BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

September 22, 2000

IN RE:	)	
	)	
UNIVERSAL SERVICE PROCEEDING	)	**DOCKET NO. 97-00888**
	)	

PHASE II ORDER RE: DETERMINATION OF COST MODEL AND REVENUE BENCHMARKS

This matter came before the Tennessee Regulatory Authority (the "Authority") at the regularly scheduled Authority Conference held on August 15, 2000 for determination of the appropriate cost model and revenue benchmarks to be used by BellSouth Telecommunications, Inc. ("BellSouth") and United Telephone-Southeast ("UTSE") in calculating Universal Service funding.

BACKGROUND

The Authority convened the Universal Service Docket to establish an intrastate Universal Service funding mechanism pursuant to Tenn. Code Ann. § 65-5-207; 47 U.S.C. § 214 of the Communications Act of 1934, as amended; the federal Telecommunications Act of 1996; and Federal Communications Commission ("FCC") Order 97-157, 12 FCC Rcd 8776 to 9616 (1997).

At the second Pre-Hearing Conference held on September 23, 1997, the Hearing Officer admitted several entities as parties to this proceeding with full rights of participation.[1] It is only necessary to recall here that included among those parties are BellSouth, UTSE, AT&T Communications of the South Central States, Inc. ("AT&T"), and MCI Telecommunications Corp. ("MCI"), as these parties have submitted filings relevant to the decisions contained in this Order.

The Authority is addressing Universal Service for non-rural carriers in Tennessee, namely BellSouth and UTSE, in three phases. In Phase I, the Authority defined, in an Interim Order issued on May 20, 1998, the general parameters for determining the size of the intrastate Universal Service Fund. The Authority recognized that the size of this fund could have a significant impact on competition. As the Authority stated,

> a fund that requires large contributions from telecommunications providers could discourage new entrants from doing business in Tennessee and encourage such companies to devote their resources to other states where Universal Services contributions are less. To the contrary, a fund that is too small could result in high cost areas not receiving the support needed to maintain "affordable" telephone services.[2]

The Authority concluded that the Tennessee intrastate Universal Service Fund will provide support to carriers who serve customers in high cost areas, serve low-income customers, and provide discounted educational lines to schools and libraries.

In Phase I, the Authority also defined the services to be included in the revenue benchmark for calculating support at the wire center level. Basically, this calculation derives the average revenue per residential line for each wire center. In addition, the Authority determined that cost studies for each wire center should reflect the forward-looking costs of providing the services included in the revenue benchmark. Finally, Phase I determined which telecommunications service providers are required to contribute to the intrastate fund.

---

[1] *See Interim Order on Phase I*, Docket No. 97-00888, May 20, 1998, at 3.
[2] *Interim Order on Phase I*, Docket No. 97-00888, May 20, 1998, at 4.

Phase II, which is still in progress, addresses the appropriate level of costs and revenues by wire center to be used in calculating the amount of intrastate Universal Service support for BellSouth and UTSE. Two models have been presented by the parties for estimating Tennessee's intrastate Universal Service costs. BellSouth and UTSE favor the Benchmark Cost Proxy Model ("BCPM"). AT&T and MCI favor the HAI, or Hatfield, Model. On September 16, 1999, the Authority issued its Interim Order on Phase II, in which the Authority ordered twenty-five (25) common adjustments to these models. The Authority also determined that the minimum amount of support necessary for the high cost areas will be determined by summing the amounts by which costs exceed the revenue benchmark in all high cost wire centers and then subtracting the amount of federal support.

Phase III will address the rate rebalancing permitted by Tenn. Code Ann. § 65-5-207, along with any remaining administrative issues. Rate rebalancing will result in the affected companies filing proposals to rebalance rates and will include proposals for collecting the support necessary for Universal Service.

COST MODELS

Comparison of the BCPM and HAI Models

In its Interim Order on Phase II, the Authority ordered the parties to make certain adjustments to their respective models' inputs. Even after these adjustments, however, significant differences remained. The reasons for these differences are as numerous as the different inputs used and the different simplifying assumptions made in these models.

A significant portion of Universal Service cost is driven by costs associated with outside plant. A number of variables enter into the determination of costs for outside plant, including investment in copper cables in the distribution plant; investment in copper and optical fiber cables in the feeder plant; investment in poles, trenches, conduits, and other structures that support or house the copper and fiber cables; and investment in serving area interfaces and digital loop carriers that connect the feeder and distribution plants.

To estimate the costs of cable and structures in the distribution and feeder plants, the BCPM uses company-specific values, which reflect the costs of the incumbent local exchange carrier's ("LEC") embedded plant. In contrast, the HAI model uses forward-looking investment as opposed to embedded investment.

The remainder of outside plant investment as determined by the BCPM and the HAI model is also significantly influenced by factors other than cable and structure costs. These factors include, but are not limited to, the methodologies used in designing outside plant and determining customer locations. Other things being equal, the design of outside plant facilities and the projected costs of Universal Service will differ to the extent the models use different assumptions and techniques to design and populate customer service areas, engineering requirements, optimization techniques, and types of technology.

The models submitted to the Authority use different approaches for loop plant design. They also utilize different clustering algorithms to create serving area interfaces. The clustering algorithms are used to create the number of feasible serving areas.

The BCPM uses ultimate grids, based on latitude and longitude, to determine serving areas. To design a distribution plant, the BCPM divides a customer service area into four quadrants, each a potential distribution area; the model assumes that the number of roads in a quadrant determines total cable length in a distribution network. The HAI model clusters customers without any limitation based on artificial latitude and longitude constraints.

Findings

The Authority found in its May 20, 1998 Interim Order on Phase I that "cost studies should use factors which reflect the forward-looking least cost technology of an efficient firm operating in Tennessee."[3] The Authority finds that the HAI model is consistent with this approach.

Using the existing LEC network to model the cost of plant investment, as proposed by the BCPM, reflects inefficiencies in LEC plant design and deployment that might not be present using a forward-looking approach. A potential entrant should not have to pay for inefficient investment decisions made by incumbent LECs in the past, especially when considering that the costs of these inefficient investments were paid for in large part by monopoly ratepayers. Therefore, the BCPM, which is predicated on the existing LEC network, is less likely to accurately predict a forward-looking economic cost of Universal Service than is the HAI model.

Consequently, the Authority adopts the HAI model at this time. The Authority will also continue analyzing subsequent decisions made by the FCC and may ultimately revisit the models and any new models at a later date to determine the appropriate cost model on a going forward basis.

REVENUE BENCHMARKS

Background

In its May 20, 1998 Interim Order on Phase I, the Authority found that the revenue benchmark used in calculating support for each wire center should be the average revenue per residential line for that wire center. Further, the Order stated that the revenues utilized in these calculations should include revenues from basic local service, toll, directory

[3] *Interim Order on Phase I*, Docket No. 97-00888, May 20, 1998, at 41.

assistance, all vertical features, touch tone, zone charges, long distance access (intrastate/interstate), interstate subscriber line charges ("SLC") and white pages, as well as the subsidy provided by yellow page advertising.

The Order also required the use of current approved tariff rates to determine the revenue benchmark. For non-usage-sensitive revenues, the Order states that the demand should be the most current units. For usage-sensitive revenues, however, the demand should be the latest twelve (12) month period.

BellSouth's Revenue Benchmark

BellSouth utilized actual revenues from the twelve (12) month period ending May 1999 for calculating toll, directory assistance, and switched access revenues. BellSouth divided these revenue numbers by the total number of access lines as of December 1998 to arrive at the average revenue per line. BellSouth claimed that it experienced problems in capturing data for certain wire centers; therefore, it used July revenues for local service, vertical service, and white pages as substitute data. In addition, touch tone, SLC, and zone charge revenues for the wire centers in question were recalculated using the May demand data for these rate elements.

BellSouth also assumed that each access line generates $3.84 in SLC revenues (the May average for Tennessee) and zone charge revenue of $1.00 per zone (the current rate). BellSouth notes that, since access charges are not assessed to end-users, the benchmark study allocates wire center-specific access minutes to residential customers on the basis of an October 1998 statewide study.

In capturing revenue from the latest twelve (12) months, BellSouth included revenue from primary and additional lines, including local service, toll, and vertical service revenues. The total access line count used to arrive at the average per line revenue also includes primary and additional lines.

Findings

Based on the foregoing, the Authority concludes that BellSouth should revise its revenue benchmark based on the most recent twelve (12) months of data. Additionally, BellSouth should provide and use the latest monthly access line count by wire center. BellSouth did not divide its benchmark revenue amounts by a corresponding access line count in determining an average revenue per line. BellSouth captured revenues for the twelve (12) months ending May 1999, but used the access line count for December 1998 to calculate the average revenue per line. The access lines contained in the cost model were used in estimating forward-looking costs, and are not tied to a specific time period as are revenues. Accordingly, when it revises its revenue benchmark, BellSouth should also provide the most recent monthly access line count by wire center, inclusive of primary and additional residential access lines, to match the period for which revenues are captured.

UTSE's Revenue Benchmark

UTSE's study develops a revenue benchmark on an exchange basis using a December 1998 access line count. Further, UTSE captured the revenues from July 1998 to June 1999 to calculate average revenue per line for the following services: touch tone, custom calling features, intraLATA toll revenue, intrastate and interstate access. UTSE summed the revenues for each service per exchange over the twelve (12) month period and divided each sum by twelve (12) to calculate average revenue per month per service. UTSE then divided the average revenue per month by the total number of residential access lines in service as of December 1998 to calculate average revenue per line per service. USTE's study does not include non-recurring revenues generated from its core services.

UTSE captured usage-sensitive revenues from primary and additional lines. It appears, however, that UTSE used only primary access lines in calculating the average revenue per line. In addition, UTSE used current approved-tariff primary line rates to determine the revenues for basic local exchange service. UTSE assumed a $3.50 SLC for all residential lines, failing to recognize that additional lines are assessed a higher SLC rate.

UTSE notes that sixty-eight percent (68%) of all white page and directory assistance revenues were allocated to residential access lines. UTSE does not have zone charges in its territory; therefore, no zone charge revenues were included in the benchmark.

AT&T contends that UTSE's revenue benchmark filing does not appear to comply with the May 20, 1998 Interim Order on Phase I.[4] More specifically, AT&T states that in developing per line revenue for most components, such as custom calling, touch tone, and toll revenues, UTSE identified the total revenues for the component, developed the average monthly revenues, and then averaged the revenue per line in each exchange. For the SLC revenue component and the basic local service revenue component, however, UTSE merely used the tariff rate, which understates the revenues. For example, by using $3.50 as the per-line SLC revenue, UTSE totally ignored the higher SLC charge that is applied to additional lines. Similarly, by using only the tariff rate for residence service, UTSE ignored local service revenues from such items as non-recurring charges and expanded calling. AT&T contends that these components of the revenue benchmark should be calculated using the same process used to calculate custom calling revenues per line.

[4] Comments of AT&T, October 18, 1999, at 3-4.

Findings

Based upon the foregoing, the Authority concludes that UTSE should submit a revised revenue benchmark study to reflect revenues by wire center, as previously ordered by the Authority, rather than by exchange as submitted by UTSE. In addition, UTSE should submit the revised study to include non-recurring revenues as well as SLC revenues inclusive of both primary and additional lines. Consistent with the May 20, 1998 Interim Order on Phase I, UTSE should provide the revised revenue benchmark based on the most recent twelve (12) months to date of available data. The Authority also finds that UTSE should provide the latest available monthly access line count by wire center, inclusive of primary and additional residential access lines, to match the period for which revenues are captured.

UTSE did not include non-recurring revenues in its revenue benchmark. While the Authority's May 20, 1998 Interim Order on Phase I did not specifically identify non-recurring charges, it clearly stated that revenues from virtually all residential services should be included. These revenues represent charges that a company assesses its customers for installation services and subsequent changes to service. A potential market entrant could expect to obtain revenues from non-recurring charges; therefore, these revenues would be considered portable. For this reason, the Authority finds that UTSE should include revenues for non-recurring charges in the revenue benchmark.

Additionally, a potential competitor could expect that some of its residential customers would order additional lines. In order to properly match the revenue benchmark with the elements in the cost models, it is essential to include SLC revenues from additional lines in the benchmark for purposes of calculating the amount of intrastate support.[5] The federal SLC for additional residential lines is higher than that for primary lines. For this reason, the Authority finds that UTSE should include SLC revenues for additional lines in the revenue benchmark by reporting the average annual SLC revenue for all residential lines.

YELLOW PAGE EARNINGS

Discussion

In its May 20, 1998 Interim Order on Phase I, the Authority stated two reasons for including yellow page advertising earnings in the Universal Service Fund revenue benchmark. The first is that yellow page earnings have historically subsidized local telephone rates. The second is that including yellow page earnings in the Universal Service Fund revenue benchmark will decrease the size of the fund, which should in turn encourage competition.

Findings

After further consideration of this issue, however, the Authority is of the opinion that yellow page earnings should be excluded from the Universal Service Fund revenue benchmark because yellow page earnings do not appear to be portable across competing carriers. Specifically, the Authority finds that, at this time, competing firms cannot reasonably expect to capture yellow page revenues that flow to the incumbent LEC. Including such non-portable revenue components in the Universal Service Fund revenue benchmark overstates the competing firms' per-line revenues, resulting in insufficient Universal Service payments. This, in turn, could discourage the development of a competitive marketplace. Although the yellow page subsidy should still be acknowledged,

[5] The Authority previously ruled in Phase I that intrastate Universal Service support would be provided only on primary or residential lines. The ruling in this decision, however, is directed at determining the amount of intrastate support and not what lines should be eligible to receive support.

the rate rebalancing to be addressed in Phase III is a more appropriate stage at which to address the issue of the yellow page subsidy. Therefore, BellSouth and UTSE shall exclude yellow page earnings subsidies from the revenue benchmark.

IT IS THEREFORE ORDERED THAT:

1. The HAI model is adopted for the purpose of estimating the amount of support necessary for intrastate Universal Service funding;

2. The methodology submitted by BellSouth for calculating its revenue benchmark, with the exclusion of the revenues from yellow page operations, is approved;

3. Consistent with the Authority's May 20, 1998 Interim Order on Phase I, BellSouth shall provide a revised revenue benchmark based on the most recent twelve (12) months to date of available data and shall also provide the latest available monthly access line count by wire center, inclusive of primary and additional residential access lines, to match the period in which revenues are captured;

4. United Telephone-Southeast shall submit a revised revenue benchmark study to reflect revenues by wire center as previously ordered by the Authority and to include non-recurring revenues as well as subscriber line charge revenues inclusive of primary and additional lines; shall remove the revenue attributable to its yellow page operations from the benchmark; shall provide the revised revenue benchmark based on the most recent twelve (12) months to date of available data, consistent with the Authority's May 20, 1998 Interim Order on Phase I; and shall provide the latest available monthly access line count by wire center, inclusive of primary and additional residential access lines, to match the period for which revenues are captured;

5. BellSouth and United Telephone-Southeast shall jointly file, within fourteen (14) days after the date this Order is entered, the most recent data that will be used in calculating the revenue benchmark and access line count; and

6. Any party aggrieved with the Authority's decision in this matter may file a Petition for Reconsideration with the Authority within fifteen (15) days from the date of this Order.

Sara Kyle, Chairman

H. Lynn Greer, Jr., Director

Melvin J. Malone, Director

ATTEST:

K. David Waddell, Executive Secretary