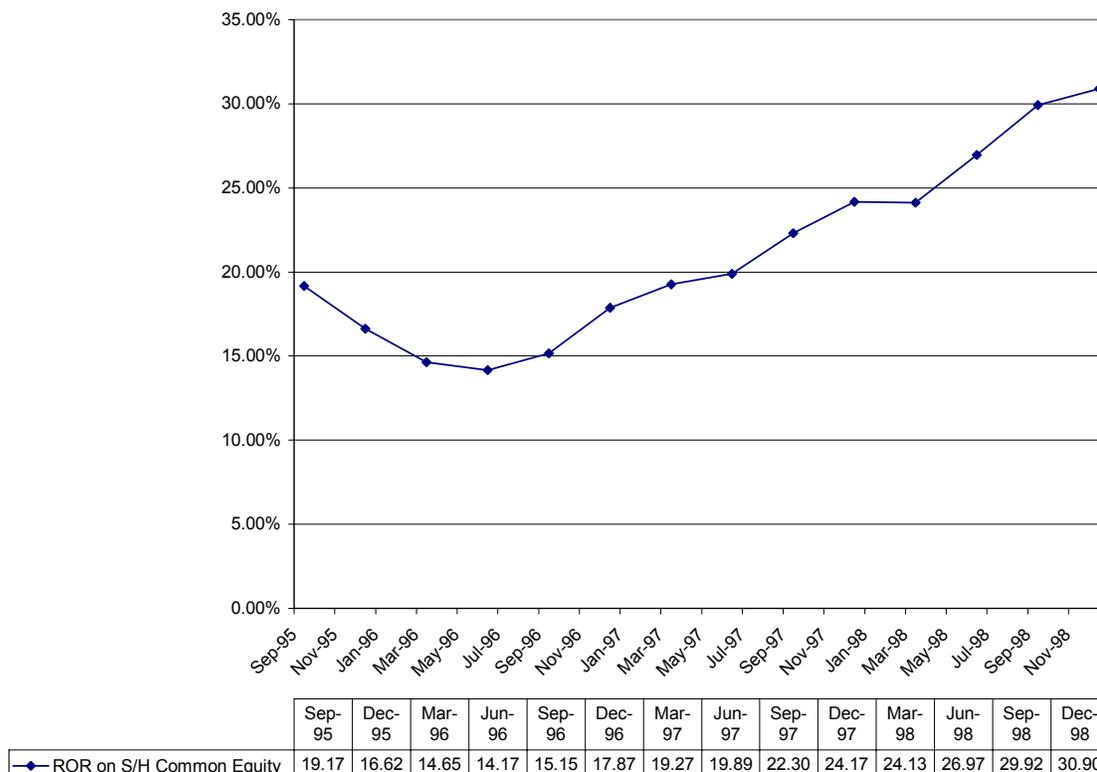
**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-12<sup>55</sup>  
Net Operating Income 1995 - 1998**



**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-13<sup>56</sup>  
Rate of Return on Shareholder's Common Equity**

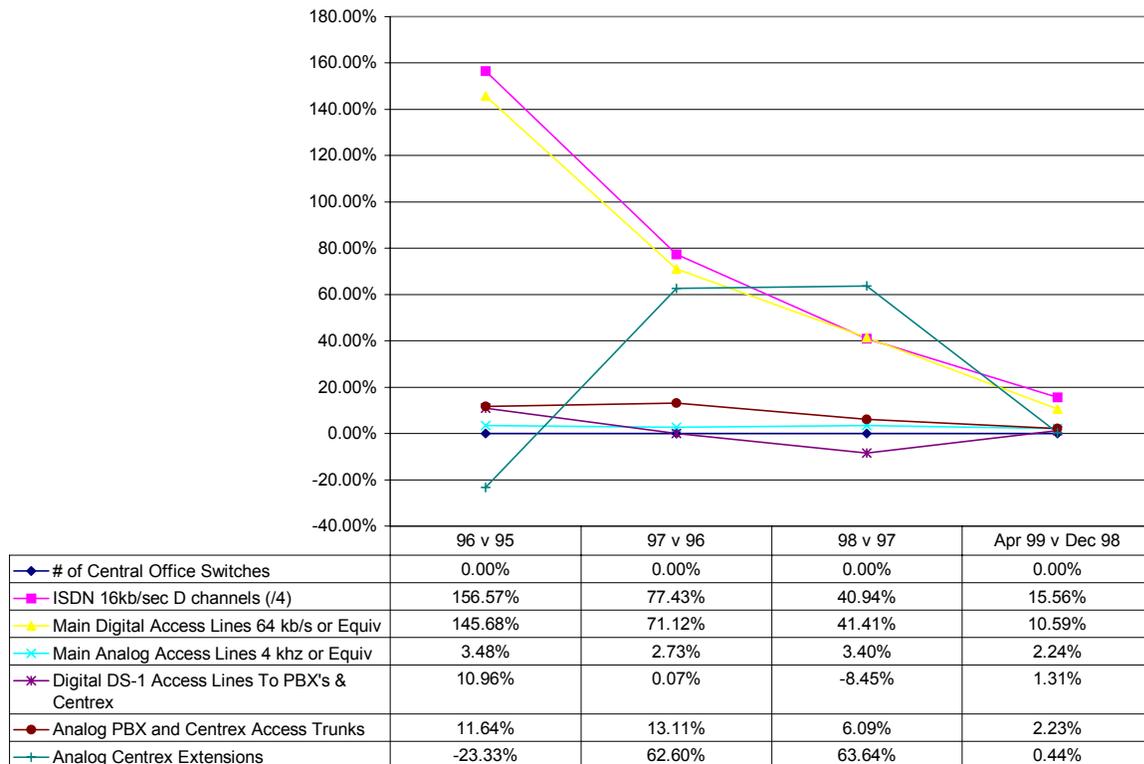


### Change in Access Lines

As described earlier, revenues are increasing with increased access lines. Access line subscribership, by technology, are increasing in almost every category, as shown in *Exhibit IV-14*. When viewed by technological category, only a couple of decreases are noted since 1995. From 1997 to 1998, Analog Centrex Extensions increased 63.64%, similar to the previous year increase of 62.6%. The next largest increase was in the Main Digital Access Lines of 41.41%, down significantly compared to the previous year increase of 71.12%. The third largest increase is noted in the ISDN category of 40.94%, down from the previous year increase of 77.43%. From the end of the year 1998 to April 1999, Analog Centrex Extensions is flat, increasing 0.44%, while Main Digital Access Lines have increased 10.59% and ISDN have increased 15.56%. Digital DS-1 access lines were flat 1996 to 1997 and flat from end of the year 1998 to end of April 1999, while Main Digital Access Lines continues to grow at a decreasing rate. The largest number of lines by far is still the Main Analog Access Lines, totaling 1.1 million at the end of April 1999, as shown in *Exhibit IV-15*.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-14<sup>57</sup>  
Percentage Growth in Access Lines Listed by Technology**



BellSouth - Kentucky access line growth appears reasonable. The trends in access lines, by technology, are more reflective of what is occurring throughout the telecommunications environment than of any trends specific to Kentucky. The Central Office switches and analog access line growth is reflective of the demands of the underlying basic public switched network (as mentioned in the access line competition discussion in other chapter). ISDN line growth (both Basic Rate ISDN and Primary rate ISDN) has moderated as a result of competition and the availability of competing service offerings. For example, ADSL lines sold by BellSouth to ISPs are competing against ISDN for high-speed data connections. In another example, PBX and Centrex compete directly, as well as receiving competition from Intranet IP. The exact effect of cannibalization is difficult to differentiate from losses to competitors. Changes are only measurable if the customer switches services within BellSouth.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-15<sup>58</sup>  
Number of Access Lines**

	Year-End/Period End				
	1995	1996	1997	1998	Apr-99
# of Central Office Switches	183	183	183	183	183
ISDN 16kb/Sec. D channels (/4)	601	1,542	2,736	3,856	4,456
Main Digital Access Lines 64 kb/s or Equivalent	475	1,167	1,997	2,824	3,123
Main Analog Access Lines 4 khz or Equivalent	991,636	1,026,149	1,054,131	1,089,972	1,114,390
Digital DS-1 Access Lines To PBX's & Centrex	70,111	77,793	77,848	71,272	72,208
Analog PBX and Centrex Access Trunks	29,132	32,523	36,787	39,027	39,897
Analog Centrex Extensions	11,429	8,763	14,249	23,317	23,420

### Capital Investment Growth

BellSouth Telecommunications capital investment in Kentucky has remained around 5% of total BellSouth Telecommunications capital investment for the last several years, as shown in *Exhibit IV-16*.<sup>59</sup> This was reiterated through the interview process by the CFO, Senior Director Regulatory Accounting, and State President - Kentucky.<sup>60</sup> Even though total dollars expended may vary up and down for BellSouth Telecommunications in total, BellSouth Telecommunications - Kentucky's piece of that has remained very steady for the last eight years. Since 1994, BellSouth Telecommunications - Kentucky expenditures as a percent of total BellSouth Telecommunications expenditures has not varied more than 2/10ths of a percent (varies between 5.2% - 5.4%). In other words, in the years of PRP regulation, Kentucky's percent of total BST Capital Expenditures is more stable than it has been in recent years. *Exhibit IV-17* focuses on Kentucky's percent of total BST Capital Expenditures. Previous to 1994, expenditures increased and decreased year-to-year to a much greater extent. Since 1995, however, the trend has been increasing capital expenditures with 1995 over 1994 being the slightest percent increase (0.20%) in capital expenditures year-to-year, and 1996 over 1995 being the largest (10.90%).<sup>61</sup>

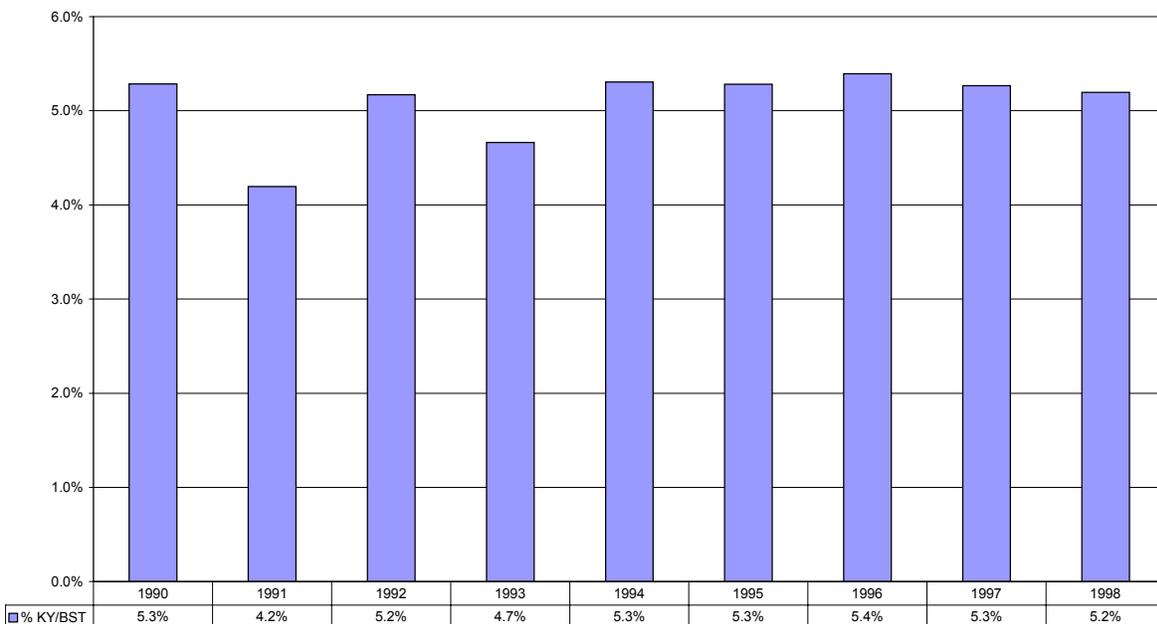
**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-16<sup>62</sup>  
Capital Expenditures  
(\$ in 000's)**

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Kentucky \$	130,920	98,620	123,710	113,970	128,130	128,340	142,360	152,230	153,530
Total BST \$	2,477,090	2,350,810	2,392,580	2,444,010	2,415,340	2,429,820	2,640,340	2,890,040	2,954,690
% KY/BST		4.2%	5.2%	4.7%	5.3%	5.3%	5.4%	5.3%	5.2%
KY Inc./Dec. Yr. to Yr.		(32,300)	25,090	(9,740)	14,160	210	14,020	9,870	1,300
% Age Inc./Dec Yr. to Yr.		-24.7%	25.4%	-7.9%	12.4%	0.2%	10.9%	6.9%	0.9%

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-17<sup>63</sup>  
Percent of Total BellSouth Telecommunications Capital Expenditures in Kentucky**



BellSouth Kentucky's new investment is estimated by reducing total BellSouth Telecommunications - Kentucky total capital investment by replacement capital, as shown in *Exhibit IV-18*. Kentucky's new investment decreased from 1994 to 1995 by approximately \$8 million or 6.9%. This corresponds to the small increase during the same time period in total Kentucky capital expenditures (0.20%, in *Exhibit IV-17*). Investment expenditures increased for the next several years. 1996 over 1995 increased almost \$19 million (17.45%), 1997 over 1996 increased almost \$11 million (8.36%), and 1998 new investment expenditures increased just over \$2 million (1.64%). Kentucky's new capital investment levels are depicted in *Exhibit IV-19* from 1994-1998.<sup>64</sup>

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

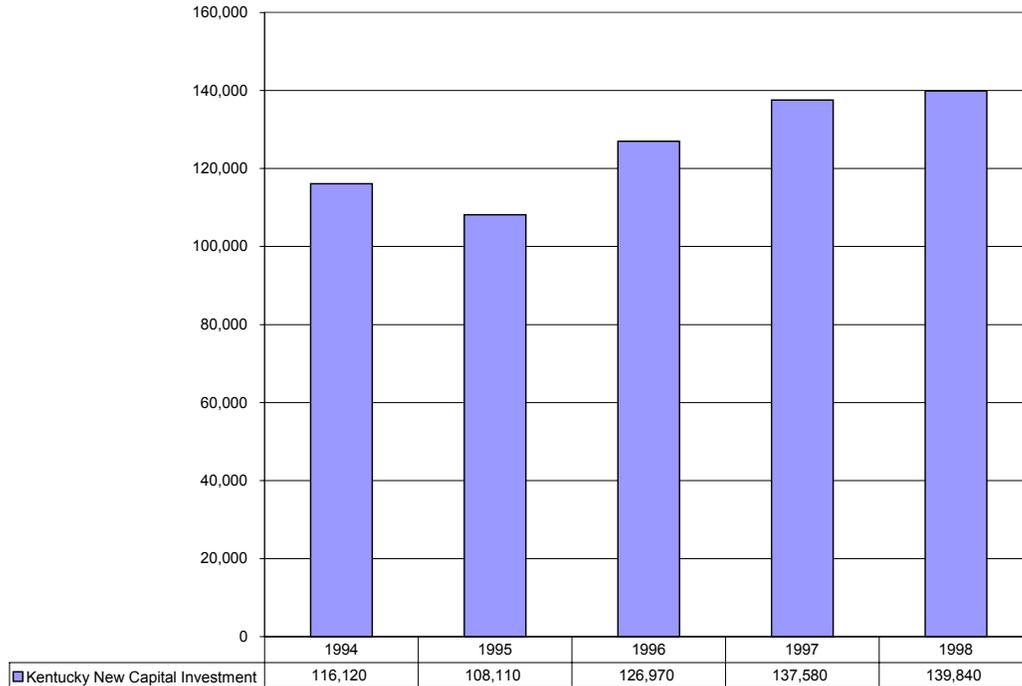
**Exhibit IV-18<sup>65</sup>  
BellSouth Kentucky New Investment  
(\$ in 000's)**

	1994	1995	1996	1997	1998
Kentucky Capital Investment	128,130	128,340	142,360	152,230	153,530
Replacement Capital	12,010	20,230	15,390	14,650	13,690
Kentucky New Capital Investment	116,120	108,110	126,970	137,580	139,840
Inc/(Dec.) in new Investment		(8,010)	18,860	10,610	2,260
% Inc./(Dec.) in new Investment		-6.90%	17.45%	8.36%	1.64%

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-19<sup>67</sup>  
Kentucky New Capital Investment (\$ in 000's)**



Access lines and new investment for Kentucky is trending up 1995 through 1998, as shown in the table in *Exhibit IV-20*. From 1997 to 1998, new investment to access lines decreased resulting from a lower increase in new investment (1.64%) and a moderate increase in access lines (6.66%). From 1995 to 1998, new investment to access lines increased from \$93.05 to \$102.75, an increase of 10.42 % over four years.<sup>68</sup>

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-20<sup>69</sup>  
New Investment as a Percent of Access Lines**

	1995	1996	1997	1998
New Investment - estimated (\$000's)	108,110	126,970	137,580	139,840
% change		17.45%	8.36%	1.64%
Access Lines in Service (Switched & Special)	1,161,875	1,255,189	1,275,934	1,360,956
% change		8.03%	1.65%	6.66%
New Investment per Access Lines (\$)	\$93.05	\$101.16	\$107.83	\$102.75
% change		8.71%	6.59%	-4.71%

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**IV-F4**     Capital Investment has not decreased as a percent of revenues after the PRP was approved.

Capital Investment as a percent of revenues is relatively flat between 1995 and 1998, fluctuating between 23% and 27% for the years after the PRP, as shown in *Exhibit IV-21*.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-21<sup>70</sup>  
Capital Investment as a Percent of Revenues  
(\$ in 000's)**

	1995	1996	1997	1998
Capital Investment	128,340	142,360	152,230	153,530
Revenues	546,421	551,280	557,772	580,023
Ratio	23.49%	25.82%	27.29%	26.47%

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**IV-F5**     There is no comparison between the PRP and increased or decreased capital expenditures in BellSouth Telecommunications - Kentucky.

Reviewing the previous analysis and charts, capital investment does not seem to be negatively effected by the PRP. *Exhibits IV-14 through IV-21* show steady increases in access lines, capital investment, and new capital investment. *Exhibit IV-21* shows relatively little change in capital investment as a percent of revenues. These areas have not been affected with the introduction or continuation of PRP regulation. Vantage Consulting Inc. found no evidence of any systematic decreases in capital investment as a result of the PRP. Access lines are up 17% from 1995. Capital investment in Kentucky, as a percent of BellSouth

Telecommunications capital investment, has been very steady since 1995, with variances of only 2/10ths of a percent. Both total Capital investment and new Capital investment in Kentucky have increased from 1995.<sup>71</sup>

BellSouth Telecommunications has stated that they propose “to invest sufficient network dollars over the next several years to provide for the necessary infrastructure to accommodate continuing excellent customer service and future technological communications innovation.” They continue “The marketplace and customer’s demands for services dictate how capital should be deployed, not the regulatory plan under which South Central Bell operates.” This sentiment was restated throughout the interview process with financial personnel at BellSouth headquarters.<sup>72</sup>

The BellSouth CFO notes that all BellSouth states are price regulated. If a state was regulated using Rate of Return (ROR), this would possibly effect BellSouth’s current decision-making process, which is regulatory plan neutral. As it is, the Regulatory Price Plans in each state are similar enough that this factor is not considered for company-wide policy and decision making.<sup>73</sup>

## Capital Investment Decision Process

*IV-F6*      The capital investment decision process has not changed relative to the PRP.

The BellSouth CFO describes the capital investment planning process as a load driven model, used to determine the total capital investment pool for BellSouth Telecommunications. That capital pool is then divided between states with inputs from the COU (Customer Operations Unit).<sup>74</sup> The inputs to the automated capital planning process were reviewed, noting no reference to the pricing factors contained within the PRP or the PRP at all. Specifically, the capital planning process divides expenditures into two categories: “Load” and “Plan”. Load capital is dictated by customer demand for new access lines. Plan capital is driven by customer demand for new communications services and applications and by the need for improvements in the network infrastructure.<sup>75</sup>

As previously stated, according to the CFO, all BellSouth states have price regulation plans. Therefore, capital investment decisions do not need to take a regulatory plan into account in order to allocate investment dollars. As all states have similar regulatory plans, there is no differentiation on which to allocate monies.<sup>76</sup>

(Also, see capital investment expenditure analyses in *Exhibits IV-18* and *IV-19* above, noting that expenditures are not fluctuating with adoption of the PRP.)

## B. OPERATIONAL PERFORMANCE

This section will evaluate operation management policies and practices, as well as any changes resulting from price cap regulation. Of particular interest is whether a Kentucky price cap regulation or other factors is placing Kentucky at a disadvantage in terms of capital and technology. We will also examine pricing trends. An inherent and underlying basis for any operating or pricing decision is the direction BellSouth is going overall. Vantage discusses this direction as a lead-in.

## **BELLSOUTH FOCUS AND DIRECTION**

The most significant change in the philosophy of BellSouth management deals with market focus. It is impossible to talk with any BellSouth manager or executive without coming away with the clear understanding that data is the overwhelming driver of BellSouth's telecommunications future. Indeed, it is the driver of the entire telecommunications industry, not just BellSouth and not just within Kentucky.

The importance of this fundamental shift in BellSouth revenue and focus cannot be overemphasized. The shift reflects a fundamental change not only in BellSouth operations, but in the industry as a whole.

## **OPERATIONS**

All regional phone companies now operate in modes, which are sometimes oblivious to state boundaries. This is for efficiencies in team sizes, and in some cases, to congregate technical talent and/or facilities. This is organizationally efficient, but it can also be confusing to those unfamiliar with the organization. In the following section, we describe which operation centers provide service to Kentucky customers.

## **CONSUMER**

### **Operator Service and Directory Assistance**

BellSouth has eight Directory Assistance (DA) call centers. Three of these call centers take calls from Kentucky and Tennessee, four take calls from anywhere in the U.S. and one, in Owensboro Kentucky, takes calls originating outside Kentucky. (The Owensboro call center will eventually take calls from all parts of the U.S.) The locations, staffing, and areas served by the call centers are shown below in *Exhibit IV-22*.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-22  
Directory Assistance Centers**

Location	Employees Handling Calls	States Served
Memphis, TN	210	TN/KY
Dickson, TN	114	TN/KY
Nashville, TN	191	TN/KY
Jackson, MS	141	All U.S.
Paducah, KY	102	All U.S.
Greenville, MS	61	All U.S.
Shreveport, LA	53	All U.S.

---

The Memphis, Dickson and Nashville centers answer 411 calls from Kentucky customers. The Jackson, Paducah, Greenville, and Shreveport offices answer 1+411 calls from all areas including Kentucky.

The Nashville and Jackson centers are 24-hour, 7-day per week operations. The other centers operate 7 days per week with various hourly schedules. BellSouth DA Call centers provide a good illustration, not only of modern call center "teams", but also provide a glimpse into the opportunities afforded communities by the modern telecommunications network. More specifically, call centers are large "virtual" teams, in which the location of the people answering the phones becomes just one of many variables in location decisions. Smaller communities with an adequate telecommunications infrastructure can not only compete for call center locations with larger communities, but are often more attractive.

### **Operator Services**

BellSouth has three operator services centers, as shown in *Exhibit IV-23* below:

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-23  
Operator Services Locations**

Location	Employees Handling Calls	States Served
Jackson, MS	100	AL/LA/MS/TN/KY
Huntsville, AL	46	AL/LA/MS/TN/KY
Knoxville, TN	66	AL/LA/MS/TN/KY

---

Both the Jackson, Mississippi and Knoxville, Tennessee centers are 24-hour/7-day per week operations. Huntsville operates from 7:00 a.m.-11:00 p.m. 7 days per week.

**Sales Centers**

Sales centers handle many of the functions that used to be referred to as the Business Office. (BellSouth operates Service centers, that handle other functions of the former Business Office). The sales functions for Kentucky consumers are handled totally with the Kentucky/Tennessee organization, as opposed to region-wide teams, which can be seen below in *Exhibit IV-24*.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-24  
Sales Centers for Kentucky Consumer Customers**

Location	Employees Handling Calls	States Served
Louisville, KY	91	Kentucky/Tennessee
Columbia, TN	36	Kentucky/Tennessee
Chattanooga, TN	30	Kentucky/Tennessee
Jackson, TN	57	Kentucky/Tennessee
Nashville, TN	90	Kentucky/Tennessee

---

All of the consumer sales offices operate from 6 a.m. until midnight. Calls are not differentiated between centers by state or other feature.

**Service Centers**

Service Centers taking Kentucky customer calls are operated on a Kentucky/Tennessee team basis in that calls from any BellSouth customer in either state may be answered in any

of the call centers. This is shown in *Exhibit IV-25*, below. All of the call centers operate from 6 a.m.-Midnight, Monday through Saturday.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-25  
Service Centers for Kentucky Consumer Customers**

Location	Employees Handling Calls	States Served
Louisville, KY	93	Kentucky/Tennessee
Paducah, KY	101	Kentucky/Tennessee
Chattanooga, TN	108	Kentucky/Tennessee
Memphis, TN	103	Kentucky/Tennessee
Nashville, TN	196	Kentucky/Tennessee

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### Repair

Repair calls for Kentucky customers are taken during normal and extended business hours by a call center in Louisville with a staffing of 129. This center takes calls for Monday-Sunday from 7 a.m. until Midnight. A call center in Shreveport, LA takes overflow calls from the Louisville center and also from a repair call center in Birmingham.

### Collections

BellSouth has three collections centers, which serve Kentucky customers. These centers and their staffing are as follows, as shown in *Exhibit IV-26*, below.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-26  
Collections Centers**

Location	Staffing	States Served
Louisville	38	Kentucky/Tennessee
Memphis	15	Kentucky/Tennessee
Nashville	12- Inbound 35- Outbound	Kentucky/Tennessee

---

The collections offices operate Monday through Saturday 6 a.m.-Midnight. (Early and late hours are for inbound only.) The outbound function is for direct proactive collection efforts. Inbound is for billing inquiry, treatment, and return of collection calls.

### **ISSC/BellSouth Solutions**

The new Integrated Sales and Service Center (ISSC), which is meant to sell and service integrated, bundled BellSouth products and services is located in Jacksonville, Florida. Current hours of operations are 9 a.m.-12 p.m., Monday through Friday. There are only four reps actually taking calls as of the end of August 1999. There are another 121 employees at the center undergoing training.

### **Alternate Channel Support Center-Regional**

This center provides support for questions sent by e-mail. The center is located in New Orleans and operates Monday-Friday and every other Saturday from 8 a.m.-6 p.m. The center has seven reps and one Assistant Manager.

### **Paging Support Group-Regional**

The Paging Support Group is located in Rome, Georgia. The center is staffed with 35 reps and hours of operation are 7 a.m.-6 p.m. and every other Saturday from 6 a.m.-Midnight.

### **Small Business Operations**

There are three primary functions supporting small business operations (on a standalone basis). These are:

- Sales and Service
- Collections
- Repair.

The locations, staffing, hours, and service area of the centers providing these functions are shown in *Exhibit IV-27* below.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-27<sup>77</sup>  
Kentucky Small Business Support Centers**

<b>Functions</b>	<b>Locations</b>	<b>Staffing Levels (Total)</b>	<b>Hours</b>	<b>Areas Served</b>
Small Business Sales and Service	Louisville, KY Knoxville, TN Memphis, TN	108	8:00-6:00 p.m. M-F	KY, TN
Small Business Collection Center	Huntsville, AL	94	8:00-5:00 p.m. M-F	AL, FL, KY, LA, MS, TN
Small Business Repair Centers	Louisville, KY Birmingham, AL Columbia, SC Sunrise, FL	225	24 hours 7 days/week	All BellSouth states.

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**BellSouth Business (BB) Centers**

BellSouth Business focuses on larger business customers who are in need of special services and support. BellSouth Business operates with more centralized support centers. *Exhibit IV-28*, below, summarizes the primary centers.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-28  
BellSouth Business Centers**

Department	Location	Hours of Operation*
Premise/Major Account Center**	Louisville, KY	8:30-5:00 EST
Mid-Market Tiers 1 & 2	Nashville, TN	8:00-4:30 CST
Mid-Market Tier 3	Birmingham, AL	8:00-5:30 CST
Vendor Service Center	Knoxville, TN	8:30-5:00 CST
TN/KY Business Repair	Nashville, TN	8:00-5:00 p.m. (Calls not answered in 2 seconds overflow to one of 27 positions in 3 BRCs.) After hours, calls also roll to these BRCs.
BSAC***	Each Customer has an 800 number	Atlanta

\* Monday-Friday unless noted.

\*\* Includes support to the Kentucky Information Highway.

\*\*\* Supports NetSource Customers, 3 IXCs and three MACs.

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The Account-Executives-Mid Market are supported by the Nashville Center (see above Mid-Market Center). The Account Executives-Premise are located in Louisville (one is also located in Danville).

### **Capital Construction**

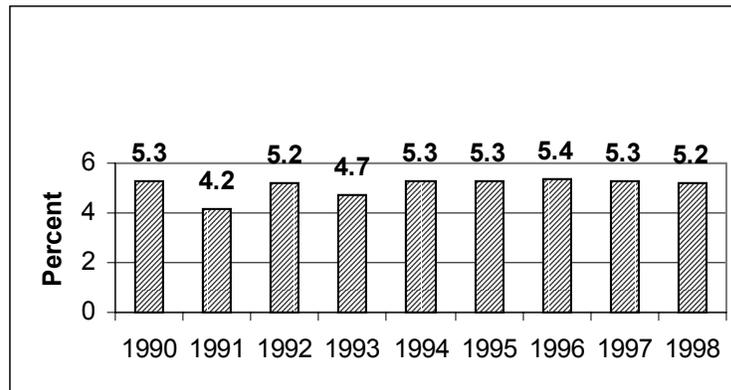
One area of critical concern in our review was the impact that the Kentucky PRP may have had on capital expenditures within BellSouth. One inevitable outcome of competition is that dollars must flow to those areas with the highest potential return. The return includes the normal business opportunities, but regulation also influences return and capital deployment. Vantage undertook to determine if the PRP had any definable negative impact on capital deployment in the state. (This is reviewed in more detail in *Section IV.C.*)

Over the nine-year period 1990-1999, the percentage of BellSouth capital invested in Kentucky remained consistently around 5%, as shown below in *Exhibit IV-29*.<sup>78</sup>

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-29<sup>79</sup>  
Kentucky Percent of BellSouth Capital**



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While it may seem odd that the percent of capital has remained fairly constant during a time of rapid technological change, the factors underlying the numbers are logical. First, the number is a percentage of total BellSouth capital. The Kentucky percentage has remained fairly constant, which can be viewed as an indicator that the PRP has not driven capital away from Kentucky on a relative basis. Kentucky has approximately 5% of BellSouth access lines and it gets approximately 5% of capital investment. The second factor is the extent to which the PSTN still dominates spending and resources. For all of the press (and real actions) associated with new technology and with a packet switched network, there is still a huge investment in the existing public switched network that must be maintained. The existing PSTN also provided the pipeline for many of the new products and services that have been deployed. For example, Internet traffic still travels over basic voice grade lines, or in some cases ADSL lines for residential users. This points to both an advantage and a disadvantage to BellSouth and other CLECs on a going-forward basis. The advantage is that BellSouth does indeed have ownership of the critical and very expensive "last mile" of facilities over the PSTN. The disadvantage is that BellSouth must now, and in the future, continue to fund maintenance, upgrades, and new construction on these facilities, even as the facilities are being used by competitors. More importantly, this maintenance and upkeep must be done while BellSouth funds investment in packet-switching technology. Packet switched technology is necessary for data services which are expected to make up the preponderance of future growth in telecommunications. It is the technology and architecture of the future.

The actual amount of capital has risen over this same period from \$130.92 million in 1990 to \$153.5 million in 1998.

All BellSouth states operate under price cap regulation plans. For this reason, it is exceedingly difficult, if not impossible, to make comparisons between BellSouth states, in an

effort to identify differences attributable to the PRP. Based upon numerous interviews, Vantage did conclude that had Kentucky not entered into a PRP, BST-KY would most certainly have been at a disadvantage in terms of discretionary capital allocation from the corporate level. Again, the actual amount of the capital difference cannot be determined because the issue is moot. However, Vantage can state with a high degree of certainty that the PRP did not in any way reduce capital coming into the state for maintenance and repair.

## PRICING OF SERVICES

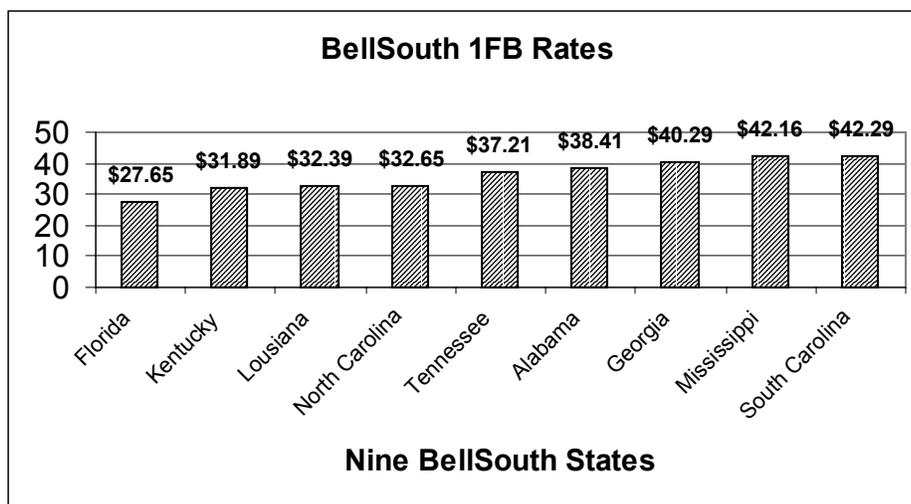
### Regulated Services

Prices for single line business service in Kentucky is the second lowest in the BellSouth system at \$31.89. *Exhibit IV-30*, below, shows the distribution of rates across the BellSouth service territory.<sup>80</sup> As shown, the rates range from a low of \$27.65 in Florida to a high of \$42.29 in South Carolina.

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### Focused Review of the Price Regulation Plan BellSouth Telecommunications, Inc. - Kentucky

Exhibit IV-30<sup>81</sup>  
BellSouth 1FB Rates



The rates shown are averages. There is a significant difference between the lowest and highest rates in the nine-state service territory, as shown below in *Exhibit IV-31*.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

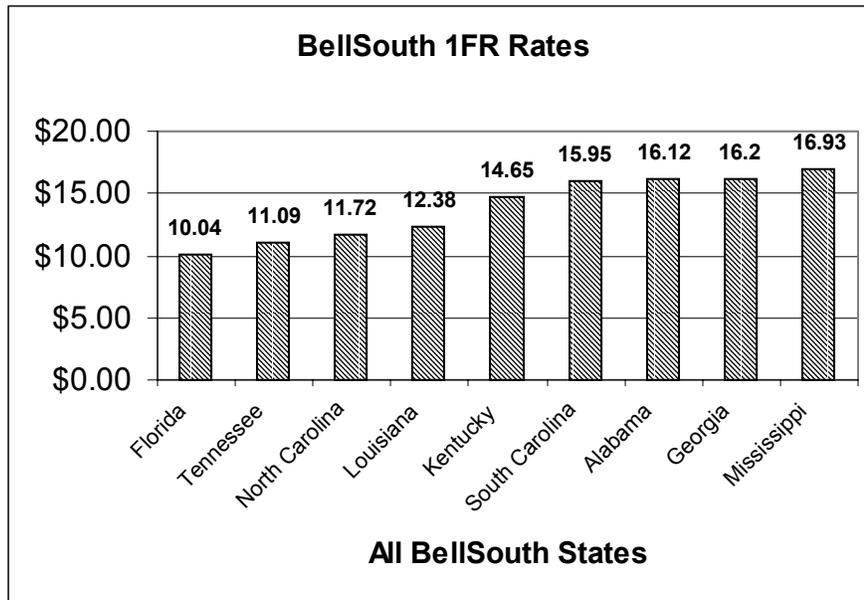
**Exhibit IV-31<sup>82</sup>  
Difference Between Highest and Lowest 1FB Rates within each State**

	AL	KY	LA	NC	FL	SC	TN	MS	GA
Difference	2.65	3.80	4.32	7.08	9.30	10.20	12.65	14.04	24.50

Rates for a single line residential customer in Kentucky are the fifth lowest in the nine-state BellSouth service territory, as shown below in *Exhibit IV-32*.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-32<sup>83</sup>  
BellSouth 1FR Rates**



In looking at 1FR rates for comparative purposes, it is important to recognize that there can be considerable variation in the rates within the states. The following, *Exhibit IV-33*, shows the difference between the highest and lowest 1FR rate in each BellSouth State.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-33<sup>84</sup>  
Difference Between Highest and Lowest 1FR Rates within each State**

	AL	FL	GA	KY	LA	MS	NC	SC	TN
Difference	1.7	3.35	4.95	5.38	1.67	4.22	2.57	2.7	4.60

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**CLEC Costs and Margins**

One measure of the incentive for competitive market entry is the available "margin" in the marketplace. While the numbers for competitors are proprietary, a surrogate number can be calculated by taking the CLEC cost and comparing that to the BST revenue. For purposes of the surrogate, CLEC costs include loop, port, usage, SG&A, and 20% gross margin. The BST rate used includes the 1FB charge hunting, access charges and the subscriber line charge. This is shown in *Exhibit IV-34*, below.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-34  
BST Revenue and CLEC Costs**

State	BST	CLEC	Difference
Alabama	62.43	35.23	\$ 27.20
Florida	53.27	47.74	\$ 5.53
Georgia	87.34	30.90	\$ 21.67
Kentucky	52.18	36.60	\$ 15.58
Louisiana	58.17	35.68	\$ 22.49
Mississippi	83.65	39.70	\$ 43.95
North Carolina	69.35	36.46	\$ 32.89
South Carolina	71.27	41.90	\$ 29.37
Tennessee	87.65	33.84	\$ 53.81

---

**C. SERVICE QUALITY**

**DESCRIPTION**

In this task, Vantage will review BST's compliance with both Commission service related regulations and BST's own internal service goals (by exchange or groups of exchanges).

BellSouth is required to report a number of service metrics as part of the PRP. For the most part, these are the same type of measures used by regulators in other states. These measures are:

- 1) Percent of requests for regular service fulfilled within five (5) working days unless applicant specifically requests a later date.
- 2) Percent of requests for regrades within thirty (30) days unless applicant specifically requests a later date.
- 3) Percent of telephone calls receiving dial tone within three (3) seconds, including busy season-busy hour.
- 4) Percent of telephone calls experiencing blockage due to an equipment or all trunks busy condition within the local dialing area. (Including busy season-busy hour.)
- 5) Percent of telephone calls offered to toll connecting or interexchange trunks encountering an all trucks busy signal.
- 6) Average speed of answer for operator assisted calls and calls requiring operator number identification.
- 7) Average Speed of answering time for calls to repair service.
- 8) Percent out-of-service troubles cleared within 24-hours unless the customer requests at a later date.
- 9) Average rate of customer trouble reports per 100 access lines.

BellSouth performance under each of these standards is discussed in the Findings sections. To summarize the results, BellSouth performance has not declined under the PRP, as measured by these standards.

*IV-F7*      BellSouth service has not declined under the PRP.

One of the primary concerns under non-traditional regulation is that service quality may decline. The thinking is that with no guarantee of a return on investment, companies will not have the incentive to invest in the necessary plant and equipment. There is no evidence that this has occurred with BellSouth in Kentucky. In addition to the traditional measures of service, there are more subjective indications that BellSouth has retained a high level of service. The 1999 J.D. Power and Associates survey of service satisfaction ranked BellSouth at the top of telephone providers for the fourth straight year. *Exhibit IV-35*, below shows the results of this survey.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-35  
J.D. Power and Associates Service Satisfaction Survey**

Company	Score
<b>BellSouth</b>	<b>115</b>
<b>SNET</b>	<b>115</b>
Cincinnati Bell	110
PacBell	105
Bell Atlantic	104
<b>Industry Average</b>	<b>100</b>
ALLTEL	98
Frontier	96
Ameritech	94
GTE	94
SBC	94
US West	92
Sprint	91
Citizens	87

---

As shown, BellSouth (and SNET) were not only the leaders in service quality satisfaction, but were far ahead of the pack. The survey was based on 12,185 households nationwide, and for the first time included cable companies offering local telephone service. We also point out that Kentucky is fortunate to have two of the top three companies providing local service to the customers of the state.

Vantage can state definitively that the service has not declined based on solid evidence. We can offer up our ideas to the Commission as to why this is the case. BellSouth gets it. Vantage is fortunate to have worked not only in telecommunications but also gas and electric industries where de-regulation is ongoing. Even in the gas and electric industries where competition has been introduced, there are companies whose management and employees simply do not grasp the enormous implications of competition. BellSouth obviously does. Almost all interviews (if not all) conducted with BellSouth employees involved some statement of awareness and concern about competition. Although there is no way to quantify the results of this focus, there is no question that BellSouth management and employees understand the importance of customer satisfaction and accept that customers will have a choice in the future.

**IV-F8**      Certain of the service measures required to be reported under the PRP are arcane and should be removed or modified.

Many of the customer service measures used in Kentucky (and other states) were developed for a technological era that no longer exists. It was an era of mechanical switching,

unsophisticated call centers, 2-party lines, and POTS. Obviously, the technical and competitive situation has changed dramatically. The following addresses the individual measures now required under the PRP, which is addressed in a separate filing. The exception is the out-of-service cleared within 24-hours, which is addressed in a separate finding. For each of these service standards, Vantage has made a recommendation, as shown below in *Exhibit IV-36* to keep, modify, or eliminate the metric.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-36  
Service Measure Changes**

<b>Service Measure</b>	<b>Percent of requests for regular service fulfilled within five (5) working days unless applicant specifically requests a later date.</b>
Standard	90%.
Vantage Evaluation	BellSouth has not missed this measure since December, 1990. BellSouth levels have been between 94% and 99%.
Value going forward	High. While BellSouth has consistently met this standard, it continues to have value. The change in the telecommunications environment has not altered the need for customers to receive new service in a timely fashion.

<b>Service Measure</b>	<b>Percent of requests for re-grades within thirty (30) days unless applicant specifically requests a later date.</b>
Standard	90%.
Vantage Evaluation	BellSouth has improved markedly in the measure. The standard has been missed four times since 1994 and after having been missed 36 times during 1990-1993.
Value going forward	Minimal. There are no longer any applicants for a re-grade in Kentucky for which the measure should apply. Party line service was obsolete on July 10, 1993. The only re-grades remaining are actually initiated by BellSouth to eliminate the 77 remaining BellSouth party lines.

<b>Service Measure</b>	<b>Percent of telephone calls receiving dial tone within three (3) seconds. (Including busy season-busy hour.)</b>
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Standard	95%.
Vantage Evaluation	BellSouth has not missed this objective even once since 1990. The lowest monthly performance over that period was 99.5%.
Value going forward	None. This measure is a carry-over from the days of step and cross bar switching and no longer has any relevance.

<b>Service Measure</b>	<b>Percent of telephone calls experiencing blockage due to an equipment or all trunks busy condition within the local dialing area. (Including busy season-busy hour.)</b>
Standard	No more than 5%.
Vantage Evaluation	BellSouth has met this standard every month since 1990. Only one month exceeded 0.7% over that period and in that month the measure was only 1.3%.
Value going forward	None. Improvements in plant and the greatly increased trunk capacity provided by fiber has virtually eliminated this problem even with the enormous increase in Internet traffic.

<b>Service Measure</b>	<b>Percent of telephone calls offered to toll connecting or interexchange trunks encountering an all trucks busy signal.</b>
Standard	No more than 3%.
Vantage Evaluation	BellSouth has not missed this objective since the beginning of 1990. BellSouth has exceeded 2% on only two occasions since that time, June 1993 (2.6%) and December 1993 (2.55%).
Value going forward	None. The standard has been exceeded every month for nearly ten years. In addition, the interexchange carriers will immediately take BellSouth to task if this measure is not being met to their satisfaction.

<b>Service Measure</b>	<b>Average speed of answer for operator assisted calls and calls requiring operator number identification.</b>
Standard	Not greater than 8 seconds.

Vantage Evaluation	BellSouth has not missed this standard since the beginning of 1990. BellSouth only exceeded 7 seconds on 7 occasions during this period. BellSouth argues that Operator Services are now competitive and should not be regulated on this service measure.
Value going forward	Minimal. This measure and its application have several problems. One as noted by BellSouth, operator services are competitive. Not only does this draw into question the appropriateness of measuring BellSouth, but in the interest of promoting a level playing field, all competitors would be required to submit to the same regulation. However, this is neither desirable nor in keeping with the movement away from regulation. Second, Kentucky and other states require that this measure be reported on a monthly basis. Yet, call center volumes and the resulting answer times vary widely even in a somewhat predictable environment like Operator Services. This means the picture given by the measure is not particularly revealing. Lastly, there is little, if any, evidence that 8 seconds is significant to the customer any more than 7 seconds or 10 seconds or some other reasonable number.

<b>Service Measure</b>	<b>Average Speed of answering time for calls to repair service.</b>
Standard	20 seconds or less.
Vantage Evaluation	The methodology for reporting this measure was changed in 1998. This change was with Commission approval. BellSouth has not exceeded 2.6 seconds since this time.
Value going forward	High. The modified measure is still relatively new and additional time is required for BellSouth to demonstrate that they will consistently outperform this standard. If BellSouth does continue to outperform the standard, they should petition the Commission for elimination of the standard or at least reporting modifications. This measure should also be retained for this time due to the importance of the trouble repair process to the customer and the Commission.

<b>Service Measure</b>	<b>Percent out-of-service troubles cleared within 24-hours unless the customer requests at a later date.</b>
Standard	85%.
Vantage Evaluation	See <i>Finding IV-F-9</i> .

Value going forward	
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<b>Service Measure</b>	<b>Average rate of customer trouble reports per 100 access lines.</b>
Standard	8 or less.
Vantage Evaluation	BellSouth has not missed this standard since 1990. The measure has only exceeded four on three occasions during this period.
Value going forward	None. This measure is also a hold over from an older technology era. The modern phone network could not even function with plant and facilities of such a poor nature to allow 8 trouble reports per 100 access lines.

---

**IV-F9**     Out of Service cleared within 24-hours may be producing inefficiencies in work completion, while adding little to customer satisfaction.

Vantage separated this service standard for report purposes because the issues surrounding the measure are different than those previously discussed. Time Out of Service remains an important measure. Arguably, it is even more important, today, given the additional disruption that may be caused by the loss of not only voice, but also data, fax, and security links.

BellSouth has argued that the service standard measuring Out of Service cleared within 24-hours is producing inefficiencies in work scheduling. The argument is that work orders, which would logically be completed by an I&R technician, are often bypassed in order to maintain the service standard of completions within 24-hours. For example, trouble reports called in at the end of a workday (a common situation with working families) must be scheduled the next work day in order to meet the 24-hour standard. BellSouth has further argued that the incremental time required to repair an out of service trouble report does not materially effect customer satisfaction.

BellSouth has rarely missed this service objective. *Exhibit IV-37*, below, shows the number of months that the Company has missed this standard since 1990.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-37<sup>85</sup>  
Out of Service Standard**

Number of Months the existing standard has been missed	
Year	Number of times missed
1990	0
1991	0
1992	0
1993	2
1994	4
1995	2
1996	2
1997	4
1998	3
1999 YTD	1

Vantage does not believe that BellSouth wants this measure altered in order to make a difficult objective merely go away. Changing this standard to 36 hours would alleviate much of BellSouth's concerns over work management.

***IV-F10***     Service standards for "wholesale" services are handled through interconnection and other party-to-party agreements.

Wholesale service standards are negotiated between the parties, primarily through interconnection agreements. Disputes are handled through operating groups. Although the players and technologies have changed, the method of operation has been in place for years. RBOCs have been working with IXC's and CAP's for a number of years and resolving service standards issues among themselves. Anecdotally, none of the CLECs contacted by Vantage was willing to make any comments regarding the PRP or service standards.<sup>86</sup>

Beyond the interconnection agreements, approval of Section 271 of TA96 also looms in the background in terms of service standards. More specifically, the OSS section which may include service standards at a wholesale level and standards for the customers of the CLEC being resold services. It cannot be said with certainty how the CLECs will respond, in terms of service standard requirements, following 271 approval. However, Vantage team members' experience in arbitration cases suggests that CLECs will request service levels equal to what the ILEC gives itself. As we have described elsewhere in the report, BellSouth has organized its network group, such that it can provide nondiscriminatory services to customers both internal and external.

## RECOMMENDATIONS

**IV-R1**     The Out of Service repair service standard should be changed from 24 to 36 hours. (Refer to Finding IV-F8.)

Vantage concludes that BellSouth should be given the opportunity to prove performance and customer satisfaction under a 36-hour service standard. Out of Service cleared within 36 hours brings the measure in line with BellSouth internal metrics. The 24-hour repair service response time is standard and has been the standard in many states for years. However, there is no evidence that Vantage is aware of that supports 24-hours as being an optimal time period for service repair from either a customer or work management standpoint.

In making this recommendation, Vantage presumes that BellSouth will continue to uphold its civic duty and give those customers who rely on phone service for critical tasks the highest possible priority for service restoration, regardless of the service standard imposed by the Commission. We also recommend that the reporting requirement for any exchange that has missed the standard for more than two months remain in effect. This should now apply to the 36-hour standard.

**IV-R2**     Service standards should be revised to include only those measures providing valuable data in today's environment. (Refer to Finding IV-F7.)

The following table, *Exhibit IV-38*, shows the recommendations for each of the individual service standards currently applied under the PRP.

**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit IV-38  
Recommended Service Standards**

Standard	Action
Percent of requests for regular service fulfilled within five (5) working days unless applicant specifically requests a later date.	Retain as is.
Percent of requests for regrades within thirty (30) days unless applicant specifically requests a later date.	Eliminate
Percent of telephone calls receiving dial tone within three (3) seconds. (Including busy season-busy hour.)	Eliminate
Percent of telephone calls experiencing blockage due to an equipment or all trunks busy condition within the local dialing area. (Including busy season-busy hour.)	Eliminate
Percent of telephone calls offered to toll connecting or interexchange trunks encountering an all trucks busy signal.	Eliminate
Average speed of answer for operator assisted calls and calls requiring operator number identification.	Eliminate
Average speed of answering time for calls to repair service.	Retain
Average rate of customer trouble reports per 100 access lines.	Eliminate

There are certain underlying themes and assumptions that Vantage used in making these recommendations. These are arguably as important as the individual service measure recommendations.

- 1) Deregulation must also mean less regulation. This may seem almost ridiculously simple, but the reality is that deregulation is taking place in a more macro environment, while most of the RBOC service regulation takes place at state levels using finite measures. One does not necessarily follow the other without planned actions.
- 2) In every measure that Vantage reviewed, BellSouth has continued to operate as a good corporate citizen, i.e., service quality has not declined, capital investment has kept pace with historical levels, and customer satisfaction remains high.
- 3) A primary goal going forward must be to maintain a level competitive playing field among all competitors. Since it is neither practical nor desirable to add regulation to the CLECS and cable, wireless, and Internet providers, which will all be competing in the marketplace, a level playing field should mean minimal

regulation of the one regulated competitor, BellSouth. In some cases, like ISPs, additional regulation is not possible, due to federal preemption.

- 4) In the new environment, we see the role of the Commission transitioning from one of regulating to one of using regulation to protect certain customers, while freeing up the market to competition. This will not be an easy task, but it is one that must be undertaken.
- 5) BellSouth has recently added almost 150 craft workers, which will logically lead to improved service or at least the ability to maintain service levels in the face of growth.

**IV-R3**     The Commission should be prepared to revisit the remaining service standards after the industry has "resettled." (Refer to Finding III-F7.)

As discussed elsewhere in this report, there are forthcoming actions which have enormous implications for the industry. These are Section 271 approval, de-averaging, access rate reform, and Universal Service. These changes are in addition to the phenomenal technological changes that have and continue to take place. The Commission must be prepared to react to these changes.

One change that may be necessary is for the Commission to revisit the service standards after the above actions have been settled. Suggestions for possible changes, at that time, include further elimination of reporting standards for market segments that have competition or a move toward an exception basis reporting on certain standards. Unfortunately, market and technological uncertainty make it impossible to spell out a defined framework for subsequent reviews.

## **D. STRATEGIC PLANNING**

This section gives a brief overview of the strategic planning process used by BellSouth and then, more importantly, talks about the direction and focus of strategic planning and how it has changed to meet the demands of today's marketplace.

### **CONCEPTUAL FRAMEWORK**

**IV-F11**     Strategic planning at BellSouth uses a formalized process that drives from higher level goals and objectives down to individual plans and actions in delineated steps.

Conceptually, the strategic planning process moves from low levels of detail with relatively infrequent changes to frequently changed high detail plans. Although the process itself is formalized, there is flexibility throughout to allow for opinions and dissension. Using BellSouth terms, this can be illustrated as follows.



The BellSouth strategic planning process is not a "bottoms up" process, which is sometimes held up as the standard for utilities. The state organizations are primarily responsible for carrying out the specifics of the strategic plans.

*IV-F13*     BellSouth strategic planning has adapted to the new telecommunications environment.

The BellSouth strategic planning process is well prepared to face the phenomenal changes taking place. BellSouth goes to great efforts to seek out those who are its critics and those who can provide alternative visions and opinions. BellSouth has also recruited personnel from outside the telecommunications industry to try and achieve greater market focus and to infuse new thinking. The dangers to BellSouth come from the market and technology change, not from any inadequacies in the strategic planning process.



## V. ASSESSMENT OF PRP STRUCTURE

### A. TOTAL FACTOR PRODUCTIVITY

#### BACKGROUND

The KPSC has approved a Price-Regulation Plan (PRP) for BST-KY, which is a performance-based rate plan. The PRP provides the Company with some levels of price flexibility for those products and services transitioning into competitive markets. Prices are capped by a formula that includes cost escalation rates as well as a total factor productivity index as an offset to inflation. This report addresses the effectiveness of the Total Factor Productivity Index in the PRP and presents alternative methodologies that might be more appropriate as telecommunication markets become more competitive.

The regulation of those industries considered natural monopolies or public utilities, e.g., telephone, electric, gas and water, has undergone significant change during the last twenty years. For nearly a century, the rates charged by public utilities were based upon historical costs plus the opportunity to earn a fair return on investment. This return was derived by multiplying the allowed rate of return times the depreciated rate base. Rates could not be changed without the approval of that utility's regulatory authority. Typically, the rate application process would take between six months and two years, depending upon individual state's rules and regulations. This time period has often been called -- regulatory lag. Regulatory lag historically served as a potent productivity incentive, as any increases in expenses occurring during the regulatory lag period was borne by the utility and its investors.

During the 1970's, however, the OPEC embargo led the United States into a period of rapidly rising energy prices and overall hyperinflation. Faced with the prospect that costs could escalate at rates up to ten times greater than potential productivity gains, a number of utilities faced financial ruin unless significant changes were made in the regulatory process. In response, regulatory commissions liberalized the rate process by either permitting forecasted rate years and/or instituting automatic rate adjustment mechanisms to recover costs considered outside of management's control.

With the advent of these changes in the rate process, commissions instituted other mechanisms to offset the lost productivity incentives associated with regulatory lag. First, utilities were required to consider potential productivity gains in their derivation of a forecasted test year. While labor productivity was the most common adjustment, total factor productivity (TFP) was also employed. Ultimately, the use of TFP was disregarded over concerns that the TFP measure failed to:

- Accurately measure the productivity of a specific company;
- Accurately forecast productivity gains based on historical trends;
- Properly measure capital versus labor productivity; and

- Properly differentiate scale economies from management initiatives.

Supplementing the imputation of expected productivity gains as an offset to inflation, commissions also instituted a management audit process where commission staff and contracted management consultants would periodically review the performance of a utility. The outcome of such audits could include specific directives, e.g., change or improve a specific process, or compute a specific rate adjustment based on the cost of any acts identified as imprudent. Commissions have imposed “prudence” adjustments for poor system reliability, cost overruns (typically nuclear power plants) and mismanagement.

Notwithstanding these changes in the regulation of the public utilities, costs continued to rise at a pace above the economy at large. The restructuring of the telecommunications industry, followed by natural gas and currently electricity, has witnessed a further shift from strict regulation to greater reliance on competition and other market forces. For those markets, not fully transitioned to true competition, utilities have sought greater pricing flexibility. Performance based rates have provided these utilities with the ability to alter prices with some constraints and to achieve higher returns should the company’s performance outpace its own respective industry. Telecommunications companies who provide local access are allowed to raise rates for those products and services that fall in the quasi-competitive environment at the rate of inflation offset by the projected rate of productivity. Typically, the escalation rate is based on the regional economy, while the productivity measure is either for the specific company or for the total telecommunications industry.

### **Total Factor Productivity**

Total Factor Productivity or TFP is an economic term defined as the ratio of percentage change in unit of output to the percentage change in unit of input. As the GNP or Gross National Product is an index of economic growth in the United States as measured by the relative change in good and services produced, the TFP is used by economists to measure the relative level of productivity for specific industry groups. Since the Great Depression, the federal government has consistently practiced a Keynesian approach to control the economy by employing a combination of fiscal and monetary policy. The key barometers of growth are economic expansion and productivity. Unfettered economic expansion can lead to inflation unless productivity gains can offset the impact of rising prices and wage rates.

The FCC, in response to the Telecommunications Act of 1996, promulgated a proceeding to review and modify its price cap plan for local exchange carriers in preparation for further deregulation and introduction of competition “to further the new pro-competitive, deregulatory paradigm.” In its Order 97 - 159, the FCC claimed that the “new price cap reflects a more reliable careful analysis of the rate of growth of incumbent LEC total factor productivity (TFP) and the rate of change of LEC input prices.”

Conceptually, there are four ways that a firm can improve its productivity.<sup>87</sup> In the short run, a firm can, in effect, learn to “do without.” Downsizing and right sizing are two examples of how firms can reduce input costs while maintaining the same level of output.

For LECs, workforce reductions have been a key to their efforts to achieve productivity gains.

Over the long run, a second form of productivity can be increased via technological advancement, the substitution of capital versus labor (e.g. automation) and improved operational practices.

While reducing the cost and quantity of inputs can improve productivity, the level of output can have similar effects. A third level of productivity can be achieved simply by adding new customers or increasing sales. Typically, telecommunication companies are capital intensive and maintain a significant level of surplus capacity. For example, because the system is designed to meet peak demand conditions, off peak periods offer significant opportunity to expand sales for very little marginal cost.

Finally, output based productivity gains can be achieved over the long run via economies of scale associated with the growth of the overall network and of scope given the capital intensive nature of the industry. Either through expanded services or acquisition, the larger the company, in terms of customers and sales, the less expensive it can be to add even more products and services.

The historical tracking of Total Factor Productivity measures the relative change in the ratio of inputs to outputs. As a result, over time, the TFP index measures all four types of productivity improvements outlined above.

In general, the TFP index provides a general measure of a firm or industry's relative level of productivity as compared to other industries, or to the same industry over time. While historical trends do provide a basis to assess opportunities for future productivity gains, it by all means is not a determinant. For example, a firm with a high ratio of fixed to variable costs and significant excess production capacity, most of the short-term productivity gains will be derived from short-term sales growth, which may be a more reliable predictor. However, for industries challenged with the need to implement rapidly improving technology simultaneous with the introduction of new competitors, the long term input productivity gains can be offset by the short- and long-term loss of sales.

Finally, the TFP index measures the total productivity of a firm. Differentiating the productivity of either a given product line or primary input like labor, can be very difficult, if not misleading. Clearly, a firm which produces a single product line has a better chance of tracking total labor and capital productivity. Even firms with multiple product lines can achieve the same assuming the amount of common plant and other common input expenses are minimal. However, multi-product and multi regional companies with significant shared or common facilities and costs will be challenged to derive an appropriate allocation scheme in its efforts to measure partial productivity.

Given the above discussion, the use of the TFP index raises several concerns, which can be summarized as follows:

- The TFP index was never intended to be a predictor of future productivity.

- TFP measures the total industry or a firm's overall productivity. It does not differentiate input versus output driven productivity gains or short-term versus long-term productivity gains.
- Multi-regional and multi-product or service firms with significant common facilities cannot accurately disaggregate productivity by region or service level.

## **IMPEDIMENTS TO MARKET COMPETITION AND FULL ACCESS**

*V-F1*      A TFP index set too high can hinder achievement of some of the desired objectives.

BST-KY has raised several concerns they believe result from a TFP index set too high. First, they argue that a high TFP index reduces their potential revenues and as a result reduces the amount of available capital resources to expand their system into less profitable areas, namely, rural Kentucky. Secondly, BST-KY argues that the reduced revenues also limits their ability to upgrade their system in a means that provides more efficient access for potential competitors who wish to use their network. Finally, BST-KY argues that their retail prices in some instances are below cost, and as a result, their wholesale prices, set for competitors, can be greater than BST-KY's own retail rates. In summary, BST-KY argues that the KPSC's very goal to enhance competition is stymied by a TFP index set too high.

BST-KY's arguments make sense only if the company cannot achieve the productivity gains projected by the TFP index. BST-KY argues that the rapid gains in TFP achieved in prior years was driven by downsizing and that future gains will be minimal as the company again needs to increase its internal resources. Furthermore, future capital investments into new systems and operations, while introducing greater efficiency, must be shared with its competitors who have access to BST-KY's facilities. In this regard, BST-KY also points out that a significant portion of its productivity gains are derived from increased sales which foster the greater utilization of existing plant. However, with the transition to a competitive market, BST-KY will likely lose market share, which will offset near term output-driven productivity gains.

BST-KY provides substantial argument and support for a performance based rate that is not weighted down by an excessive TFP based performance target.

## **ALTERNATIVES TO TOTAL FACTOR PRODUCTIVITY**

*V-F2*      There are alternatives to the Total Factor Productivity index which foster the types of competitive incentives the KPSC had sought in its Price Regulation Plan.

The Total Factor Productivity index offers several advantages, but as discussed above, none of which foster the types of competitive incentives the KPSC had sought in its Price Regulation Plan. Theoretically, the TFP index would serve as an added incentive for BST-KY's management to either improve performance or face the consequences of lower returns. Unfortunately, even if the forecasted value of the TFP were correct, such a broad based incentive provided no specific direction as to how such savings should be achieved. Any public policy initiative would be tempered against management's primary incentive, that is, to serve and retain its customer base and to achieve a fair return. In fact, as also discussed

above, a targeted TFP that was set too high, might discourage the very objectives the KPSC sought by diverting BST-KY's management away from achieving true productivity gains via technological and process enhancements, but instead focusing on sales growth and retention strategies which would also achieve the TFP target.

### **Management by Objectives**

Until all of BST-KY's products and services are open to full competition, the KPSC will need to regulate the prices set for the non-competitive basket. On balance, the prices should be cost based, yet flexible enough to simultaneously provide BST-KY with the opportunity to respond in a timely manner to the development of greater competition, and to earn an adequate enough return to continue to invest in system upgrades and expansions which offer greater access and further opens the market to competition. As Vantage discusses at length elsewhere, there are also very significant external factors that will influence pricing, such as USF and de-averaging. While the TFP index affords a generalized performance target to achieve, it does not necessarily provide the KPSC with the same level public policy influence it had with traditional cost-based rate regulation. As noted above, the simple TFP target can be achieved by BST-KY via means that are most advantageous to BST-KY, which may not necessarily accomplish the very objectives sought by the KPSC in the first place.

While it is not the role of regulatory commissions to micro-manage the utilities that it regulates, influencing public policy is an important tenet of this quasi-legislative process. Historically, Commissions have long influenced the direction of electric, gas, and telephone companies by issuing public policy statements, holding generic proceedings on special issues and directing specific outcomes as part of a rate award. These and other tactics are synonymous with the management process called "Management by Objectives." While the Commission leaves the actual implementation up to the utility management, clear objectives are enumerated by the Commission as a component of a rate application or other regulatory proceeding. As a result, the regulated utility has specific and clearly defined objectives that must be achieved as part of the rate settlement process. Notwithstanding, this approach to regulation has its limitations. Mandates requiring electric utilities to purchase electricity from independent power producers, at above market costs, resulted in significant price increases and in surplus capacity in the Northeast, now a major component of stranded costs. As a result, the objectives should be clear and flow from the stated public policy objective, and yet, not be so specific as to foster inefficient and distorted management practices.

With a performance based rate mechanism, the KPSC could substitute the productivity target set by the TFP index, by identifying several key objectives it seeks to address as part of the transition process toward competitive markets. Such objectives might address specific issues in:

- Quality of Service
- Economic Development
- Rural Access to Telecommunication Services
- Rate of Competitive Market Development

- Investment in Technologies

The company, not encumbered with a specific productivity number to achieve, would have the added resources to address these objectives.

## **OTHER PERFORMANCE-BASED INCENTIVE REGULATORY PLANS**

The concept of objective-based performance targets is not a new or an unproven concept. On June 16, 1995, the New York Public Service Commission issued its Order Approving Performance Regulatory Plan for New York Telephone (Case 92-C-0665).<sup>88</sup>

*“The Plan revises the regulatory framework for NYNEX in view of the dynamic changes taking place in the telecommunications industry and the emergence of competition. It provides market-based incentives for investment by substantially deregulating the company’s earnings and providing pricing flexibility for new competitive services for a period of five to seven years. It establishes comprehensive incentives for improved service quality during the transition, and it imposes commitments to freeze basic service rates, reduce toll and carrier access rates, limit rate increases for other existing services, and undertake various competitive enhancements and infrastructure improvements.”*

While the New York Plan frees the company from TFP type targets and shared earnings formulas, the NYPSC established specific objectives to be achieved accompanied by associated incentives and penalties. The Commission also established a periodic review schedule during this transition period. For example, following the first year of the plan, the Commission found that NYNEX failed to achieve several objectives and was required to refund consumers the penalties established in the plan. In more recent years, Bell Atlantic has met those targets and thus has not been required to refund money back to customers.

On June 28, 1999, a number of interested parties including BST-KY, AT&T, GTE and Sprint have offered the FCC “a proposal to reform interstate access charges and interstate universal service in the context of a continued commitment to universal service.”<sup>89</sup> This proposal outlines a number of “Key Objectives” that the parties believe are in the best interest of consumers. While the proposal identifies a number of steps needed to accomplish these objectives relative to the use of the TFP or X-factor, the parties agreed that:

- X-factor reductions would be targeted to local switching and switched transport rates;
- The X-factor should continue to be 6.5% until local switching and switched transport rates reach \$0.55 per access minute for the Bells and GTE, and \$0.65 for other price cap LECs. Together, with phasing out the Carrier Common Line Charge had this plan started July 1, 1999, switched access charges would have been cut by more than half within 3 years; and
- The X-factor should equal inflation once local switching and switched transport rates reach \$0.55 per access minute for Bells and GTE, or \$0.65 per access minute for other price cap LECs.

In essence, this settlement offers a transition away from the TFP adjustment in support of other, more defined public policy objectives, namely:

- Improve choices and value for customers;
- Keep Americans connected with universal service at affordable rates;
- Be Internet/Digital friendly;
- Be Competition-friendly (i.e. encourage efficient investment in real choices for all Americans); and
- Improve telephone subscription among low-income Americans.

While these objectives were offered to the FCC by the joint local and long distance telephone companies, and yet to be approved, it does offer another example of regulatory management by objectives.

Finally, the Kentucky PSC has embraced this approach in its Order associated with the petition for rehearing of Cincinnati Bell Telephone Company (CBT), Case No. 98-292. CBT sought an alternative regulation plan that excluded a productivity target “derived through an earnings sharing mechanism.” While the Commission, at first felt that there was a need for a productivity offset, after reconsideration, deleted the earnings sharing mechanism because it “dilutes the incentives to reduce costs, expand output and invest in new infrastructure and new technology, distorts pricing decisions for all the Company’s regulated services, irrespective of service costs, current prices and competitive market conditions; maintains theoretical incentives to misallocate costs and subsidize competitive services; and continues to impose regulatory costs and inefficiencies.”<sup>90</sup>

## RECOMMENDATIONS

**V-R1**     The KPSC should eliminate the TFP index. *(Refer to Findings V-F1 and V-F2.)*

After careful evaluation of all the relevant factors, Vantage recommends that the KPSC should eliminate the TFP index for BST-KY. Instead, it should allow rates for services in the non-competitive category to be capped by inflation. Should the KPSC decide that a transition period is appropriate for a movement away from the current 4% TFP index, it should consider directing BST-KY to make investments in achieving certain policy objectives. The KPSC should identify the specific policy objectives that BST-KY will need to accomplish and BST-KY will be responsible for determining, upon KPSC review and approval, the methodology and expense that will be charged against this fund.

Vantage does caution, however, against applying a traditional regulatory approach in this manner by determining a level of funds and requiring BellSouth to apply them to specific infrastructure. This would not, in fact, eliminate the productivity factor as recommended, but rather would reduce revenue flowing to BellSouth using a different term or mechanism. This is not the intended result. Future regulation will need to concern itself with the rates for those customers with no competitive choice, but not with revenue overall. Otherwise, BellSouth would be the only competitor with revenue restrictions.

Vantage suggests a cooperative approach between the Commission, state government, and BellSouth whereby the parties work together to determine telecommunications goals and visions and then identify specific projects and infrastructure goals to meet those goals. Vantage consciously refrained from suggesting specific infrastructure improvements. This is for the parties involved to decide. Some suggestions on areas of infrastructure include:

- Expanded local calling access to BellSouth Internet service. (BellSouth has no control over where and how ISPs elect to serve).
- Improved infrastructure and perhaps special pricing in economically depressed areas of Kentucky to encourage call center development and resulting jobs.
- Continued expansion of the KIH.

BST-KY is currently required to complete a productivity study as part of their compliance with the PRP. Vantage would encourage the KPSC, BST-KY, and other key parties to attempt to reach an accord on an alternative to this study. We reiterate the statements above, that productivity studies are largely retrospective in nature and are not particularly applicable in an industry that is undergoing significant technological and structural changes.

**V-R2**      Change the non-competitive service category pricing formula to allow for price increases at inflation. (Refer to Finding V-F2.)

It is difficult to fully discuss this recommendation at this point as subsequent analysis and recommendations in this *Report* impact upon this recommendation.

However, as a starting point, this recommendation will allow BS-KY to raise the overall non-competitive service category rates to an index based upon the GDP-PI. The elimination of the productivity factor will eliminate the potential for forced service category rate reductions, as has been the case in each of BST-KY's required annual filings.

The mirroring of intrastate access rates with interstate access rates should be maintained. The competitive category should maintain its pricing rules--no limit on price changes and a price floor of LRIC.

## **B. SERVICE CATEGORIES**

The PRP established three service categories into which BST-KY's retail services were classified:<sup>91</sup>

- Non-competitive -- services, products and options which are commonly included in basic local exchange service packages, or for which there is no competitive substitute.
- Interconnection -- interconnection and access services commonly purchased by other telecommunications providers.
- Competitive -- services that are not classified as non-competitive or interconnection.

The PRP defined procedures by which BST-KY could seek to re-classify a service between categories.

**V-F3**     BST-KY has not petitioned the KPSC to re-classify a single service since the PRP was implemented.

To move a service from the non-competitive category to the competitive category requires either a demonstration that competition exists for the service or that the complimentary nature of a service has changed.<sup>92</sup> BST-KY does believe that it may seek some service reclassifications to the competitive category.<sup>93</sup>

**V-F4**     There is currently no basis for re-defining the three service category classifications.

No party has petitioned the KPSC to modify the service category classifications. Vantage has not identified nor been made aware of any evidence suggesting that the three service classification categories need to be modified. For example, to define a new service category that captures services "about to become competitive", positioned as a transition between the non-competitive and competitive service categories would only add an extra layer of complexity to deal with definitions of "competitive" and "about to become competitive." Likewise, to simply move *Residential 1FR* service into a new category of "frozen rates" does not upgrade the PRP regulations as this service revenue is excluded from the pricing mechanisms of the non-competitive service category.

Vantage has not identified any rationale supporting a decision to disaggregate the non-competitive service category into multiple service categories in which each category would have a unique pricing mechanism.

**V-R3**     BST-KY should review the services contained in the non-competitive service category and, based upon the KPSC standards, submit a petition to the KPSC for their re-classification to the competitive category. (Refer to Findings V-F3 and V-F4.)

A review of the services in the non-competitive service category reveals several that would appear to warrant re-classification. These would include, at a minimum, services associated with operator assistance, directory and white pages. It was not within the scope of Vantage's assignment to perform a comprehensive study of each non-competitive service and apply the KPSC's standards for re-classification.

### **C. SERVICE CATEGORY PRICING FORMULAS**

The PRP defines pricing formulas for each service category. Several regulations were defined to provide BST-KY with pricing flexibility beyond the service category formulas. First, BST-KY was allowed to file tariffs which priced services below LRIC to meet the equally low price of a competitor. Second, Contract Service Arrangements (CSAs) are offered by BST-KY where there is a reasonable potential for uneconomic bypass of the Company's services.<sup>94</sup> The revenue generated by CSAs is considered "competitive" by the

KPSC and, is therefore, excluded from the non-competitive service category pricing formulas.<sup>95</sup>

**V-F5**      The pricing formula for the non-competitive service category requires modification.

As fully discussed in *Section A of this Chapter*, Vantage has recommended the elimination of the productivity factor from the pricing formula. As such, the pricing formula for the non-competitive service category requires modification. A second component in the pricing formula is the GDP-PI. The current PRP threshold level of 8% was not fully supported in the KPSC Order in Case No. 94-121.

**V-F6**      BST-KY has not filed any tariffs or entered into any CSAs which have requested prices below LRIC.

As stated, BST-KY has not availed itself of this PRP pricing flexibility option. Vantage concurs with BST-KY in that this option, though not utilized to-date, should remain in the prospective PRP.<sup>96</sup>

**V-F7**      BST-KY has appropriately utilized CSAs.

BST-KY's use of CSAs has been limited in number and revenue impact. The number of contracts entered into by year and the amount of revenue are shown in *Exhibit V-1*, below. Some of the yearly contract totals reflect renewal contracts as well as BST-KY's portion of a regional BellSouth contract. The CSA revenue by year, while growing, has been immaterial in relation to BST-KY's total revenue.

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**Focused Review of the Price Regulation Plan  
BellSouth Telecommunications, Inc. - Kentucky**

**Exhibit V-1  
Contract Service Arrangement Levels**

	1994	1995	1996	1997	1998
Number of CSAs <sup>97*</sup>	N/A	81	91	129	118
Value of CSAs <sup>98</sup>	\$193,001	\$824,258	\$1,840,675	\$5,821,906	\$9,021,838

\* Includes special service arrangements (contracts for services not offered in BellSouth's tariffs).

Some parties have raised a concern that CSAs are anti-competitive. Vantage understands their argument to focus on a provision in some jurisdictions that either CSAs are not subject to resale or that the contracts have such huge termination fees, that essentially the customer is locked in for the duration of the contract. First, we note that the KPSC has approved each CSA BST-KY has submitted, as required, for approval. Second, the conditions described above are not applicable to BST-KY CSAs. All of their CSAs are subject to resale and should

a CLEC purchase a CSA to offer the contract services to the current customer, BST-KY does not receive any termination fees from the customer. However, should the CLEC subsequently cancel the CSA with BST-KY prior to its termination, the CLEC will incur termination fees.

## **PRESUMPTIVE VALIDITY**

One of the issues that arose in our discussions with BST-KY was the issue of “Presumptive Validity”. Under this concept, a tariff change proposed by BST-KY would be assumed to be valid until the KPSC ruled otherwise. The basis of the concern is that under the current rules, if an intervenor objects on any grounds to the proposed changes, implementation is delayed until the KPSC issues an order. This can take months to occur, during which time BST-KY is restrained from implementing the change. Examples of delays that have occurred are the \$.25 Call Plan and the LATAwide Area Plus service filings.

**V-F8**      Seven of the nine BST States have wording in their PRPs or statues that address presumptive validity.

A review of applicable PRPs across all BBT States and statutes provided references to types of activity that is treated as presumptive validity. All but Tennessee and Kentucky have language that addresses the issue. (See Exhibit V-2, below.)

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### **Focused Review of the Price Regulation Plan BellSouth Telecommunications, Inc. - Kentucky**

#### **Exhibit V-2<sup>99</sup> References to Presumptive Validity**

State	Section
Alabama	13.06
Florida	(6)(a), 364.163 (2), (5), and (8)
Georgia	V
Louisiana	5.b.
Mississippi	A36.1.4.D.1
North Carolina	IV.A.1
South Carolina	3.D.

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**V-R4**      Change the PRP regulations to allow for a reasonable level of presumptive validity. (Refer to Finding V-F8.)

The seven states identified, above, all use different wording to address the issue. Vantage believes that there are adequate avenues available for the KPSC or intervenors to raise

questions and delay the introduction of proposed tariffs without hindering BST-KY's ability to act and react in a competitive environment.

The Georgia Interim Tariff requirement point V, in Docket No. 5833-U, states:

*"V. Any tariff filing will be presumed to be valid and shall become effective, unless suspended, revised or denied by the GPSC, 30 days after the filing."*

## **D. EVALUATION OF PRP OBJECTIVES**

The PRP originally established five objectives:

- Ensure Basic Service.
- Maintain High Quality Service.
- Meet Customers Needs and Enhance Technology.
- Incentives for Technology Investments.
- Flexibility for Pricing, Depreciation, and Changing Market Place.

Since these objectives were crucial as a framework for Vantage's review, we have articulated our understanding of what each of these objectives represents.

### **ENSURE BASIC SERVICE**

State and Federal telephone legislation, since its inception, has had as a primary focus the provision of basic phone service. Moreover, this has also meant the provision of this service at an affordable rate. Complicating the issue is the fact that an "affordable" or "reasonable" rate is difficult to quantify. In order to ensure that rates were affordable in low density (primarily rural areas) service territories, various subsidy mechanisms were utilized in establishing rates, which served to artificially reduce rates for residential customers and even more so for rural residential customers.

While it is important to recognize the broad and far reaching issues of Universal Service and rate de-averaging, Vantage took the specific PRP goal of ensuring basic service to mean that no provision of the PRP would directly or inadvertently discent BST-KY from maintaining basic plain old telephone service (POTS).

The PRP has been successful in this regard. Combined with continuous improvements in technology, basic service is not only available, but available at high quality. BST-KY has fewer than 100 party lines, and old measures of service quality such as dial tone within 3 seconds have been exceeded for so long and by so great an amount, that they are no longer relevant.

### **MAINTAIN HIGH QUALITY SERVICE**

A concern under any plan which no longer allows a utility guaranteed recovery of capital costs plus a return, is that the necessary dollars will not be invested to maintain plant and equipment. This would, of course, result ultimately in reduced service quality. There are

also concerns as a result of TA96 (enacted after the PRP), which brings into question how much new investment an incumbent may recover. These are serious concerns and ones that will continue to be issues into the foreseeable future.

As we describe in *Chapter 4*, BST-KY service quality has remained high. Further, customer satisfaction with BST-KY is the highest of any local exchange carrier as measured in the J. D. Power Survey.

## **MEET CUSTOMERS NEEDS AND ENHANCE TECHNOLOGY**

This is perhaps the most difficult of the PRP objectives to articulate and certainly to quantify. This is primarily the result of both customer needs and technology increasing at a phenomenal rate. Competition has pretty much assured that business customers can find the technology to fit their needs and a provider will be there to provision the service. For the residential customer the answer is not so clear. To read the trade journals, residential customers are clamoring for high speed Internet access. Yet the reality is that only approximately 20 percent of the U.S. population has any access to the Internet. The constraint here is not phone lines, but customer equipment (computers and modems) and a desire to be on the Internet. The reality is that relatively few customers are actually demanding enhanced facilities, and more importantly, willing to pay. The Vantage yardstick here was not whether all customers wishing high-speed Internet access had it available, but whether BST-KY had made reasonable efforts to provide enhanced technology where the demand and payback were reasonable. The answer is yes, by any reasonable measure.

For example, BellSouth has rolled out ATM as part of the KIH, they also offer ADSL to ISPs who then sell the service to their Internet customers. BellSouth is also a "participant" in packet switched technology whereby CLECs collocate frame relay and ATM switching equipment in BellSouth offices. While these technologies are being provided by a second party in this instance, the benefit still flows to the Kentucky customer. BellSouth also has bundled service offerings to the extent allowed by combining customer calling features and area wide plans that can be customized by the customer. While not a "new technology" this is an example of additional telecommunications benefits flowing to customers.

## **E. ONGOING PRP OBJECTIVES**

This section discusses Vantage's views on the continuation of the five original PRP objectives and the requirement for any additional prospective PRP objectives.

**V-F9**      The original PRP objectives should be maintained. However, additional objectives are required to facilitate the introduction of competition in Kentucky.

The PRP's original five objectives remain valid on a prospective basis. However, the Telecommunications Act of 1996 and the subsequent FCC Interconnection Order have altered the telecommunications industry more than was envisioned at the time the PRP was introduced. The key component relates to the concept of UNEs and their pricing, based on TELRIC methodology costs plus overhead cost contribution to CLECs.

The main intent of the Telecommunications Act of 1996 was the introduction of competition in the local exchange market. The FCC's Interconnection Order provided the framework upon which UNEs would be offered by ILECs, at a price equal to the associated TELRIC cost plus common cost contribution. The impact of the UNE pricing decision was to put in play the relationship of ILEC retail rates and UNE prices. Clearly, if UNE prices (recurring plus non-recurring) exceed comparable retail rates, competition may not be immediately forthcoming. Likewise, where UNE prices fall below retail rates, the introduction of uneconomic competition may occur.

The PRP should not be viewed as a vehicle for the introduction of competition in all markets in Kentucky. More pointedly, the PRP - in whatever structure - will not be the catalyst to effect residential local service competition. There are many other factors involved, such as the RBOCs attempt to gain Section 271 approval and the subsequent ability to offer long distance service within their regional territory. However, the PRP should not, either through its structure or regulations, create an impediment to the introduction of competition.

A primary factor in encouraging economic competition in Kentucky is a realization that implicit/explicit subsidies within BST-KY's retail rates need to be minimized, if not totally eliminated. Vantage believes that the KPSC, through its various rulings over the past several years, shares this position. Vantage also believes that the KPSC is very concerned with the impact upon residential rates, as they have been the beneficiary of various subsidy supports. A flash-cut of subsidy elimination is not appropriate as the impact upon residential customers could be dramatic. However, gradual movement towards the underlying objective is warranted.

BST-KY's transition to being able to effectively compete in a more competitive marketplace has been facilitated by the regulations of the PRP. The PRP service baskets and corresponding pricing schemes have provided BST-KY some flexibility in addressing subsidy elimination. For example, business rates have come down dramatically. Likewise, intrastate access rates, through the PRP mirroring provision with interstate access rates, have also seen decreases.

However, the price movements have been slow. IXCs complain about "excessive" access rates, including NTSRR. BST-KY has serious concerns regarding residential rates set below incremental cost, as exhibited by their rate restructuring proposal.<sup>100</sup> The KPSC has implicitly agreed with the need for additional flexibility by approving two BST-KY petitions to deviate from the PRP provisions by applying non-competitive service basket mandated price decreases to the interconnection service category, in particular, NTSRR.

The objectives of the prospective PRP need to be set out in an Order to reflect the relationship between BST-KY retail rates and incremental cost and the impact of the Telecommunications Act of 1996.

**V-R5**      The KPSC should maintain the five current objectives of the PRP. However, two new objectives should be added. (Refer to Finding V-F9.)

These two objective statements are:

- Permit all BST-KY retail rates to move towards incremental cost or market price.
- Ensure that the potential introduction of competition to all markets in Kentucky is not hindered by the PRP.

The first objective essentially reiterates a prior recommendation from this chapter -- that the current PRP provision on freezing residential rates be removed. The process by which residential rates would be modified is more fully discussed in *Chapter VII*. However, it is sufficient to state here that this objective does not permit significant increases to residential rates. In point of fact, the BST-KY proposal would have limited the immediate increase to residential rates to 10% or less and then frozen those new rates for two years. An additional provision was that the KPSC would then have allowed for another review of the BST-KY retail rate structure.

This first new objective also has an impact upon business rates, toll rates, vertical services, and access charges. The benefit from this PRP objective is a KPSC realization that the entire BST-KY retail rate structure and its inherent subsidies need to be acted upon sooner rather than later.

The second proposed new objective simply assures all current and potential competitors within Kentucky that the PRP will not place them in an unfair competitive position with respect to BST-KY. It also reflects a view that no regulatory action, by itself, can force or guarantee that competitors will come into Kentucky and offer a full package of services to all customers, residential and business, regardless as their location, urban or rural.

Vantage believes that the inclusion of these two new objectives strengthens the prospective PRP and allows for additional flexibility by BST-KY to re-adjust its retail rates. Vantage believes this action is warranted as its review of BST-KY performance under the PRP revealed no inappropriate behavior, and as such, they have earned additional pricing freedoms.



## VI. STAKEHOLDER IMPACT FROM PRP

In conducting this audit, Vantage felt it was important to understand the impact the PRP had on various stakeholders. The reasons for implementing the PRP were varied and different stakeholders either argued for their positions or were silent and underrepresented. The following provides a brief summary of our view of how each stakeholder was affected and what impact we believe the continuance of the PRP is likely to have.

### A. CUSTOMERS

In assessing the impact of the PRP on customers, it is necessary to look at the two primary groups separately. In doing so, one can better understand the interaction of competitive alternatives, cross-subsidization, customer density, and other factors.

#### RESIDENTIAL

##### RETROSPECTIVE IMPACT

*VI-F1*     Residential customers have realized slightly declining rates that are below incremental cost, with continued satisfactory service.

Over the last four years, the PRP has provided rates that were capped and subject to reductions due to the impact of the productivity factor. While the reductions were minimal, one should take into consideration the fact that residential rates are subsidized by business rates, and therefore, are a very good deal. The subsidization of residential rates varies between urban and rural, with the rural rates receiving the highest subsidies.

This subsidization of residential rates has a negative impact as well. The advent of competition in the residential area is not likely to make any significant gains until either subsidies are removed or the costs of competitive technologies drop so low that the entry into residential markets is profitable.

##### FUTURE IMPACT

*VI-F2*     A continuation of the PRP, with the recommendations included in this report, should continue to provide residential customers with below cost rates, although the gap should be allowed to narrow.

The KPSC needs to make some hard decisions regarding its objectives for residential customers. Continued subsidies will inhibit competition. The result is that customers will have artificially low rates in the short-term while losing competitive alternatives that may offer additional services at market rates.

In our recommendations, Vantage suggests that subsidies be reduced in concert with the advent of competitive alternatives. At that point, the market will both set the price and determine the services residential customers want.

## BUSINESS

### RETROSPECTIVE IMPACT

*VI-F3* Business customers, particularly in Louisville, have benefited significantly from the PRP as competitive alternatives became available at discounted rates.

The statistics, provided earlier in this report, clearly show that large-to-medium business customers have had competitive alternatives available at lower prices. There is no question that these customers are benefiting the most from both the design of the PRP and competitive alternatives.

### FUTURE IMPACT

*VI-F4* Business customers should continue to benefit from both the PRP and the influx of competitive technologies.

With the recommendations Vantage proposes, business customers would provide lower subsidies to other classes of customers while continuing to be targeted by new competitors. As with the deregulation of other industries, large customers with complex needs are the first to benefit from a competitive environment. The greater short-term benefit to business customers versus residential customers should be considered on a macro level. The impact of improved productivity resulting from lower rates and a broader range of services has a direct positive impact for everyone in Kentucky. As businesses are more profitable, the job market expands and all residents get an indirect benefit.

## B. BELLSOUTH CORPORATION

### RETROSPECTIVE IMPACT

*VI-F5* BST-KY, as well as its parent company-BellSouth, has benefited significantly from the PRP, with improved productivity, increased focus on service, revised depreciation rates, and pricing flexibility.

Despite arguments that the productivity factor was too high and that some of the service standards were counter-productive, BST-KY has gained enormously from the PRP. These gains were two-fold. First, the PRP incited BST-KY to streamline its work force, more appropriately allocating resources in a fast changing industry. While we cannot be certain, we would speculate that under traditional cost regulation, BST-KY would not have been as aggressive in striving for improved productivity.

Secondly, earnings have increased dramatically despite the rate reductions imposed by the PRP pricing formula. The reasons for these increases have been discussed earlier and need to be kept in a historical perspective.

## FUTURE IMPACT

*VI-F6*     In the future, the PRP should permit BST-KY to make the difficult and risky transition to a more competitive industry while continuing to improve its rate structure and facilitate competition.

Over the next few years, the telecommunications industry will continue its transformation. It is our belief that a properly designed PRP, with flexibility for changes, will facilitate this transition. BST-KY faces great risk in the transition and will be forced to undergo major changes in their business and invest in new technology. Their success is not assured. However, to the degree that the PRP provides them the opportunity to compete on a level playing field as competitors enter their markets, they have an excellent chance of effectively responding.

## C. BELLSOUTH EMPLOYEES

### RETROSPECTIVE IMPACT

*VI-F7*     During the first three years of the PRP, the BellSouth workforce was reduced significantly.

As was illustrated in *Exhibit IV-9* there was a reduction in staffing at BellSouth during the first two years, and the average salary went down significantly, reflecting the reduction in higher paid management employees. While these reductions were done through attrition and retirement packages, the reductions were naturally of concern to all employees. During the last year, additional workload has resulted in an increase in staffing.

To the credit of BellSouth, it appears that the reorganizations and realignment of duties have resulted in continued levels of good reliability.

### FUTURE IMPACT

*VI-F8*     The future for BellSouth employees is tied largely to the success of the overall company business plan and its intent to achieve the transition to competition.

While in the past, employees could have justifiably argued that the PRP caused a reduction in the workforce, today, one could argue that it will help to stabilize and perhaps increase the same workforce. The reasons are twofold. First, the reliability requirements of the PRP force management to maintain an adequate, and as we have seen, growing workforce. As long as these reliability standards are well-defined, there should be a direct correlation between the increase in services and customers and the number of employees. The second reason why we may see an increase in workforce is the need by BellSouth to move into new markets. Data and network technologies will open a broad range of new opportunities for BellSouth employees, although one should caution that there may be a change in skill sets required by employees in the future.

## D. CLECS

### RETROSPECTIVE IMPACT

*VI-F9* The PRP has permitted some inroads in competition by CLECS, although it is not clear as to whether the PRP was the driving factor in their entry into the Louisville business market.

To date, there has been a concerted effort by CLECs to go after many business customers in the urban areas of BST-KY. However, while there are a large number of CLECs registered to do business in Kentucky, the percentage actually selling services is small.

### FUTURE IMPACT

*VI-F10* Should subsidies for residential rates be reduced, there is some likelihood that the activity of CLECs will increase.

As has been stated a number of times in this report, the subsidies inherent in BST-KY's retail rates limit residential competition at this time.

## E. IXC/CLECS

### RETROSPECTIVE IMPACT

*VI-F11* There has been almost no local competitive activity on the part of IXC/CLECs.

This is largely due to the ongoing battles over FCC 271 issues regarding RBOCs being allowed to provide long distance service and the apparent unwillingness of long distance carriers to enter local competition.

### FUTURE IMPACT

*VI-F12* The entrance of IXC/CLECs into local markets is more dependent on national issues and their competitive strategies than on the design of the PRP.

The strategies and actions of large, long distance carriers will be based on factors outside the purview of the KPSC. The battle for telecommunications supremacy is taking place on a national and worldwide stage. No state regulatory commission will sway when an international company decides to compete in any telecommunications market. The best the KPSC can hope to accomplish is structuring a level playing field through its regulations that encourages competitive entry.

## F. STATE REGULATORS

### RETROSPECTIVE IMPACT

*VI-F13*     The regulatory load for state regulators has been minimized during the first four years of the PRP.

One of the objectives of the PRP was to minimize regulatory oversight and burden for both the Company and the KPSC. This objective has been met. Except for the review of the annual reports and rulings on a small number of exception requests, there have been limited requirements in the areas that the PRP encompasses.

The above statement does not suggest that the KPSC has not had to face major telecommunications issues during this period. In fact, there have been and still are a number of major issues that need to be resolved before true competition can be expected.

### FUTURE IMPACT

*VI-F14*     While the continuation of the PRP will require minimal regulatory interaction, the other related regulatory issues that must be resolved will create a continuing burden for the KPSC in the short-term.

Except for the proceedings related to this review, the PRP requires very little regulatory oversight. Vantage suggests that the KPSC set for itself the objective of achieving deregulation of the telecommunications industry. However, there are a number of related regulatory issues that require resolution prior to that objective being satisfied. These are discussed, in detail, in *Chapter VII*.

## G. STATE GOVERNMENT AND ECONOMIC DEVELOPMENT GROUPS

### RETROSPECTIVE IMPACT

*VI-F15*     To date, the PRP has had little direct impact or interaction with political or economic development interests.

The PRP, as currently designed, is not intended to meet the objectives of State Government and Economic Development Groups. However, during discussions with State Government and Economic Development representatives, we learned that there was great interest in how BST-KY could help with statewide issues.

### FUTURE IMPACT

*VI-F16*     The recommendations Vantage makes in *Chapter VII* address the opportunity to benefit the customers and citizens of Kentucky by directing some of the benefits to economic development activities.

As stated in *Chapter VII*, Vantage proposes using the PRP as a means of generating benefits for customers through an improved economic development focus.



## VII. PLATFORM TOWARDS DEREGULATION

Vantage has proposed in *Chapter V* significant recommendations to the PRPs prospective objectives and regulations. In sync with this recommended PRP, Vantage has also recommended in *Chapter VI* that the KPSC state for itself an objective of moving from the PRP regulatory mode to a fully deregulated telecommunications environment. In this section, a platform of activities to be undertaken by the BST-KY and the KPSC to achieve that objective is discussed.

**VII-F1**     The Kentucky state-wide wholesale UNE price structure in conjunction with BST-KY's subsidy laden retail rate structure inhibits the successful transition to a deregulated telecommunications marketplace.

The KPSC itself, in Administrative Case No. 360, stated "under traditional regulatory rules and prior to the 1996 Act, specific implicit urban to rural and business to residential subsidies were established through traditional rate cases."<sup>101</sup> The establishment of UNE rates, based upon TELRIC methods, following the FCC's Interconnection Order has exacerbated the need for retail rate subsidies to be eliminated.

The key issue is an examination of retail versus UNE rates and the impact upon potential CLEC competition. Consider the business case example that BST-KY responded to in Docket No. 97-074. The example considered three business lines (RG 5), one vertical feature, Touch-Tone and hunting.<sup>102</sup> Based upon current BST-KY retail rates and UNE prices, the total retail cost for a customer, including SLC, is \$153.95. The UNE-recurring cost to a CLEC for the same package, including a derived local usage value, is \$84.19.<sup>103</sup> This amounts to a 45% discount for the CLEC. Obviously, the CLEC will offer a price for this package above its UNE cost such that the effective potential disparity between BST-KY's retail price and the CLEC's retail price, based on UNE cost and contribution, will be less than 45%, but still at a level for the CLEC to significantly under-price BST-KY.

If such a disparity exists, why isn't there more aggressive CLEC entry into the Kentucky business markets? One answer is found in the UNE non-recurring charges a CLEC incurs. For the business example above, a CLEC would be billed nearly \$327 in UNE non-recurring charges for procuring the package.<sup>104</sup> If customer churn is assumed at 18 months, then the CLEC would be adding essentially \$18 to their monthly UNE costs. After adding in CLEC marketing costs, the initial disparity between BST-KY's retail rate and the recurring UNE costs shrinks considerably.

What lessons does this example provide? First, CLECs may be attracted to offering services at a niche level to business customers since the BST-KY retail rates include some amount of subsidy under which a CLEC may gain a price advantage. Second, UNE non-recurring charges act as a potential deterrent to competition. Third, a state-wide UNE cost continues to send inappropriate signals as it contains an implicit subsidy between urban and rural rates. It also begs the question that if BellSouth rates are truly "too high", then why do competitors not build a competing network as was originally envisioned in TA96?

The corresponding situation exists between BST-KY's retail residential rates and UNE costs. BST-KY's Residential 1fr rates, which have been frozen since implementation of the PRP, range from \$12.17 (RG1) up to \$17.55 (RG5).<sup>105</sup> With just the recurring UNE cost of the loop, NID, and port equaling \$22.61, it's not difficult to understand the lack of residential competition, when non-recurring UNE costs, CLEC marketing costs and contribution are factored into the price equation. This situation is ripe for several actions to be undertaken by the KPSC. First the KPSC should be focused on rate re-balancing to begin the elimination of implicit subsidies.

The KPSC has recognized the impact such an action will have. It has stated in Administrative Case No. 360, that "the KPSC realizes that eliminating part or all of the implicit subsidy embedded in urban business rates and urban residential rates will affect those customers most likely to see local competition in the near future."<sup>106</sup>

The current statewide UNE costs will require some form of de-averaging to move them more in alignment with actual BST-KY retail rate group rates. Furthermore, the FCC requires de-averaging of UNEs. Currently, a state-wide UNE may inhibit the introduction of competition, as this "average" cost does not reflect a true TELRIC cost in a particular grouping of wire centers, for example. The KPSC appears to be in agreement with this principle of UNE de-averaging. It has stated that "at the very least, UNE cost estimates should be recalculated on a geographically de-averaged basis."<sup>107</sup>

Second, the issue of UNE non-recurring charges also needs to be addressed. These non-recurring charges represent a significant initial cost investment by CLECs to initiate service for new customers. One particular point relates to the CLECs purchase of the UNE platform for an existing customer. The KPSC, in its ruling on BST-KY's SGAT filing, ruled that "while BellSouth may charge a reasonable, non-recurring, cost based "glue charge" for its expertise in having combined the UNEs, the KPSC finds that neither BellSouth nor any other ILEC shall indulge in the wasteful habit of physically separating UNEs for no other apparent reason than to disrupt migration of a customer to the services of another carrier."<sup>108</sup> At this time, BST-KY has not re-filed an SGAT with the non-recurring "glue charge."

Third, another subsidy element is the Non-Traffic Sensitive Revenue Requirement (NTSRR). With the KPSC's recent approval of BST-KY's petition to deviate from the provisions of the PRP by applying required non-competitive service category reductions to the interconnection service category<sup>109</sup>, the NTSRR is now approximately \$22.3 million, of which the IXCs pays \$14.1 million and the balance of \$8.2 million is implicit in BST-KY's intraLATA toll rates.<sup>110</sup> The KPSC has signaled its intent with respect to NTSRR, wherein Administrative Case No. 360, it stated "elimination of NTS is a priority and will be considered along with the elimination of other implicit subsidies."<sup>111</sup>

**VII-R1**     The BST-KY should work with the KPSC to undertake several proceedings with the aim of eliminating implicit/explicit subsidies from BST-KY's retail rates, establishing de-averaged recurring UNEs, and modifying non-recurring UNEs. (Refer to Finding VII-F1.)

This recommendation is adjunct to the recommendations made to a prospective PRPs objectives and regulations provided in *Chapter V* (e.g., pricing in inflation for the non-

competitive service basket). This recommendation is the most critical as it addresses pricing issues related to the non-competitive and interconnection service categories. The initial component of this recommendation proposes limited residential rate re-balancing, with a new freeze on the revised rates, and BST-KY's proposal related to intrastate access charges. Vantage believes these initiatives are critical to properly re-shaping BST-KY's retail rates and the elimination of subsidies.

The KPSC has indicated its concern over adjusting residential rates prior to addressing the intertwined issues associated with universal service.<sup>112</sup> However, the lack of movement at the FCC regarding this issue and the apparent intent to move universal service funding from a revenue benchmark to a cost benchmark provides the KPSC with opportunity to move forward and address critical issues. Recognizing that the FCC has not yet finalized its cost proxy model, and based upon the Joint Board's recommended range of 115 to 150% above the national average for determining federal support, BST-KY, itself, is unsure of what amount, if any, it will obtain.<sup>113</sup>

The time is, therefore, ripe for the KPSC to aggressively move forward in a systematic manner and address issues related to implicit/explicit subsidies in BST-KY's retail rates and begin to lay the foundation supporting the introduction of economic competition for all customers.

This recommendation calls for the KPSC to initiate the following hearings:

- Re-balance BST-KY's residential and NTSRR rates.
- De-average BST-KY's recurring UNE costs.
- Re-examine BST-KY's non-recurring UNE costs, especially the required platform UNE charge and the commended "glue charge".

## **RATE REBALANCING**

**VII-F2**     BST-KY had reached a settlement with various parties regarding Rate Rebalancing.

BST-KY had reached a settlement with various parties: AT&T, MCI, Sprint, the Attorney General, and Metro Human Needs Alliance in its application to restructure rates in Case No. 97-074.<sup>114</sup> As part of that proposed settlement, the parties had agreed to a \$2.93 per month increase to residential rates in all rate groups, various NTSRR reductions, and adjustments to business touch-tone rates. The settlement was rejected by the KPSC on the basis that subsidy issues would be decided in its Administrative Case No. 360.

**VII-R2**     Vantage recommends that the issues of rate re-balancing be reassessed by BST-KY and the KPSC and, that together with other involved parties, an effort be made to move forward with a limited rate re-balancing. (Refer to Finding VII-F2.)

In discussions between BST-KY and Vantage, BST-KY has proposed a "hypothetical" alternative. Under this scenario, residential rates would be adjusted by rate group, with no rate group incurring an increase greater than 10%: RG1 would increase \$1.22, RG2 would increase \$1.30, RG3 would increase \$1.37, RG4 would increase \$1.43, and RG5 would

increase \$0.95. Additionally, some vertical services would see increases, as well as measured plans and area calling plans. The total annual revenue impact is \$14.1 million. The offset would reduce the IXC portion of the NTSRR to zero.<sup>115</sup>

BST-KY has also stated that these revised residential rates would remain frozen for two additional years. Additionally, the non-competitive service basket price increase would be limited to 5% per year, as opposed to the current 10% cap. In conjunction with this, BST-KY would commit to reducing intrastate access charges to \$.0055 (originating/terminating, less NTSRR) by the July 2002 Annual Filing.<sup>116</sup>

Vantage believes this overall plan has merit and should be considered. The proposed residential rate increases are significantly less than that agreed to by the parties in the previous settlement. The proposal begins to narrow the subsidies inherent in residential rates and eliminates an explicit access subsidy. Under this proposal (or some variation), the KPSC is positioned to act upon any USF recommendations forthcoming by the FCC. In conjunction with the increase in residential rates, the Kentucky low-income portion of the state USF, more commonly known as Lifeline, should be reviewed with potential customer credits being linked to actual retail residential rates.

## **RECURRING UNE COST DE-AVERAGING**

This action is simply a continuation of the KPSC's rulings on UNE costs in various BST-KY arbitrations. In point-of-fact, the KPSC has already recognized the need for UNE de-averaging; refer to the KPSC's Order in Administrative Case No. 360, dated May 22, 1998, in particular, the discussion associated with *Footnote #52*. UNE de-averaging must occur in order to eliminate any artificial barriers hindering CLECs ability to compete with BST-KY. A statewide average creates a "subsidy" between urban and rural areas which is contrary to the KPSC's stated objectives of eliminating subsidies. The de-averaging should be on a wire center basis and as closely tied to the composition of BST-KY's current rate groups as possible.

## **NON-RECURRING UNE COSTS**

The KPSC should require BST-KY to present a cost study supporting the development of both a platform UNE non-recurring charge and the "glue charge. The platform non-recurring charge is based upon the Supreme Court's ruling which recognized that the FCC had the authority to define UNEs. Subsequently, the FCC did define the platform (loop and port) as a UNE. Apparently, no CLEC has requested the purchase of the platform from BST-KY as they have not yet submitted a TELRIC cost study supporting their proposed non-recurring charges. The concept of a "glue charge" for BST-KY's "expertise" while not explicitly discussed in various FCC orders none-the-less may remain a viable charge to be authorized by the KPSC.

As has been indicated above, non-recurring UNE costs represent a potential impediment to CLECs competing for BST-KY customers. The current UNE non-recurring charge of \$86.08 for the 1<sup>st</sup> UNE loop and NID and \$37.55 for the UNE port would be significantly less if bundled into platform UNE non-recurring charges.

The benefit of this recommendation is movement towards elimination of some subsidy elements in BST-KY's retail rates and the establishment of appropriate recurring and non-recurring UNE costs to encourage more competitive entry into telecommunications markets throughout Kentucky.



## VIII. APPENDIX

### A. GLOSSARY OF TERMS

<b>Access Charge</b>	A charge by a telephone company to a long distance (interexchange) company for availability and use of its telephone facilities for origination and termination of long distance (interexchange) calls.
<b>Accelerated Depreciation</b>	A change in depreciation accounting that reduces the number of years over which a depreciable asset will be amortized.
<b>Access Line</b>	The facilities between a telephone company central office and a customer that are required to provide access to the local and toll switched network.
<b>Accounting Separations</b>	FCC Rules that are supposed to separate the costs of providing regulated and unregulated services through the use of Cost Allocation Manuals (CAMs).
<b>Alternate Access Vendor (AAV)</b>	A firm providing transport of calls from customers to long distance carrier points of presence (POPs), or between a given customer's multiple locations, typically using a fiber ring. Also referred to as Competitive Access Providers (CAPs).
<b>Alternative Operator Services (AOS)</b>	Alternative operator services are operator services provided by companies other than the traditional telephone companies. Usually an AOS provider will contract to provide all the operator services from telephones located on private premises, such as a hospital or hotel, or from private pay phones.
<b>American Telephone and Telegraph (AT&amp;T) 1982 Consent Decree</b>	(also called Modification of Final Judgment, or MFJ): A judicial settlement ending the Federal Government's 1974 antitrust suit against AT&T, Bell Labs, and Western Electric. Among the provisions were (1) the divestiture of the local exchange service and access functions of the 22 Bell operating companies; and (2) the modification of the 1956 AT&T Consent Decree so that post-divestiture AT&T could enter into unregulated markets. The divestiture took place on January 1, 1984.

<b>Antitrust Consent Decree</b>	An agreement between the U.S. Department of Justice and a defendant settling an antitrust case prior to a court ruling. The government's 1974 monopolization case against AT&T was settled by a consent decree approved by Judge Greene in 1982. The consent decree proposed by the DOJ separated the monopoly local exchange from competitive lines of business: long distance, information services, and equipment manufacturing. Also see "Modification of Final Judgment" and "Divestiture."
<b>Basic Local Exchange Service</b>	The portion of local exchange service comprised of an access line and dial tone provided to the premises of residential or single-line business customers for the transmission of two-way interactive switched voice grade communication for usage within the local calling area that is billed at one flat rate.
<b>Bellcore (Bell Communications Research, Inc.)</b>	The research and development consortium jointly owned and funded by the seven Regional Bell Operating Companies.
<b>BellSouth</b>	One of seven Regional Bell Operating Companies, it is the parent of the Southern Bell and South Central Bell telephone companies. BellSouth's Southern Bell and South Central Bell subsidiaries serve the states of Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee.
<b>Broadband</b>	The amount of bandwidth generally needed for video and high speed data transmission. Broadband services can be carrier in analog or digital format. A cable TV system employs broadband transmission. These technologies are capable of carrying a great deal of information in a short amount of time, but are more expensive to use than voice grade technologies like telephone which require less bandwidth.
<b>Broadband ISDN</b>	A network standard for voice, data, and video in the same network. The network is fiber based with rates of 150 MB/S and 600 MB/S, initially.
<b>Bundled Rates</b>	Rates in which the various rate elements which comprise the service are consolidated.

<b>Bypass</b>	Technological alternatives to local telephone company facilities that generally fall into two categories, service bypass and facilities bypass. Service bypass refers to the use of local exchange company dedicated access facilities as an alternative to switched access facilities. Facilities bypass refers to the use of non-telephone company provided services (i.e., fiber, short-haul microwave, and direct satellite to rooftop antennae.)
<b>Carrier's Carrier</b>	A provider of telecommunications services to other carriers who then provide services to customers. Does not offer service directly to the public.
<b>Carrier of Last Resort</b>	In today's environment, an incumbent local exchange company that is obligated to provide basic local exchange service in all of its local calling areas in response to reasonable requests for service.
<b>Cellular Mobile Radio Service</b>	A radio telecommunication service provided using a cellular radio system. This service falls under the category of Commercial Mobile Radio Services (CMRS).
<b>Carterfone Decision</b>	An FCC decision striking down tariff restrictions that had prohibited attachment or connection to the public telephone system of any equipment or device not supplied by the telephone.
<b>Cellular Radio System</b>	An automated, high-capacity system of one or more multi-channel base stations designed to provide radio telecommunication services in the 800 MHz band to mobile stations over a wide area in a spectrally efficient manner. Cellular systems employ techniques such as automatic power control and automatic hand-off between base stations of communications in progress to enable channels to be reused at relatively short distances. Cellular systems may also employ digital techniques such as voice encoding and decoding, data compression, error correction, and time or code division multiple access in order to increase system capacity. Radio frequencies, technical and operational requirements are set forth in <i>Part 22</i> of the FCC's Rules.

<b>Collocation (Expanded Interconnection)</b>	When a user of telephone company services places transmission equipment in the same building that houses the telephone company's switches. The Telco is responsible for all maintenance and repair of the equipment under an equipment lease agreement. The collocator does not have access to his own equipment under virtual collocation.
<b>Common Costs</b>	Costs incurred for the benefit of an enterprise as a whole, but not for the benefit of an individual service or group of services. They are not impacted appreciably by changes in the quantity of any particular service, or group of services. If they are common to all services, they are also known as overhead costs.
<b>Competitive Access Provider (CAP)</b>	See "Alternate Access Vendors (AAVs)."
<b>Cross Subsidization</b>	The use of revenues generated by one service to support below-cost pricing of another service. The concern is that a regulated service may subsidize an unregulated service. This activity disadvantages competitors in the business market being subsidized. But, historically basic residential flat rate service has been subsidized by the services that are now competitive. The accepted test of cross-subsidization is if the price of a service is greater than its long run incremental costs then it is not being subsidized.
<b>Customer Access Line Charge (CALC)</b>	See "Subscriber line charge."
<b>Customer Premises Equipment (CPE)</b>	All telecommunications terminal equipment located on the customer premises, such as PBXs, data equipment and telephone sets.
<b>Depreciation</b>	Accounting allowance made for the decrease in property or equipment value through wear, deterioration, or obsolescence.

<b>Depreciation Reserve</b>	A balance sheet account which reflects the portion of the costs of depreciable public utility assets that have been recovered from ratepayers as an expense. In theory, the cost of the depreciable asset should be fully recovered by the time the asset is retired from service. If the actual schedule of recovery is such that some costs will remain unrecovered when a depreciable asset is due for retirement, a depreciation reserve deficiency is said to exist.
<b>Deregulate</b>	To remove a service from the jurisdiction of, and oversight or regulation by, a public service commission.
<b>Detariffing</b>	Removal of the requirement that a service be offered under a tariff filed with the regulatory agency. Regulatory agencies use detariffing as one tool for freeing regulated companies from price controls in competitive markets.
<b>Divestiture</b>	The court agreement implemented on January 1, 1984 that caused AT&T to divest itself of its Bell Operating Companies. The divestiture agreement settled a 1974 federal antitrust case against AT&T, and was signed in January 1982, while the antitrust case was being tried before Judge Harold Greene in U.S. District Court. The Court approved the agreement with modifications later in the year.
<b>800 Service</b>	A long distance telephone service wherein the caller places a call using the "800" prefix as the area code and the party being called pays for the call.
<b>Enhanced Services</b>	Defined by the FCC in Computer Inquiry II as services offered over transmission facilities which employ computer processing applications that act on the format, content, code, protocol or similar aspects of the subscribers information; provide the subscriber additional, different or restructured information; or involve subscriber interaction with stored information.
<b>Equal Access</b>	Provision of local exchange access service in equal kind and quality to all long distance companies. Allows for customers to have their local telephone company automatically deliver long distance calls to the carrier of their choice.

<b>Exchange</b>	A geographical area served by one or more central offices, within which the telephone company provides local telephone service.
<b>Federal Communications Commission (FCC)</b>	A board of five commissioners appointed by the President under the Communications Act of 1934, having the power to regulate interstate and foreign communication originating in the United States.
<b>Fiber Optics</b>	Technology based on thin filaments of glass that use light instead of electricity to transmit data, images and sound and provide vastly greater capacity for transmission than previous technologies.
<b>Fiber Ring</b>	A fiber transmission path within a given area. Service reliability is enhanced because any two points on the ring can be reached from either direction.
<b>Fully Distributed Costing</b>	A costing methodology which assigns a percentage of all common costs, including overhead, to individual services.
<b>Gross Domestic Product-Price Index (GDP-PI)</b>	The gross domestic product fixed weight price index calculated by the U.S. Department of Commerce.
<b>Incremental (Marginal) Costing</b>	The forward looking costs which will be advanced by expanding production of a service or deferred by reducing the level of production of a service. The incremental costs of a service do not include any joint or common costs.
<b>Independent Telephone Company</b>	A telephone company which is not affiliated with AT&T or the Bell Operating Companies, but is the designated established carrier for the provision of telecommunications common carrier service in a specific geographic area.
<b>Inside Wiring</b>	The telephone wires within a customer's home or place of business that are on the customer's side of the point of intersection between the telephone company's communications facilities and the customer's facilities.
<b>Interconnection Service</b>	The service of providing access to a local exchange company's facilities for the purpose of enabling another telecommunications company to originate or terminate telecommunications service.

<b>Interexchange Carrier (IXC)</b>	A carrier authorized by the FCC to provide interstate long distance communications services between LATAs; a carrier authorized by a state public service commission to provide long distance communications services.
<b>InterLATA</b>	Telecommunications services originating in one local access and transport area (LATA) and terminating in another LATA or outside of a LATA.
<b>Internet</b>	An internationally connected system of university, government and commercial networks providing a variety of data interchange services.
<b>IntraLATA</b>	Telecommunications services originating and terminating within the same local access and transport area (LATA).
<b>Joint Cost Rules</b>	Rules promulgated in FCC Docket No. CC 86-111, which are intended to prevent cross-subsidization of diversified business by insuring proper allocation of costs between regulated and non-regulated operations of telephone companies. These rules describe a range of cost methods which the FCC considers acceptable in principle. The <i>Tier I</i> local telephone companies must submit their own specific CAMs for FCC approval.
<b>Jurisdictional Separations</b>	The process by which telephone property costs, revenues, expenses, taxes and reserves are assigned between interstate operations, subject to the jurisdiction of the FCC, and intrastate operations, subject to the jurisdiction of the several state regulatory bodies.
<b>LATA (local access and transport area)</b>	One of almost 200 local telephone exchange areas established as a result of the AT&T divestiture. The Bell Operating Companies are not allowed to provide services between or among LATAs.
<b>Local Area Network (LAN)</b>	A data transmission network connecting a number of communications devices (e.g., computers, printers, servers) within a single building, campus of buildings or geographic area.

<b>Local Calling Area</b>	The geographic area encompassing one or more local exchanges as described in existing commission orders or in maps, tariffs, and rate schedules reviewed and approved by a commission.
<b>Local Exchange Company</b>	A telecommunications company holding a certificate of public convenience and necessity to provide local exchange services.
<b>Local Exchange Services</b>	Services offered for the transmission and utilization of two-way interactive communications and associated usage within the local calling area.
<b>Local Loop</b>	That part of a communications circuit between the subscriber's premises and the equipment in the central office.
<b>Local Switched Interconnection Service</b>	That part of switched interconnection service provided for the purpose of originating or terminating a call which originates and terminates within the local calling area.
<b>MFJ (Modification of Final Judgment)</b>	The Divestiture agreement between the Justice Department and AT&T that forced AT&T to get out of the local exchange business and give up its local phone companies. It required the divested companies to provide equal access to long distance (interexchange) carriers. See also "Antitrust Consent Decree" and "Divestiture."
<b>Microwave System</b>	Generally, a digital or analog transmission system employing the use of radio frequencies above 890 Mhz.
<b>Non Traffic Sensitive Revenue Requirement (Recovery) [NTSRR(R)]</b>	The mechanism used in Kentucky to recover the common line revenue requirement from intrastate access.
<b>North American Numbering Plan (NANP)</b>	The dialing plan for the U.S., Canada, Caribbean and northern Mexico that allow locations on local telephone networks to be uniquely identified by a 10-digit telephone number.
<b>ONA (Open Network Architecture)</b>	Overall design of a communication carrier's basic network, permitting all network users (including all enhanced service providers) to connect equally to the basic network capabilities.

<b>Personal Communications Services (PCS)</b>	Radio communications that encompass mobile and ancillary fixed communication that provide services to individuals and businesses and can be integrated with a variety of competing networks. Most of these services will be provided using radio frequencies in or near the 2 Ghz frequency band. These services generally fall under the category of Commercial Mobile Radio Services (CMRS) and are governed by <i>Part 24</i> of the FCC's Rules.
<b>Point of Presence (POP)</b>	The geographic location where a long distance (interexchange) carrier's facilities interconnect those of the local exchange carrier.
<b>Portability</b>	The technical capacity that permits a customer to retain the same local number at the same customer location regardless of the provider of local exchange service.
<b>Price Regulation</b>	The regulation of a company's prices versus the regulation of a company's earnings. Changes in prices are constrained through various mechanisms such as price ceilings, price floors, inflation based formulas, etc.
<b>Private Branch Exchange (PBX)</b>	A telephone switch installed on the user's premises, that permits a user to receive incoming calls, to dial other telephones on the premises, to access a tie line leading to another PBX or to access an outside line to the public switched telephone network. Many PBXs also offer call-control and call-accounting features.
<b>Private Line</b>	A non-switched telephone service used by high-volume or special-needs customers which offers a line between specific points solely for the customer's private use. See also "leased circuit."
<b>Productivity Factor</b>	The element of a price regulation or price cap formula that captures the difference between telecommunications industry productivity and economy wide productivity.
<b>Public Switched Network</b>	A switching system providing switching and transmission facilities to many customers; any common carrier network providing circuit switching between public users. The term generally applies to the public telephone network.

<b>Rate of Return Regulation</b>	A method of regulation that specifies that maximum rate of return -- a ratio of net profit to total invested capital -- a telephone company is authorized to earn. Appropriate only in an environment with little or no competition. Generally involves social contracts between a company and the state that have historically created artificial pricing policies.
<b>Regional Bell Operating Company (RBOC)</b>	One of seven regional holding companies created by the AT&T divestiture to take over ownership of the Bell Operating Companies within their region. They are: Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, Southwestern Bell and US WEST.
<b>Resale Carrier</b>	A carrier that does not own transmission facilities, but obtains communications services from another carrier for resale to the public for profit.
<b>Special Access</b>	Non-switched exchange access service provided by local telephone companies. Used to make direct connections between a long distance provider's point of presence and an end user customer.
<b>SONET</b>	Stands for "synchronous optical network," a high speed fiber optic transmission technology that can carry services such as broad cast quality video, electronic data interchange (EDI), long distance medical imaging, multimedia education, and movies on demand.
<b>Subscriber Line Charge</b>	A charge paid by the telephone subscriber for the ability to access an IXC for the purpose of originating and terminating interstate calls and to defray a portion of the expense of providing the subscriber's access lines. The charge is a fixed monthly fee determined by the FCC, assessed by the telephone company on each line of a subscriber.
<b>Switched Access</b>	That part of switched interconnection service provided for the purpose of originating or terminating a toll service.

<b>Switched Interconnection Service</b>	That part of interconnection service which utilizes the local exchange company's switching facilities to provide line or trunkside access or both to the local exchange company's end office or tandem switches for the purpose of originating and terminating the telecommunications services of other telecommunications companies.
<b>Tandem Office</b>	A major Telco switching center for the switched telephone network, which interconnects two or more central offices that cannot be directly connected; a major switching center linking several end offices and/or IXC points of presence especially in high-density areas.
<b>Tariff</b>	The schedule or other writing filed with a commission that describes the rates, terms, and conditions of certain telecommunications services provided by the telecommunications company.
<b>Telco</b>	Telephone company.
<b>Telecommunications Company</b>	Any person, firm, partnership, corporation, association, or municipal, county or local governmental entity offering telecommunications services for hire or compensation.
<b>Telecommunications Services</b>	The services offered to customers for the transmission and utilization of two-way interactive communications and associated usage.
<b>Telephony</b>	Voice telecommunications.
<b>Toll Service</b>	The transmission of two-way interactive switched communications between local calling areas.
<b>Total Factor Productivity (TFP)</b>	A specific study methodology for defining industry inputs and outputs.
<b>Transport</b>	Facility between the telephone company and the IXC's point of presence and/or end user premises.

<b>Unbundled Access</b>	[Section 251(C)(3), Telecommunications Act of 1934] The duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of this section and <i>Section 252</i> . An incumbent local exchange carrier shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service.
<b>Unbundled Rates</b>	Rates in which the various rate elements that comprise the service are separately stated.
<b>Uniform System of Accounts</b>	A FCC prescribed accounting system encompassing both balance sheet and income statement accounts, used to review the operations of telecommunications common carriers under its jurisdiction.
<b>Universal Service</b>	The provision of widely available, reasonable, affordable basic local exchange services for all customers. Generally considered to encompass a basic set of services to provide access to the local network.
<b>Universal Service Fund (USF)</b>	The fund established to explicitly support universal service and by extension the processes involved in identification, collection, and disbursement of such funds.

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 Focused Review of the Price Regulation Plan  
 BellSouth Telecommunications, Inc. - Kentucky**

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- 1/ IR #133. Note - CLECs approved in multiple states would be counted more than once.
  - 2/ IR #133 – Exhibit Source.
  - 3/ IR #133.
  - 4/ IR #133.
  - 5/ IR #133.
  - 6/ IR #133.
  - 7/ "The Next Generation of Service Provider" Presented by Anurag Lal Vice President, Data and Internet Product Management e.spire Communications, Inc.
  - 8/ *Local phone competition increasing*. USA Today, September 2, 1999. Referencing FCC data.
  - 9/ Hyperion data obtained from [www.hyperion.net](http://www.hyperion.net).
  - 10/ [www.icgcomm.com/telecom](http://www.icgcomm.com/telecom) 8/28/99.
  - 11/ [www.icgcomm.com/telecom](http://www.icgcomm.com/telecom) 8/28/99.
  - 12/ [www2.espire.net](http://www2.espire.net) as of August 11, 1999.
  - 13/ IR # 131, Book 1 of 2, page 6 of 18.
  - 14/ [www2.espire.net/products/integrated](http://www2.espire.net/products/integrated).
  - 15/ *Reaching for some Lofty Goals*, Colorado Springs Gazette Telegraph Article. Interview with George Koons, GM King's Deer Telephone.
  - 16/ King's Deer terminology for fiber in the loop.
  - 17/ Roy Furchgott-Roth, "Cutting the Phone Cord," New York Times, September 17, 1998.
  - 18/ [Point.com/deafual.asp](http://Point.com/deafual.asp) 8/16/99.
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  - 21/ [www.home.net/source/thetruth.html](http://www.home.net/source/thetruth.html) 9/5/99.
  - 22/ [www.directv.com/press/pressdel/0,1112,198,00.html](http://www.directv.com/press/pressdel/0,1112,198,00.html).
  - 23/ IR #221.
  - 24/ IR #221.
  - 25/ IR #196.
  - 26/ IR #225.
  - 27/ IR # 221.
  - 28/ [www.qwest.com/press/story.asp&id=143](http://www.qwest.com/press/story.asp&id=143) Customers are to receive unlimited internet access and 250 minutes of long distance service for a flat rate of \$24.95 per month. Additional interstate minutes are \$.10 per minute.
  - 29/ Through EarthLink.
  - 30/ IR #121.
  - 31/ IR #121.
  - 32/ IR #121.
  - 33/ IR #121.
  - 34/ IR #'s 121 and 215.
  - 35/ Lohman 8/4/99 & 8/5/99.
  - 36/ IR #'s 121 and 185.
  - 37/ IR #121.
  - 38/ IR #'s 121 and 185.
  - 39/ IR #121.
  - 40/ IR #121.
  - 41/ IR #'s 121 and 185.
  - 42/ IR #'s 121 and 185.
  - 43/ IR #121.
  - 44/ IR #121.

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- 45/ IR #121.
- 46/ IR #121.
- 47/ IR #'s 121 and 185.
- 48/ IR #121.
- 49/ Interview Cunningham.
- 50/ IR #121.
- 51/ IR #121.
- 52/ Interview Cunningham.
- 53/ Interview Cunningham.
- 54/ IR #121.
- 55/ IR #121.
- 56/ IR #121.
- 57/ IR #'s 121, 192, 185.
- 58/ IR #'s 121, 192, 185.
- 59/ IR #135.
- 60/ Interview Harris.
- 61/ IR #135.
- 62/ IR #135.
- 63/ IR #135.
- 64/ IR #194.
- 65/ IR #194.
- 66/ IR #194.
- 67/ IR #194.
- 68/ IR #'s 121 and 194.
- 69/ IR #'s 121, 185, and 194.
- 70/ IR #'s 121 and 194.
- 71/ IR #'s 185, 121 (page 10 & 34) and IR #194.
- 72/ IR #161.
- 73/ Interview Harris.
- 74/ Interview Harris.
- 75/ IR #189.
- 76/ Interview Harris.
- 77/ IR #238.
- 78/ IR #135.
- 79/ IR #154.
- 80/ IR #154.
- 81/ IR #154.
- 82/ IR #154.
- 83/ IR #154.
- 84/ IR #154.
- 85/ IR #237.
- 86/ These include Hyperion, ICG and e.spire. AT&T and MCI did make comments, but these comments addressed primarily access issues.
- 87/ Reference: "*Price Cap Productivity Factors Can Make or Break Telecom Infrastructure Investments*", by Larry F. Darby, *Communications & Finance*, Vol. 2, No. 5 ( March 17, 1995). Mr. Darby was the former FCC Chief Economist and Chief of the FCC's Common Carrier Bureau.
- 88/ Now an operating company of Bell Atlantic.
- 89/ June 28, 1999 letter from John T. Nakahara representing the telecommunications companies to Ms. Magalie Roman Salas, Secretary, Federal Communications Commission.
- 90/ KPSC's Order relative to CBT's Petition for Rehearing.

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- 91/ BellSouth-KY General Subscriber Services Tariff.
  - 92/ IR #157.
  - 93/ IR #157.
  - 94/ IR #183.
  - 95/ IR #173, Commission Order in BellSouth-KY, MCI Arbitration.
  - 96/ IR #113.
  - 97/ IR #122.
  - 98/ IR #204.
  - 99/ IR #187.
  - 100/ IR #146.
  - 101/ IR #156, Order in Administrative Case No. 360, dated May 22, 1998.
  - 102/ IR #116, Direct Testimony of Fred Gerwing, Exhibit FLG-1.
  - 103/ IR #175.
  - 104/ IR #175.
  - 105/ IR #179.
  - 106/ IR #156, Order in Administrative Case No. 360, dated May 22, 1998.
  - 107/ IR #156, Order in Administrative Case No. 360, dated May 22, 1998, footnote 52.
  - 108/ IR #168, Order in Case No. 98-348, dated August 21, 1998.
  - 109/ IR #231.
  - 110/ IR #235.
  - 111/ IR #156, Order in Administrative Case No. 360, dated May 22, 1998.
  - 112/ IR #146, KPSC's Order Case No. 97-074, dated January 21, 1998.
  - 113/ IR #164.
  - 114/ IR #146.
  - 115/ IR #236.
  - 116/ Vantage, BellSouth-KY Draft Report Review Meeting; September 2, 1999.