SECTION 1 - Introduction

Voters say that they are more concerned about health care, social security, education, and a whole bunch of other things their children can't spell.

The Daily Show
November 5th, 1998

The quote above, although humorous, is indicative of the view that the America's educational establishment could be improved. Critics note poor test scores, low educational standards, and in the wake of the Littleton massacre a shortage of discipline and moral values as symptoms of a dysfunctional establishment. With a new round of elections coming in a little more than year, education reform promises to be a major issue. A survey of presidential candidates web pages finds a definitive statement about education policy on a majority of the pages. The suggestions for school reform are divisive along party lines with Republican candidates calling for market-based reforms and the Democratic candidates urging reform of the existing public education system.

Mirroring the division between Democratic and Republican education policy, newer reform proposals have shifted emphasis from changing the behavior and organization of schools to altering market incentives available to schools. Market-based reformers contend that competition brought about by privatization, open enrollment, or voucher programs, is the most effective way to improve school outcomes.[1] They contend that markets will be more responsive to consumer demands for quality and surpass the existing public school monopoly in efficiency.

Although market-based provision of goods and services is an intuitively appealing idea for economists, empirical evidence to support for market-based reform of education

[1] School outcomes include test scores, dropout rates, breadth of academic and extracurricular offerings, and school environmental factors like safety and peer group composition.

is not entirely conclusive. Evidence of the efficacy of reform programs is equally inconclusive. For example, a study of school privatization in Baltimore, Maryland finds no significant difference in cost or quality between traditional public schools and for profit public schools (Williams and Leak, 1995). A recent article in U.S. News and World Reports describes charter and private schools in Arizona and Michigan as suffering from the same problems as public schools, as well as a host of unique problems. The article cites numerous instances of financial fraud and abuse, nepotism, substandard or non-existent school facilities, and weak school curriculum. One school allowed students to exempt a literature class by instead watching movies based on literary works.

Given the importance of education to the continued economic and social well being of our nation, school reform should be under-taken in the most cautious manner. Market based reforms, which would involve a large-scale restructuring of the education establishment, should be pursued only when it is sufficiently clear that public schools are somehow exercising market power and the exercise of market power is harmful to school outcomes and economic efficiency.

This dissertation will provide evidence that will be useful in evaluation of school reform policies and educational policy in general. Unlike the majority of previous studies of schools, I will utilize models found in the industrial economics literature. I will begin my study by describing school output utilizing the hedonic valuation model. The goal is to create an intuitively appealing way to describe the quality of a school that produces many outputs. After describing the output of schools, I will develop a market definition for public schools, using Tennessee as an example. I will adapt a common model used in education research by utilizing a unique econometric model identification strategy.

Finally, building upon the results of the two previous essays, I will examine how market power effects the technical efficiency of schools.

Section 2 – Formulating a School Quality Index

Section 2.1 - Introduction

One of the fundamental problems associated with formulating policies to improve educational quality is, strangely enough, defining the term educational quality. Maddaus and Marion note "numerous studies have indicated that parents believe quality of education is important, but such studies rarely attempt to determine what parents mean by 'quality of education' or how they decide whether a given school provides this quality education"(1995, 76). Given the lack of research concerning what parents consider quality education, it is possible for school administrators to pursue educational goals that are not shared by parents. Jaeger, Gorney, and Johnson (1994) cite survey evidence that indicates school administrators closely identify school quality with performance on standardized tests while parents are more concerned with school safety and environment, the availability of a diverse curriculum, and teacher qualifications than test scores.

The economics profession has done little to clarify the definition of school quality as economists generally follow the lead of school administrators, using test scores as a measure of school quality, while neglecting factors that parents view as important in assessing school quality. Research by Maddaus and Marion (1995) underscores the inadequacy of test scores as a measure of school quality by showing that test scores account for only 20 percent of the variation in high school enrollment trends in a sample of Maine school districts. Although important, test scores do not fully capture the concept of school quality that guides the school choice decision.

A good measure of school quality must incorporate the diverse educational objectives of both parents and school administrators. However, since schooling is a good with many attributes that contribute to its quality it is not intuitively obvious how to form a measure of school quality. One way to overcome this difficulty is to form an index of school quality based on hedonic theory, which contends that the market price of a good can be described as a function of product characteristics. A hedonic quality index would appeal to economists as the weights used in the index are generated from market data.

Section 2.2 -- A Model of School Choice

A household's choice of schooling services will typically depend on the availability and quality of the local public school system, private religious and non-religious schools, and perhaps nearby public (including magnet and charter) schools that lie outside the residential school zone. The school choice decision is further constrained by the price of schooling alternatives and parental perception of what constitutes school quality.

Formally, we assume consumers maximize utility with preferences over schooling services provided by school E and a composite commodity X. Each school produces a unique schooling product expressed as $E = E(A_1,\ldots,A_n)$, where the A_i represents the many attributes of the education bundle. Schooling enters into the utility function only in terms of attributes yielding the utility function $U = U(X, A_1,\ldots,A_n)$.[2] This specification allows households to make trade-offs across components of the schooling bundle when

[2] I assume that schooling services are an intermediary good used to produce education. Attributes of the schooling bundle are internalized by the child and converted into educational goods. Some schooling attributes are supplied independently by private markets. For example, athletic instruction is often provided by community recreation agencies. Parents often hire tutors for music or language instruction. I choose not to model this aspect of the school choice decision, as I feel it is exogenous to the school choice decision.

choosing among alternative schools. The consumer's problem is to choose a level of private good consumption and a bundled set of education services subject to the budget constraint $B = p_x X + T(\vec{A}) - \tau$ where p_x and τ are the price of the composite commodity and tax paid to support public schooling respectively.[3] Following hedonic theory, the tuition price charged by a school $T(\vec{A})$ is modeled as a function of product attributes. Solving the consumer maximization problem, after normalizing the price of the composite commodity to one, yields the first order condition

$$(1) \quad \frac{\delta T}{\delta A_i} = \frac{U_{A_i}}{U_X} \quad \mathrm{i} = 1,\ldots,n.$$

The expression $\frac{\delta T}{\delta A_i}$ is the marginal implicit price function for attribute A_i. It represents the marginal effect an additional unit of attribute A_i has on tuition prices. In equilibrium, consumers equate the marginal implicit prices of all attributes to the marginal rate of substitution between product attributes and the composite commodity.

To meet the demand of heterogeneous consumers, schools have adopted the practice of providing a bundled set of educational services. This bundle contains a diverse set of outputs including diverse academic offerings, athletic opportunities, and a breadth of extracurricular activities. Some schools find niches in the schooling marketplace like those that specialize in religious, artistic or military instruction.

Formally, schools are assumed to maximize profit firms producing differentiated products sold in a competitive market. Let $\Pi_j = (T_j + S_j)m_j - C_j$ where T_j and m_j are

[3] It is assumed that the choice of the level and mix of public school output has been determined through the voting process. Accordingly, the tax price is exogenous to the consumer and must be paid regardless of the choice of schooling.

the price and enrollment of the j[th] school respectively. The per pupil subsidy S_j might be provided by federal/state governments in the case of public schools. Private schools can receive subsidization from governmental agencies, but generally receive contributions from religious and charitable organizations. Enrollments are assumed to decrease as the tuition price increases. Enrollments are positively affected by desirable attributes like above-average test scores or a wide selection of instructional and extracurricular activities. Factors like high dropout rates, frequent criminal activities and negative peer group interactions should lower the tuition price of the school. The school cost function is defined as $C_j = C(m_j, A_1, \ldots, A_n)$. Costs are increasing in enrollments, reflecting the costs of hiring additional teachers and constructing new facilities to accommodate more students. Costs may increase or decrease with the attributes. Instructional attributes, like increased sports or course offerings will increase costs; improved socioeconomic conditions, may on the other hand, decrease the cost of producing the schooling bundle. The first order conditions for the school maximization problem are:

$$(2)\quad T(\vec{A}) + S_j = \frac{\delta C}{\delta m}$$

$$(3)\quad \frac{\delta T}{\delta \mathrm{A_{ij}}} m = \frac{\delta C}{\delta A_{ij}}$$

Equation two indicates schools should increase enrollment to the point where tuition plus subsidy is equal to the marginal cost of an additional student. If schools receive large subsidies or have low marginal cost, possibly resulting from excess capacity, it will charge a low or zero price.[4] Satisfying equation three requires that schools equate the

[4] If marginal cost is close to zero, then schools will want to expand their enrollments to, or even past capacity. Zero marginal cost implies that profit maximization and revenue/budget maximization are equivalent.

marginal revenue product of an incremental unit of an attribute with the marginal cost of providing an additional unit of the attribute.

In equilibrium, households will have sorted themselves across communities and public/private schooling alternatives based on the opportunities made available by schooling providers. Since the focus here is on how consumers value attributes and components of the education bundle, equilibrium is modeled in terms of the resulting tuition price T for public and private schools. Known as the hedonic price function, it is written as $T = T(A_1,\ldots,A_n)$.[5] Empirical estimation of the hedonic price function will form the basis for the creation of the hedonic school quality index.

Empirical Methodology

Hedonic theory places many restrictions on the functional form of the hedonic price equation $T = T(A_1,\ldots,A_n)$. Rosen (1974) illustrates, using typical cost and preference functions, that the hedonic price function is a non-linear function of product attributes.[6] Besides the inherent difficulties non-linear behavior brings to econometric analysis, Rosen argues that without prior knowledge of supplier and consumer traits, the functional form of $T(\vec{A})$ is generally unknown to the analyst. Choosing the correct functional form of the hedonic price equation is essential, as using an improper specification will lead to inefficient, possibly biased, parameter estimates, which will contaminate the derivative quality index.

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[5] For the public school system, in which the household resides, the out or pocket tuition costs for public schooling is zero. For all other educational alternatives, tuition will generally be nonzero. Exceptions would include some public schools that do not charge tuition to out of district students. For these districts, marginal cost is likely to be low and per pupil aid through S_i from higher levels of government provides sufficient revenue to compensate the districts the cost of providing education services.

One approach to the estimation of hedonic price functions is the flexible functional form technique suggested by Halvorsen and Pollakowski (1981). The technique involves estimating a single equation that can incorporate all equations of interest. This is done by estimating

$$(4)\ \mathrm{T}^{(\vartheta)} = \delta_0 + \sum_{i=1}^{n} \delta_i A_i^{(\lambda)} + \sum_{i=1}^{n} \sum_{j=1}^{n} \delta_{ij} A_i^{(\lambda)} A_j^{(\lambda)}$$

where $T^{(\vartheta)}$ and $A^{(\lambda)}$ are Box-Cox transformations. Utilizing Box-Cox transformations allows equation 4 to take on double-log, semi-log, log-linear, or quadratic functional forms. When the analyst is unsure as to whether all relevant product characteristics are being included in the analysis, Cropper, Deck, and McConnell (1988) show that linear Box-Cox models are preferable to quadratic models as they produce the lowest mean percentage errors. Selection of the properly model specification is made using a likelihood ratio test or other appropriate specification test.

An alternative approach to using traditional hypothesis test to select the best model, is to utilize a model selection criteria like the Akaike Information Criterion (Akaike 1974). Model selection criteria are very useful in situations when either the true model is unknown to the analyst or there are a large number of potentially feasible models. Both of the cases apply to estimation of hedonic price functions. Model selection criteria provide a tool to analyze a portfolio of competing models simultaneously, instead of analyzing model individually using hypothesis tests. The technique involves scoring each model with a measure of 'goodness-of-fit'. The model with the lowest score has best fit. Unlike 'goodness of fit' measure like R^2 or adjusted

[6] If T(A) is linear, the resulting marginal implicit price function will be constant for all agents. This is equivalent to the existence of homogeneous consumers and producers implying the existence of a

R^2, information criteria can account for the complexity of the model. For example, the AIC selects parsimoniously parameterized models by penalizing models with large numbers of parameters. In sum, model selection criteria are very useful in selecting a properly specified hedonic price equation.

The Quality Index

The hedonic quality index is formed by calculating

$$(5) \quad \frac{\sum_{i=1}^{n} \frac{\delta \hat{T}(\vec{A})}{\delta A_i} A_i - T}{T}$$

where $\frac{\delta \hat{T}(\vec{A})}{\delta A_i}$ is the estimated marginal implicit price function. For a given school, $\sum_{i=1}^{n} \frac{\delta \hat{T}(\vec{A})}{\delta A_i} A_i$ is the estimated valuation of the schooling product. The measure of quality presented in equation 5, rewards schools that have estimated valuations that exceed charged tuition. These 'best buy' schools contain, relative to their tuition price, larger amounts of desirable attributes. Low quality schools will generally under supply desirable attributes relative to their tuition price.

Data

The data used in the empirical analysis encompass both public and private schools in Tennessee for the school year 1990/91. The public school data were drawn largely from the *Annual Statistical Report of the Department of Education*. These data were completed by a telephone survey of all public schools in the state on the tuition charge to out-of-district students. While the state generally has an open enrollment policy, local school districts could charge tuition to nonresident students. Finally, standardized test

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standardized, undifferentiated commodity.

score data were obtained from the State Board of Education. Note that state and federal aid follows the student to the school of their choice.

Data on private schools were acquired through a mail survey of all private schools in the state. The listing of schools was obtained for the State Department of Education which maintains master files of all private schools in the state. The survey requested information on enrollment, tuition and fee charges, staff qualifications, class sizes, extracurricular activities, etc. (Test score data were not requested and are not available from public sources.) A copy of the survey instrument can be found in Appendix 1. A total of 175 schools (from a population of more than 500) responded to the initial survey. Direct telephone follow-ups and the use of third party information (including state records and private school directories) yielded adequate data for 60 percent of the private schools in the state.

Section Three - Competition and Market Definition in Schooling Markets

Section 3.1 -- Introduction

In a survey of the education literature, Hanushek (1986) points out that numerous attempts to explain the determinants of educational outcomes have failed to generate a consensus. He notes "differences in quality do not seem to reflect variations in expenditures, class size, or other commonly measure attributes of schools and teachers (1142)." By the early nineties, a new branch of the literature emerged arguing that school outcomes are primarily determined by the degree of competition facing a school. Known as the empirical school competition literature, this research generally supports claims made by Chubb and Moe (1990) that competitive pressure is necessary for schools to achieve effective organization and increase educational quality.

What is notably absent from the empirical school competition literature is a careful definition of the geographic and product boundaries of schooling markets. Market definition is traditionally the initial step in the analysis of market behavior as it forms the basis for all estimates of market power. Market definitions that are too broad will tend to underestimate the degree of market power while definitions that are excessively narrow will overestimate the market power. Defining the market correctly is necessary for any valid inference as to the degree of market power being exercised.

Besides the absence of a definitive market definition, the school competition literature suffers from econometric problems as issues of model specification are generally ignored. Further, parameters that describe competition are difficult to interpret, especially when the estimating equation is specified incorrectly. I contend that the production function method utilized by the school competition literature can be rescued from its econometric problems by utilizing the econometric strategy outlined in the previous section. However, parameters describing competition will still have vague interpretation as they come from a reduced form model. What can be gleamed from these estimates is information useful in defining schooling markets. Before I discuss the empirical and conceptual basis for using schooling production functions in market definition exercise, a review the empirical school competition literature and the untested market definition that already exist in the literature is needed.

Section 3.2 – Literature Review

The empirical school competition literature focuses on two major themes. The first emphasizes the interactions of public schools in determining school outcomes. The second theme is that public school outcomes are influenced by competition from local

religious and non-religious private schools. Central to both broad research areas is the conjecture that competition from private or public schools forces school administrators to abandon personal agendas and maximize student achievement. Market power gives school administrators freedom to pursue actions that may be at odds with student achievement. Competition, in the sense that a schooling alternative is present, forces school administrators to align their interests with students and parents; abstaining from rents received from excessive bureaucratization or the implementation of discretionary policies. Anderson, Shughart, and Tollison (1991) quantify the detrimental effect of bureaucratic emolument seeking on educational outcomes; showing that states with larger educational bureaucracies have lower average test scores and higher dropout rates.

The first branch of the school competition literature deals with competition between public schools and its affect on school outcomes. In a study of Kentucky school districts, Borland and Howsen (1992, 1993), find a negative significant relationship between market concentration and test scores. Restricting her analysis to school districts in metropolitan areas Hoxby (1994b, 1996) reports substantively the same results as Borland and Howsen. Blair and Staley (1995) posit that school districts compete for students via by providing high quality schooling. They show that school outcomes are positively affected by the outcomes of neighboring school districts. The positive effect is interpreted as evidence that schools produce quality education in order to keep students from switching to rival districts.

The second branch of the school competition literature explores how competition between private and public schools affects public school outcomes. Hoxby (1994a) and Couch, Shughart, and Williams (CSW) (1993) show that public school outcomes are

improved by increasing enrollments in local private schools. Using the same data as CSW, Newmark (1995) shows that CSW's results are not robust with respect to functional form or the definition of variables. The work of Newmark is a reminder that the education literature, specifically the production function method utilized in all of the studies described so far, has for varying reasons failed to produce consistent results.[7]

The education literature contains several untested market definitions. Borland and Howsen (1992, 1993) and Murray and Wallace (1997) define the geographic dimension of schooling markets as a county. An alternate definition comes from Hoxby (1994a,b) who considers all counties in a metropolitan statistical area (MSA) to be in the same geographic market. On the product side of the market, private schools are readily assumed to be substitutes for public schools. However, some debate still persists about the competitiveness of different modes of private schooling. Religious and non-religious private schools may interact with public schools in a different fashion or may exhibit differing patterns of substitutions by consumers.

Section 3.3 – Conceptual Issues in Market Definition

A market is defined as the group of buyers and sellers whose trading establishes equilibrium outcomes including price, output and quality. Market bounds are discerned by examining the pattern of substitutions made by producers and consumers across product and geographic dimensions. Market bounds are reached when no other product in a different geographic region is considered to be a viable substitute for the product under

[7] The production function method is used to determine what inputs are used to produce an educational outcome. Results generated by the production function technique are often suspect due to a plethora of econometric problems involved in the estimation procedure. See Hanushek (1979) for a survey of the econometric difficulties encountered using the production function technique.

examination. Goods that are not substitutable will not influence market outcomes and thus should not be considered in the same market.

Geographic market bounds can be defined by answering the following hypothetical question: what is the smallest area that a hypothetical cartel can sustain non-competitive market outcomes.[8] Substitutions made by consumers and producers are attempts to circumvent unfavorable market outcomes. For example, if a consumer finds the public schooling options in her home district undesirable, they may be willing to attend a neighboring school district even though she may have to pay tuition. The smallest area that consumers are willing to make schooling substitutions is the relevant geographic market.

Product markets are defined by answering the same hypothetical question as geographic markets. Unlike other markets the universe of schooling products is quite small. Consumers can choose to attend local public schools, religious or non-religious private schools, neighboring public schools, or to home school their children. Examining the trends in substitutions between the various modes of schooling suffices to define the product dimension of schooling markets.

Section 3.4 -- Methodology

My approach to the market definition problem will employ two tactics. First, I will estimate econometric models adapted from the price correlation technique described by Stigler and Sherwin (1985). Secondly, I will augment the results of the econometric analysis with supporting evidence suggested by the Department of Justice (DOJ) *Merger*

[8] This is a modification of the hypothetical question used to define markets for antitrust analysis. Antitrust markets are defined by answering whether a hypothetical monopolist or cartel can sustain a small, non-transitory price increase. The smallest area that the price increase can be sustained is the relevant geographic market for antitrust purposes.

Guidelines. This approach will produce a robust market definition compensating for potential errors in the econometric analysis.

Stigler and Sherwin argue that the correlation between prices in different geographic regions is useful for defining markets. If prices are highly correlated across geographic regions then that is considered sufficient to include them in the same geographic market. Unfortunately the use of this technique can generate incorrect results due to the occurrence of spurious correlation. To eliminate the potential for spurious correlation, Stigler and Sherwin suggest controlling for mutually shared causal factors.

The motivation for using price correlation to find market bounds is that price is the competitive variable used by firms. However, public schools utilize quality rather than price as their competitive variable. Modifying the Stigler and Sherwin model to account for quality competition produces the empirical model

$$(6) \quad OUTCOME = f(SEC, SCHOOL, \ldots, NEIGHBOR)$$

where OUTCOME is a measure of school output like a test score or drop-out rates. SCHOOL is a vector of variables describing school district funding, facilities, organization, and staff. SEC is a collection of variables capturing the prevailing socioeconomic conditions in the school district. Finally, NEIGHBOR is a measure of neighboring school district outcomes. Significance NEIGHBOR indicates nearby school districts influence outcomes and should included in the same geographic market.

Blair and Staley (1995) estimate a similar model in a study of competition in Michigan MSAs. My approach differs from Blair and Staley's in many respects. First, I allow for competitive interactions to occur inside and outside MSAs. Excluding rural counties, especially those that border an MSA, will neglect potential market participants.

Secondly, to account for functional specification problem inherent in the estimation of education production functions, I will incorporate the flexible functional forms modeling technique and the use of model selection criteria. In general, the form of the production function for schooling outcomes is unknown making the use of model selection techniques the most efficient way to estimate the proper equation.

To test for bounds of the schooling product market I will adapt equation 1 to test for correlation between public school outcomes and a measure of private school competition. The empirical model is

$$(7) \quad OUTCOME = f(SEC, SCHOOL, \ldots, PRIVATE)$$

where PRIVATE is the variable constructed to capture private school competitiveness. A positive and significant coefficient for PRIVATE would indicate that private schools influence public school outcomes and should be included in the same product market.

The econometric models described above will provide useful evidence in defining market boundaries; additional evidence will help clarify market boundaries. The DOJ *Merger Guidelines* provide a concise summary of evidence useful in defining markets. Concerning the definition of geographic markets the *Merger Guidelines* suggest using evidence that buyers have shifted or have considered shifting purchases between different geographic locations in response to relative changes in competitive variables. Geographic market definition can be further enhanced by considering evidence that make decisions on the assumption that consumers will make substitutions between geographic locations in response to relative changes in competitive variables. Evaluating evidence on patterns of transfer enrollments, even though the point of origin is unknown, can provide useful evidence on the range of geographic substitution. Evidence on supply side

behavior can be found in Downes and Greenstein's (1997) study of entry in California schooling markets. The *Merger Guidelines* suggest that product market definition can be sharpened by examining consumers perception of substitute goods. Evidence on consumer perception of private schooling with or without religious content is contained in many survey studies.

Essay Three –Technical Efficiency and Competition in Schooling Markets

A common criticism of the public provision of education is that public schools are inefficient. Inefficiency, claimed to be the result of market power exercised by public schools manifests itself in two fashions; the establishment of bureaucracies and the exercise of managerial discretion. Anderson, Shughart, and Tollison (1991) argue that bureaucracies naturally arise from self-utility maximization by school administrators. They show that states with larger educational bureaucracies have lower test scores and higher dropout rates. According to Chubb and Moe (1990), bureaucracy is the bane of effective school organization. Effective schools are characterized by flexible, possibly decentralized, decision-making that is not possible with excessive bureaucracy. The exercise of managerial discretion can range from inadequate monitoring of teacher effort by administrators to implementation of personal educational agendas. Either are examples of behavior incompatible with the maximization of student achievement arising from alternate allocations of school resources.

Leibenstein (1966) describes inefficiency that results from the exercise of monopoly power is as x-inefficiency. In general, a firm is x-inefficient when it fails to produce maximum output with its allocated inputs or fails to produce its output in a least cost manner. The presence of x-inefficiency in schooling markets suggests a new way to

test the affect of market forces on schools. If competition aligns the interests of school administrators with student achievement, then schools in competitive markets should be more efficient than schools that face less competition. This test would be a substantial improvement over past attempts to quantify the effects of market power on school outcomes as it directly identifies a cause of poor school outcomes; inefficient resource allocation by school administrators.

The first step in performing a test of the effect of market power on the efficiency of firms is to obtain a measure of the efficiency of school districts. Data Envelopment Analysis (DEA) provides a intuitive, efficient technique to evaluate the efficiency of firms. DEA is a non-parametric technique that generates efficiency measure by solving a linear programming model. Since DEA is a non-parametric technique, it differs substantially from traditional regression-based approaches to evaluate efficiency through estimation of a production function. First, DEA recovers the "best practice" frontier, identifying firms that lie on or near the production function. Regression-based estimation of production functions find "average" production relationships, inasmuch they do not find the true production function.[9] Hanushek (1979, 1986) points out that improper functional specification may be responsible for the poor performance of production function studies. DEA overcomes this limitation of the regression-based approach since it does not require the specification of a functional form for estimation. Further, DEA can

[9] Regression-based estimates of production functions are constrained to pass through the means of all variables present in the regression equation. The resulting regression line does not identify the production function, which is the maximum output associated with a set of inputs, but rather a line that best fits a cloud of data points. Regression-based attempts to estimate production functions ignore firm inefficiencies, treating them as part of the error term. Failure to account for inefficiency will cause the true production function to systematically lie above the estimated function. Some attempts have been made to correct this deficiency of regression analysis by altering the distributional assumptions placed on the error terms. The technique will recover the true production function, but at the expense of the ability to conduct traditional hypothesis tests. The technique is still sensitive to functional specification as well.

correct for another weakness of the regression based approach; the inability to handle multiple outputs. Hanushek (1979) show that regression results may be poor when the measured educational output is incorrectly measured. The most likely source of measurement error is that the composite output, usually a test score, should be replaced by a multitude of outputs.

DEA efficiency measures are generated by solving the mathematical program

$$(8) \quad max \quad h_0 = \frac{\sum_{r=1}^{s} u_r y_{r0}}{\sum_{i=1}^{m} v_i x_{i0}}$$

$$subject\ to \quad \frac{\sum_{r=1}^{s} u_r y_{rj}}{\sum_{i=1}^{m} v_i x_{ij}} \leq 1 \quad j = 1,\ldots,n$$

$$u_r, v_i > 0$$

Where y and x are measured outputs and inputs respectively. The parameters u and v are generated by solving the maximization problem. The objective function in equation 8 is a variation of the intuitive measure of efficiency; output divided by input. The difference is that the efficiency measure is weighted to provide the most favorable measure of efficiency relative to the efficiency of the other firms under investigation. Efficient firms will have $h_0 = 1$; which implies that it not possible to produce more output with its chosen inputs.

Rewriting equation 8 into an equivalent minimization problem yields

$$(9) \quad min \quad f_0 = \frac{\sum_{i=1}^{m} v_i x_{i0}}{\sum_{r=1}^{s} u_r y_{r0}}$$

$$subject\ to \quad \frac{\sum_{i=1}^{m} v_i x_{ij}}{\sum_{r=1}^{s} u_r y_{rj}} \geq 1 \quad j = 1,\ldots,n$$

$$u_r, v_i > 0$$

Efficient firms will have $f_0 = 1$. However, inefficient firms will have $f_0 \geq 1$.

Although equations 4 and 5 yield intuitive efficiency measures, they are fractional programming problems that are difficult to solve. Charnes, Cooper and Rhodes (1978) show that equation 9 can be transformed into an equivalent linear programming problem. The advantage of transforming the problem into a linear programming format is the abundance of solution techniques available. The transformed problem is

$$(10) \quad min \quad g_0 = \sum_{i=1}^{m} w_i x_{i0}$$

$$subject\ to \sum_{i=1}^{m} w_i x_{ij} - \sum_{r=1}^{s} u_r y_{rj} \geq 0$$

$$u_r, w_i > 0$$

Solving this linear program for each firm yields efficiency scores that are interpreted in the same manner as solutions to equation 9.

To test the hypothesis that school districts that face greater competition will be more efficient I will employ tests described in Fare, Grosskopf and Weber (1989) and Banker (1996). The test begins by calculating efficiency scores for all firms in the sample. The sample will then be partitioned into two groups based upon the degree of competition facing the school district. I will test the effect of competition from public and private schools on the efficiency of school. I will measure the competitiveness of

private schools by market wide private school enrollments. Following Borland and Howsen (1992, 1993) and Hoxby (1994b, 1996) I will use the Hirfindahl-Hirschman Index (HHI) to measure the competitiveness of the market for public schooling. The HHI is defined as $\sum_{i=1}^{n}\left(\frac{s_i}{s}\right)^2$ where $\frac{s_i}{s}$ is the share of market enrollment by the i^{th} school[10]. If the HHI is equal to 1, then the school district is a monopolist provider of schooling of the market. As the HHI gets smaller, the market is assumed to be more competitive.

Banker (1996) describes a series of tests to determine if the mean efficiency of two (or more) groups of firms is significantly different. Rejection of the null hypothesis that there is no difference in mean efficiency implies technical efficiency is affected by market competition.

[10] Market enrollments will be determined from the market definition described in Section 3.

From: Pat Murphy
To: McCormac, Dan
Date: 7/6/2006 4:16:33 PM
Subject: Atmos WNA info

Dan,

I didn't make a detailed note of your request, so I'm going from memory. Let me know if this is not the information you needed.
The reports contain tables showing the WNA and total revenues reported for each year. Also, for some years I have a spreadsheet breaking those numbers down by month. 1999 is as far back as I can readily identify from my files. We didn't put descriptors on the files earlier than that. I'll need more time to go further back.

Pat

From: Pat Murphy
To: McCormac, Dan
Date: 7/13/2006 8:51:20 AM
Subject: Inventory question

Dan,

I finally found time to get with Gary to discuss your question about the $15 million in inventory in Discovery Question 36.

We're not sure exactly what you need, but as we understand your question:

When gas is injected into storage, no cost is passed on to customers. When gas is withdrawn, cost is recovered from customers. Atmos uses a FIFO method. So, the injected cost is what is charged to customers. Gary audits all these transactions by tracing to invoices.

Pat

CC: Lamb, Gary

From: Pat Murphy
To: McCormac, Dan
Date: 7/20/2006 5:16:48 PM
Subject: Atmos

Dan,

I found the workpapers I was remembering where injection and withdrawal signs were reversed. However, it has nothing to do with your question. At that time Atmos was taking swing gas off Texas Gas Pipeline in the winter and paying it back in the summer. So, they were accruing a liability in the winter months.

I can find no reference to storage fees for Barnsley in the last 2 ACA filings. Just the normal injections and withdrawals. Net cost in the ACA averages around $200 - $300 thousand. No where near $1.8 million. Just from looking at the schedule, there's no way they should be backing out $1.8 million from the revenue calculation. The $50,750,025 is comprised of priced out customer volumes. I would interpret the $1.8 million to be fees collected. Do you know if Atmos owns the Barnsley Storage? To my mind the $1.8 million should be added to revenues. Unless I am missing something BIG.

Pat

BEFORE THE TENNESSEE PUBLIC SERVICE COMMISSION

Nashville, Tennessee
August 20, 1993

IN RE: EARNINGS INVESTIGATION OF SOUTH CENTRAL BELL TELEPHONE COMPANY, 1993-1995
DOCKET NO. 92-13527

PETITION OF BELLSOUTH TELECOMMUNICATIONS, INC., D/B/A SOUTH CENTRAL BELL TELEPHONE COMPANY FOR CONDITIONAL ELECTION OF REGULATION PURSUANT TO CHAPTER 1220-4-2-.5 OF THE TENNESSEE PUBLIC SERVICE COMMISSION'S RULES AND REGULATIONS
DOCKET NO. 93-00311

ORDER

This matter is before the Commission pursuant to a Staff investigation concluding that South Central Bell Telephone Company should reduce its earnings[1] during the 1993-1995 period. See T.C.A. § 65-2-106 and § 65-5-201.

The investigation began in early 1992 and over the succeeding months the Company submitted voluminous information concerning its operations in response to Staff Requests and on its own initiative. The parties in these cases have served data requests and received responses to those requests. This information, and all of the evidence presented at the hearings on April 6 and 7, 1993, comprise the record before this agency. Based on that record, the Commission adopts the Findings of Fact and Conclusions of Law set forth below:

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[1] See attached Appendix A itemizing the differences between the Staff's presentation and the Company's projections of earnings during the forecast period.

I. RATE OF RETURN/CAPITAL STRUCTURE

The Staff recommends 12 percent as a reasonable return on equity. The Staff further recommends an overall return on rate base of 10.26 percent. This return is based on the Staff's proposal for a double-leverage capital structure.

The Company asked for a continuation of its 11.6 percent overall return granted in 1990. This implies an approximate 14 percent return on equity. The Company recommends use of its actual capital structure.

a. Capital Structure

Until the first day of the hearing (April 6), capital structure was not a contested issue in this case. The Staff and the Company agreed that the Company's actual capital structure (33.41% long term debt, 5.11% short term debt, and 61.48% common equity) was appropriate for ratemaking purposes. This agreement was supported by Staff witness Klein in his direct and rebuttal testimony and by several facts: first, that the Company's actual capital structure remained very stable over the course of the initial regulatory reform plan; second, the actual capital structure reflects the realities of the Company's financial situation; and finally, the recent regulatory practice of this Commission has been to use the Company's actual capital structure.

Dr. Klein in his surrebuttal testimony on April 6 recommended the use of a "double leverage" capital structure. This recommendation changed the earlier Staff position that had accepted the Company's capital structure.

The source of the revised Staff recommendation is the guarantee by BellSouth (the parent of the Company) of debt which supports an Employee Stock Ownership Plan. The Staff recommends recognition of this debt in the Company's capital structure. The Company opposes this recommendation, citing Dr. Klein's original reasoning and additionally presenting evidence that the Staff recommendation would unnecessarily penalize the Company for the tax savings associated with the debt, which is already accounted for through the Company's compensation expense accounting.

The Commission has used double-leverage capital structures in setting rates for other utilities, and such findings will continue to be made where appropriate. In light of the specific evidence in this case relating to this Company's capital structure, however, we find that the Company's actual capital structure is appropriate for the 1993-95 plan for the Company.

b. Authorized Rate of Return Range

Testimony on the required return on equity was presented by a Staff witness, Dr. Klein, and a witness presented by the Company, Professor Vander Weide. These witnesses disagreed on at least three points: (1) Dr. Klein's use of the annual Discounted Cash Flow (DCF) model as opposed to the quarterly DCF model used by Professor Vander Weide; (2) Dr. Klein's use of short term U. S. Treasury bills for the risk premium analyses versus Professor Vander Weide's use of long term corporate bonds; and (3) the selection of firms for the analysis of required return on equity.

In addition to witnesses Klein and Vander Weide, the Staff and Company presented differing views of the competitive risk

that will be faced by the Company over the next three years. The Staff contends that Company financials indicate that the risk facing the Company from competition is minimal over the next three years, while the Company contends that the risk is clearly greater. The Company asserts that the threat of local competition from co-locators, cable television companies, and wireless companies has contributed to increase the Company's risk, and consequently its required return.

In considering all of the evidence, the Commission finds that a range of return on rate base of 10.65% to 11.85%, with a mid-point of 11.25%, is just and reasonable.

II. USE OF THE FORECAST

The regulatory reform rule requires that we project Bell's earnings over a forecast test period of two to four years. Both Bell and the Staff have provided us with forecasts of each of the next three years.

The Staff and Bell have different opinions as to how the forecast should be used. The Staff proposes that we use the forecast as we did in 1990, when we took each of the three years and ordered in advance three separate rate adjustments, after which we allowed the sharing matrix to make any other adjustments.

The only sharing which occurred was "negative" as Bell was unable to achieve the targeted rate of return in any of the three years of the plan, and fell below the authorized range of 11% to 12.2% in the latter two years.

Bell's proposal in this case is to make a different use of the forecast than that made in 1990. Bell proposes that only the first year of the forecast be used to set rates. If the first year forecasted rate of return is outside the rate of return range, rates will be adjusted to the nearest end of the range. If the forecasted rate of return does not fall outside of the range, no rate adjustment will be made. After the initial rate adjustment, the sharing matrix would be used to determine the funds available for future rate adjustments.

Both the Staff and Bell, as expected, criticize each other's positions. The Staff says Bell's plan causes earnings to accrue to the company which should be used for rate reductions or for the accelerated deployment of technology, and that Bell ignores the second and third years of the forecast. Bell criticizes the Staff plan as one which is more draconian than traditional regulation because it eliminates any possibility of the Company's sharing in efficiencies as spurred by an incentive regulation environment and limits the Company to sharing only 40-60% of any "extra" efficiencies; under traditional regulation the Company claims it would retain 100% of the extra efficiencies. In addition, Bell claims the Staff plan is flawed because it relies on speculative "out year" forecasts for some of its rate adjustments, rather than relying on actual results.

The contention over use of the forecast in the renewal of incentive plans requires resolution. Our regulatory reform rule requires us to make a multi-year forecast, but it does not require any particular use of the forecast. In fact, the rule

states clearly that "all or part" of projected earnings above the prescribed return may be placed in a deferred revenue account "in appropriate circumstances." Accordingly, we are free to tailor the incentive renewals in a way that will best serve the public interest.

The Staff has raised a legal issue regarding Bell's proposal. The Staff argues that a three year forecast must be utilized to set rates so that all "known and reasonably anticipated" changes are taken into account in setting rates.

We are satisfied that the law allows the Commission the discretion to use a forecast test period, a historical test period, or any other accepted method to determine a fair rate of return.

Both the Company and the Staff have proved that forecasting the results of the "out" years (i.e., the second and third years of the forecast) is a problematic exercise. Neither party predicted with any precision in 1990 what actually happened in 1991 and 1992. The causes of the misses cannot be, and probably could never be, identified with certainty. Changes in Tennessee's and the nation's economies, rapid technological change, increasing competition, and regulatory changes could have contributed to the inaccuracy of these predictions.

Whatever the cause may be, however, the potentially perverse results should be avoided. For example, Bell in 1991 earned below the range of 11-12.2% which was determined reasonable by this Commission. Yet the 1990 order mandated a rate

reduction/deferred revenue account (DRA) contribution of $74.0 million in 1992 despite the underearnings in 1991. Continuation of a policy similar to that which we started in 1990 could, if forecasts continue to be missed, result in rate decreases for companies that need rate increases, and rate increases for companies that are overearning. While our 1990 policies may have been correct in starting regulatory reform, we will not continue a policy that could have such contrary results. In the future, rate adjustments and Deferred Revenue Account contributions flowing from the Company's regulatory reform plan will be based only on actual results. Use of actual results will allow us to take into account all changes, known or unknown, reasonably anticipated or ignored by any forecast.

Basing future adjustments only on actual results is also consistent with our view of how regulatory reform ought to work. Companies that have been operating under a Regulatory Reform Plan have made decisions for which they should bear at least part of the potential consequences and reap at least part of the potential rewards. By focusing only on actual results, the Company will share in the consequences of earnings outside its authorized rate of return range, and will not be shielded or disincented from those consequences by a stale and speculative forecast adjustment.

In considering all of the evidence, the Commission finds that it is reasonable to adopt the Company's recommendations respecting use of the forecast.

III. FORECAST/ACCOUNTING/REGULATORY ISSUES

The Staff and the Company differed greatly in their respective predictions of the next three year's performance of the Company.

The difference in calculations of historical returns were not as great. Both the Staff and the Company presented evidence that the overall return was between 11.18% and 11.34% in 1990, and between 10.5% and 10.96% during 1991 and 1992.

The 1993 forecast filed by the Company predicts an 11.45% return on rate base. The Staff forecasts a return of 14.06%.

The trend shown above by actual results speaks for itself. We find the Company forecast to be more in line with the trend from previous actual results. Accordingly, we accept the use of the Company's forecast, by each component and in total, with the following exceptions and explanations:

(a) Inside Wire

The Staff proposed to treat the maintenance plan payment option for inside wire maintenance service as an above the line item, while recommending that maintenance paid for on a "time and materials" basis and installation should be below the line items. The Staff believes that the maintenance plan activity is unique and not subject to competition, but believes that installation is a competitive business.

In response to the Staff's position, the Company states that if part of the inside wire business is to be imputed, then the whole business should be imputed. The Company expresses a preference for accounting for all inside wire operations below the line, which will remove all inside wire revenues and expenses from ratemaking and would leave the Company free to set any price it wants for any of the services. Thus, the sum of the Company's position is that the entire inside wire business should be treated as a whole, either above or below the line. In particular, the Company contests the Staff position that maintenance is a separable activity; the Company contends that maintenance is a single activity with two payment options. Recognizing the Commission's history of imputing total inside wire operations in 1990-92, the Company filed tariffs for the installation and maintenance of inside wire. The Company states that if inside wire operations are to be imputed, then it favors formalizing the process through tariffing.

While there is disagreement over how the revenues and expenses should be treated, there is agreement that the total inside wire operations of the Company are losing money. Based upon records submitted by the Company, the Staff calculates that the maintenance plan service of Bell loses approximately $200,000 per year. The Staff also calculates much larger losses on the time and materials maintenance and installation segments of the inside wire business. The Commission finds that the inside wire operations of the Company are losing money as a whole, and that

each of the components of the inside wire line of business are losing money.

While inside wire has existed in a turbulent regulatory environment for many years, it is now clear that the FCC acquiesces in state decisions to account for inside wire operations either above or below the line in setting rates and regulating those operations. The FCC and many other states require that inside wire operations be accounted for below the line. Given our clear flexibility, and the evidence of competition in the inside wire business, we believe it is appropriate to end inclusion of the inside wire business in the calculation of the Company's revenue requirement.

Accordingly, we require the Company to account for all inside wire operations below the line and we deny the tariff filed by the Company. It is necessary, however, to continue the exercise of our jurisdiction with respect to the price and service rendered pursuant to the Company's monthly maintenance plan. In order to maintain reasonable rates for monthly inside wire maintenance services, we require the Company to maintain the current price of $1.25 per month through the end of 1993. In 1994, the Company may raise the price to and including $1.75 per month. In 1995, the Company may increase the price above $1.75 by no more than 10%, and the Company will be limited to an increase of 10% per year thereafter. In addition, we will continue to exercise jurisdiction over complaints regarding the maintenance service rendered by the Company.

(b) L.M. Berry Adjustment

In the 1990 case, the Staff recommended, and the Commission adopted, an adjustment to the Company's revenue requirement based on the difference between new and old contracts that BAPCO had with L.M. Berry.

BellSouth acquired L.M. Berry in 1986. Prior to the acquisition, L.M. Berry had performed yellow pages advertising sales services for South Central Bell. The contract negotiated with South Central Bell in the 1970s provided for the payment of certain commissions to L.M. Berry for its efforts. In 1989, L.M. Berry and BAPCO entered into an agreement which the Staff found resulted in a higher percentage of commission payments to L.M. Berry. The Staff recommended we disallow the difference in the two contracts, and the Commission adopted the Staff recommendation. Accordingly, the revenue requirement for the 1990 through 1992 period reflected this adjustment. The basis for the Commission's decision was a lack of evidence on the part of the Company justifying the change in the commission rate. The Commission was presented with no evidence that L.M. Berry had a similar rate with companies similar to South Central Bell.

In this case, however, the Company did present similar contracts to the Staff for review. The Staff continued to recommend that we disallow the difference. We find, however, that the evidence presented by the Company supports its contention that similar commission rates are paid to L.M. Berry by telephone companies of similar size and influence.

Accordingly, the Commission orders that the disallowance respecting the L.M. Berry contract be discontinued.

(c) BAPCO Rate Base/Yellow Page Revenue Growth[2]

1. Yellow Page Revenue Growth

The Staff forecasted yellow and white page directory advertising revenue to be $288.1 million using an average growth rate of 8.4%. The Company projected these same revenues to be $262.8 million using an average growth rate of 3.6%.

	Staff	Company	Difference
Yellow Page Publishing Fee	$189.0	$166.7	$22.3
BAPCO Yellow Page Rev.	63.5	59.4	4.1
White Pages	35.6	36.8	-1.2
Total Directory Rev.	$288.1	$262.9	$25.2

Company witness Cochran stated in his rebuttal testimony that only the $22.3 million difference in the Yellow Page publishing fee remains an issue. Therefore, the Company apparently accepts the Staff's numbers on White Pages and BAPCO revenue.

The Company's only argument on the publishing fee revenues is that the Staff used too high a growth rate. Staff witness Gaines explained that his forecast of revenues was made using an average growth rate which considered that the individual components making up the Directory Revenue account grow at

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[2] This is actually a "forecast" rather than an "accounting" issue but is included here because it relates to BAPCO and the proper amount of the Yellow Page imputation.

different rates. He pointed out that the Company only chose to take issue with the one area of this account where the Staff's forecast was higher than the actually achieved rates. As an example, he pointed out that BAPCO Tennessee Net Income had actually grown at an average annual rate of 16.3% -- not the 9.2% used in the Staff's forecast. Therefore, he stated that the growth of one component of the account should not be changed unless the growth in the other areas is also adjusted. To emphasize this, Staff witness Gaines indicated that he had arrived at virtually the same Directory Revenue forecast by pricing out the individual components at the individual growth rates.

Staff witness Gaines also pointed out that his methodology for forecasting the Yellow Pages revenues had been found reasonable by BAPCO and may well be conservative since BAPCO itself refused to tell the Staff what price increases BAPCO expected to make during the 1993-95 period. Finally, Staff witness Gaines stated, and Company witness Cochran confirmed on cross examination, that BAPCO itself failed to provide any workpapers to support the growth rate used in the Company's forecast.

Based on the lack of documentation supporting the Company's Yellow Page revenue and the Staff's ability to demonstrate that using individual growth rates produces approximately the same revenues as the average growth rate, the Commission adopts the Staff's projected Directory Revenues of $288.1 million for 1993-1995.

2. BAPCO Rate Base Addition

The Staff's rate base addition for BAPCO's Tennessee Yellow Page operations is $28.2 million less than the Company's rate base addition. The revenue requirement of this issue is $4.0 million for the three years.

Staff witness Gaines pointed out in surrebuttal testimony that the Staff's rate base addition is less than the Company's because Bell's figures reflect investment while the Staff's figures reflect equity. The Company presented no evidence to support its position which, in any event, is not consistent with prior Commission decisions on this issue. Therefore, the Commission adopts the Staff's BAPCO rate base addition of $75.2 million for 1993-1995.

(d) Other Disallowances

In addition to the BAPCO and L.M. Berry disallowances discussed above, the Commission has in previous cases ordered various disallowances that have been reflected in the Company's earnings. The Company's forecast was computed using the Commission's methods. The Staff proposed an increase in the percentages applied in computing the disallowance for certain lobbying and advertising expenses. The Commission finds that the other disallowances as computed by the Company are appropriate, and, accordingly, no change is required.

(e) Conclusion

Our rulings on the L.M. Berry issue discussed in (b) above and the BAPCO issues discussed in (c) above have only a slight impact (See Appendix A, page 1) on the Company's forecast

of an 11.45 percent return on rate base for 1993. After the change made for Inside Wire, the forecasted return for 1993 is approximately 11.75% and thus falls within the rate of return range approved in this Order. Accordingly, no rate adjustment based on the forecast is ordered.

IV. RATE DESIGN

a. Cap for Local Residential and Business Rates

The Commission finds that it is just and reasonable and in the public interest to cap the current rate levels for basic flat rate local residential and business services.

b. Optional Calling Plans

The Commission finds that it is in the public interest to create optional calling plans for calls within a 40-mile radius of the customer's serving wire center. South Central Bell is hereby ordered to develop and submit such plans to the Commission by March 31, 1994. The plan shall be submitted on a revenue neutral basis.

c. Rate Changes to Be Funded From the Deferred Revenue Account

The Commission established a deferred revenue account in the 1990 regulatory reform order adopted for South Central Bell. Although the legal status of that deferred revenue account has been in question because of the Tennessee Court of Appeals decision on appeal of that Order, the Company committed to

maintain a deferred revenue account whose balance would be based on the rate reductions/deferred revenue account contributions flowing from the 1990 Order. The new regulatory reform rule adopted in January, 1993, allows for creation and maintenance of a deferred revenue account. The Commission has adopted, in another docket, a motion that establishes the deferred revenue account and balance for that account based on the Company's commitment.

Accordingly, the Commission finds and orders that the Company maintain the deferred revenue account established by the Commission for the period January 1, 1993 through December 31, 1995. Based on the record before it, the Commission finds and orders that the deferred revenue account be used for the following rate adjustments:

(1) Access/Toll Reductions

The Commission finds that it is in public interest to reduce South Central Bell's access rates by an amount that will allow long distance companies to reduce their toll rates to interstate levels, and to reduce South Central Bell's toll rates consistent with the method used to reduce toll rates in Docket 89-11065. This action continues the Commission's consistent practice of reducing toll rates to all Tennessee customers and moving access rates closer to parity with interstate rates. The Commission intends to continue this practice as appropriate opportunities present themselves. Accordingly, effective September 1, 1993, the Company is hereby required to reduce switched access rates by an amount which will allow long distance companies to reduce

their intrastate toll rates to currently effective interstate levels, and to reduce South Central Bell's toll rates consistent with the method used in Docket No. 89-11065, and the funds for these reductions will be drawn annually from the deferred revenue account. AT&T, the state's dominant interlata carrier, shall flow through, on a dollar-for-dollar basis, these access reductions to their customers.[3]

(2) County Wide Calling

The Commission finds that it is in the public interest to complete county wide calling in Tennessee. To the extent that there are any counties where county wide calling without toll charges is not available, the Company will file tariffs to accomplish such county wide calling, and the funding required to provide such county wide calling will be drawn from the deferred revenue account.

(3) Depreciation

The three-way meeting between the Staffs of the FCC and this Commission and the Company was held April 5, 6, 1993. Agreement has now been reached between the Company and the Staff respecting the capital recovery program for the Company. The Company is hereby ordered to implement the depreciation schedules attached as Appendix B effective September 1, 1993. The funding for 1993 shall be drawn from the deferred revenue account. The funding

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[3] AT&T shall reduce its intrastate rates so that they are no higher than the comparable interstate rates. Any intrastate rates which are currently below the comparable interstate rates are not affected by this Order.

for 1994 and 1995 will be drawn from the deferred revenue account and such deferred revenue account will include any applicable accruals for sharing associated with 1994 and 1995 results. If, at the end of 1995, the Company has recorded changed depreciation expense[4] for the combined years of 1994 and 1995 in excess of the sum of all sharing amounts attributed to customers during those two years, the Company shall contribute the amount of such excess, with appropriate interest, to the deferred revenue account.

(4) Dickson County

The Dickson County Chamber of Commerce was an intervenor in this proceeding. Its witness, Richard Bibb, requested that Dickson County be added to the Metro Area Calling (MAC) area. Dickson County was not included in the MAC plan for Nashville originally because Dickson County is not a county contiguous to Davidson County. Dickson County argues that it is in the Metropolitan Statistical Area (MSA) for Nashville, and that it ought therefore to be included in the MAC plan for Nashville.

After consideration of the evidence on this issue, the Commission finds that Dickson County should be included in the Metro Area Calling area for Nashville. The Company is hereby ordered to include Dickson County in the Nashville Metro Area

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[4] "Changed depreciation expense" is the difference between the actual revenue requirement calculated using the previous depreciation rates and the actual revenue requirement calculated using the depreciation rates adopted in this order.

Calling area effective January 15, 1994, and the funding shall be drawn from the Deferred Revenue Account.

V. PETITION FOR RECONSIDERATION

Any party aggrieved with the Commission's decision of this matter may file a Petition for Reconsideration with the Commission within ten (10) days from and after the date of this Order.

VI. JUDICIAL REVIEW

Any party aggrieved with the Commission's decision of this matter has the right of judicial review by filing a Petition for Review in the Tennessee Court of Appeals, Middle Section, within sixty (60) days from and after the date of this Order.

IT IS SO ORDERED, this 20TH day of August, 1993.

CHAIRMAN

COMMISSIONER

COMMISSIONER

ATTEST:

EXECUTIVE DIRECTOR

South Central Bell
Revenue Requirement of Rate Review Issues
1993 Forecast Year Based on Single-Year Methodology
(Millions)

	Approximate Amounts
COMPANY METHODOLOGY FOR PLAN IMPLEMENTATION A/	-2.5
RATE OF RETURN:	
ESOP Debt (ROR 10.35% to 10.26%)	2.2
Updated Feb Debt Cost Interest Synch	-0.4
Change in Rate of Return - 11.6% to 10.06%	33.6
Total Rate of Return	35.4
ACCOUNTING/REGULATORY ISSUES:	
Inside Wire	6.1
Pension	9.5
OPEBS	1.5
Disallowances	0.6
BAPCO Rate Base	1.2
LM Berry	2.4
ESOP (Interest Synchronization)	2.0
Total Accounting/Regulatory Issues	23.3
FORECAST ISSUES:	
Local Revenues	5.3
Access Revenues	1.8
Long Distance Revenues	-0.2
Miscellaneous Revenues	0.6
Uncollectible Revenues	1.7
Total Revenue Issues	9.2
Salary & Wage Expenses	9.2
Other O & M Expenses	10.6
Other Taxes	-1.6
MemoryCall	2.3
BAPCO Income	0.2
Def'd FIT	-0.3
Other	4.6
Total Expense/Other	25.0
GRAND TOTAL	90.4

A/ Difference in Company proposed Plan to continue the incentive plan methodology with sharings above 12.2% versus the Staff's proposed continuation with rate reductions down to 11.6%. (See Note A/ on the 3 year forecast sheet).

Note 1: The above quantifications have been developed by the Staff and include the Staff's proposed rate of return of 10.06%. The Company and Staff agree that a different rate of return will cause the value of the accounting issues to be different than the amounts listed above. This difference would not be expected to significantly change the quantification of those issues.

Note 2: The Staff's use of a 10.06% rate of return if a single year review period is utilized to set revenue requirements is different than the 10.26% rate of return that was utilized in the quantification of issues over the three-ye period of 1993-1995. However, neither the Company nor the Staff recommended a one-year review period.

South Central Bell
Revenue Requirement of Rate Review Issues
Three Year Forecast
(Millions)

		Approximate Amounts
COMPANY METHODOLOGY FOR PLAN IMPLEMENTATION	A/	46.6
RATE OF RETURN:		
ESOP Debt (ROR 10.35% to 10.26%)		6.3
Updated Feb Debt Cost Int Synch		-1.2
Change in Rate of Return - 11.6% to 10.35%		87.8
Total Rate of Return		92.9
ACCOUNTING/REGULATORY ISSUES:		
Inside Wire		22.0
Pension		27.6
OPEBS		2.5
Disallowances		1.7
BAPCO Rate Base		4.0
LM Berry		8.0
ESOP (Interest Synchroniztion)		7.4
Total Accounting Issues		73.2
FORECAST ISSUES:		
Revenues:		
Local		12.0
Access		4.9
Long Distance		2.9
Miscellaneous		10.7
Uncollectibles		5.4
Total Revenue		35.9
Expenses:		
Salaries & Wages		21.2
Other O & M Expenses		59.6
Other Taxes		1.3
MemoryCall		3.3
BAPCO Income		4.1
Def'd FIT		2.5
Other		6.4
Total Expense/Other		98.4
GRAND TOTAL		347.0

A/ (Staff Calculated excess based on amount above 11.6% using the Company's forecast for 1993-1995.) Difference in Company's proposed continuation of the incentive plan methodology (i.e., based upon 1 year forecast with rate reductions in years 2 and 3 based upon actual results) and the Staff's proposed continuation of the incentive plan methodology (i.e., based upon a 3 year forecast with rate reductions in years 2 and 3 based upon forecasted results presented in the hearings).

Note: The above quantifications have been developed by the Staff and include the Staff's proposed rate of return of 10.26%. The Company and the Staff agree that a different rate of return will cause the value of the accounting issues to be different than the amounts listed above. This difference would not be expected to significantly change the quantification of those issues.

Run Date : 04/19/93 - 07.54.45
Report : STM-A-RL, PSC_3WAY
Proposed

Company : BellSouth Telecommunications
State : Tennessee
Statement A - Remaining Life

Summary of Changes in Depreciation Rates

Account Number	Class or Subclass of Plant	Rates in Effect: RL Life Years	Reserve Percent	Future Net Salv	Depr. Rate %	Rates Effective 1993: RL Life Years	Reserve Percent	Future Net Salv	Depr. Rate %
		A	B	C	D	E	F	G	H
2112.00	Motor Vehicles	4.2	42.1	16	10.0	3.7	52.5	16	8.5
2115.00	Garage Work Equipment	13.1	24.8	-1	5.8	13.3	9.4	-1	6.9
2116.00	Other Work Equipment	13.1	24.8	-1	5.8	12.6	30.7	-1	5.6
2121.00	Buildings	30.0	26.2	1	2.4	29.0	28.9	1	2.4
2122.00	Furniture	11.0	29.4	9	5.6	10.1	24.0	9	6.6
2123.00	Office Equipment	3.9	19.6	28	13.4	3.9	21.3	28	13.0
2124.00	Genl Purpose Computers	3.6	71.3	2	7.4	3.8	38.8	2	15.6
2211.00	Analog ESS	3.6	52.8	3	12.3	2.0	71.7	3	12.7
2212.00	Digital ESS	12.2	20.1	5	6.1	10.3	23.0	4	7.1
2220.00	Operator Systems	7.7	37.2	5	7.5	7.7	46.5	5	6.3
2231.00	Radio Systems	7.8	31.1	0	8.8	8.0	53.8	0	5.8
2232.00	Circuit-Other	6.2	36.4	2	9.9	5.8	43.6	0	9.7
2232.11	Circuit-DDS	4.4	42.1	10	10.9	4.1	48.1	2	12.2
2311.00	Station Apparatus	4.6	7.4	4	19.3	3.2	60.2	4	11.2
2341.00	Large PBX	4.6	10.8	-4	20.3	3.3	45.7	-4	17.7
2351.00	Public Telephone	3.8	48.4	20	8.3	2.9	60.5	20	6.7
2362.00	Other Terminal Equip.	3.2	60.0	3	11.6	3.0	66.8	3	10.1
2411.00	Poles	23.0	44.9	-48	4.5	22.0	43.8	-48	4.7
2421.10	Aerial Cable Metal	12.7	38.0	-15	6.1	10.8	44.6	-15	6.5
2421.20	Aerial Cable Fiber	20.0	15.0	-20	5.3	20.0	10.8	-20	5.5
2422.10	Undergrd Cable Metal	17.0	33.5	-9	4.4	14.4	41.9	-8	4.6
2422.20	Undergrd Cable Fiber	19.2	19.1	-20	5.3	18.9	19.0	-20	5.3
2423.10	Buried Cable Metal	13.6	35.3	-5	5.1	11.5	41.6	-5	5.5
2423.20	Buried Cable Fiber	13.1	32.5	-9	5.8	14.6	25.1	-9	5.7
2424.00	Submarine Cable	15.4	43.6	-1	3.7	13.6	40.2	-1	4.5
2426.00	Intra-Bldg Netwk Cable	13.6	24.8	-10	6.3	12.5	37.1	-10	5.8
2431.00	Aerial Wire	14.5	71.0	-40	4.8	14.1	74.8	-40	4.6
2441.00	Conduit System	49.0	21.7	-5	1.7	46.0	23.2	-5	1.8
Composite Rate					6.7				7.2

Run Date : 04/19/93 - 07.54.45
Report : STM-B-SP, PSC_3WAY
Proposed

Company : BellSouth Telecommunications
State : Tennessee
Statement B - RL Separated

Change in Annual Depreciation Expense
Resulting from Changes in Depreciation Rates and Amortization
(Separated on an INTRASTATE basis)
(000)

Account Number	Class or Subclass of Plant	INTRASTATE Separations Factor	Investment 1-1-93		Rates in Effect		Rates Effective 1993		INTRASTATE Change in Expense
			Combined	Separated	Combined	Separated	Combined	Separated	
		Q	R=I	S=Q*R	T=L	U=Q*T	V=O	W=Q*V	X=W-U
2112.00	Motor Vehicles	.766	58,066	44,479	5,807	4,448	4,936	3,781	-667
2115.00	Garage Work Equipment	.766	1,687	1,292	98	75	116	89	14
2116.00	Other Work Equipment	.766	31,644	24,239	1,835	1,406	1,772	1,357	-48
2121.00	Buildings	.766	208,632	159,812	5,007	3,835	5,007	3,835	0
2122.00	Furniture	.766	2,601	1,993	146	112	172	132	20
2123.00	Office Equipment	.766	7,340	5,622	984	753	954	731	-22
2124.00	Genl Purpose Computers	.766	140,915	107,941	10,428	7,988	21,983	16,839	8,851
2211.00	Analog ESS	.838	239,868	201,010	29,504	24,724	30,463	25,528	804
2212.00	Digital ESS	.838	539,766	452,324	32,926	27,592	38,323	32,115	4,523
2220.00	Operator Systems	.844	10,599	8,945	795	671	668	564	-107
2231.00	Radio Systems	.660	27,924	18,430	2,457	1,622	1,620	1,069	-553
2232.00	Circuit-Other	.660	703,833	464,530	69,679	45,988	68,272	45,059	-929
2232.11	Circuit-DDS	.660	11,238	7,417	1,225	808	1,371	905	96
2311.00	Station Apparatus	.751	324	244	63	47	36	27	-20
2341.00	Large PBX	.751	5,913	4,440	1,200	901	1,047	786	-115
2351.00	Public Telephone	.751	26,216	19,688	2,176	1,634	1,756	1,319	-315
2362.00	Other Terminal Equip.	.751	30,488	22,897	3,537	2,656	3,079	2,313	-343
2411.00	Poles	.739	104,339	77,106	4,695	3,470	4,904	3,624	154
2421.10	Aerial Cable Metal	.739	463,721	342,690	28,287	20,904	30,142	22,275	1,371
2421.20	Aerial Cable Fiber	.739	27,805	20,548	1,474	1,089	1,529	1,130	41
2422.10	Undergrd Cable Metal	.739	217,201	160,512	9,557	7,063	9,991	7,384	321
2422.20	Undergrd Cable Fiber	.739	34,120	25,215	1,808	1,336	1,808	1,336	0
2423.10	Buried Cable Metal	.739	642,869	475,080	32,786	24,229	35,358	26,129	1,900
2423.20	Buried Cable Fiber	.739	17,773	13,134	1,031	762	1,013	749	-13
2424.00	Submarine Cable	.739	1,215	898	45	33	55	40	7
2426.00	Intra-Bldg Netwk Cable	.739	18,592	13,740	1,171	866	1,078	797	-69
2431.00	Aerial Wire	.739	20,141	14,884	967	714	926	685	-30
2441.00	Conduit System	.739	155,132	114,642	2,637	1,949	2,792	2,064	115
	TOTAL		3,749,963	2,803,752	252,324	187,676	271,173	202,661	14,986
	Composite Rate (%)				6.7	6.7	7.2	7.2	

BEFORE THE TENNESSEE PUBLIC SERVICE COMMISSION

Nashville, Tennessee

IN RE: PETITION OF SOUTH CENTRAL BELL TELEPHONE COMPANY TO CHANGE AND INCREASE CERTAIN RATES AND CHARGES FOR INTRASTATE TELEPHONE SERVICE

DOCKET NO. U-83-7248

JAN 1 0 1984

ORDER

This matter is before the Tennessee Public Service Commission upon the petition filed July 8, 1983 by South Central Bell Telephone Company (hereinafter referred to as Bell, SCB or the Company), wherein the Company requested authority to increase its existing rates and charges for intrastate telephone service to produce additional annual revenue of approximately $280 million dollars. The Company also filed a revised schedule of intrastate tariffs designed to produce the requested increase.

Pursuant to T.C.A. 65-5-203, the Commission suspended the proposed tariffs and set the petition for hearing.

Chairman Keith Bissell, Commissioner Jane Eskind and Commissioner Frank Cochran conducted hearings on the petition December 5, 6, 7, 8, 9, and 16, 1983, in Nashville, Tennessee, at which time the following appearances were entered:

APPEARANCES:

Mr. Raymond Whiteaker, General Counsel, South Central Bell Telephone Company, P. O. Box 210, 318 Green Hills Office Building, Nashville, Tennessee 37215, appearing on behalf of Petitioner, South Central Bell Telephone Company.

Mr. Mark D. Hallenbeck, Counsel, South Central Bell Telephone Company, P. O. Box 771, 600 North 19th Street, Birmingham, Alabama 35201, appearing on benalf of Petitioner, South Central Bell Telephone Company.

Mr. T. G. Pappas, Attorney, 2700 First American Center, Nashville, Tennessee 37238, appearing on benalf of the Petitioner, South Central Bell Telephone Company.

Mr. Henry Walker, General Counsel, and Mr. Don Scholes, Assistant General Counsel, Tennessee Public Service Commission, C-1 102 Cordell Hull Building, Nashville, Tennessee 37219, appearing on behalf of the Commission Staff.

Ms. Susan Fendell, Attorney, LSUET, 311 West Walnut Street, Johnson City, Tennessee 37601, appearing on behalf of Intervenors, Low-Income Telephone Users.

Mr. William Allen, Attorney, P. O. Box =3358, Oak Ridge, Tennessee 37831, appearing on behalf of Intervenors, Low-Income Telephone Users.

Mr. Jerry Scanlon, Attorney, West Tennessee Legal Services, Jackson, Tennessee, appearing on behalf of Intervenors, Low-Income Telephone Users.

Mr. John W. Kelley, Attorney, 23rd Floor Life and Casualty Tower, Nashville, Tennessee 37219, appearing on behalf of Intervenor, United Inter-Mountain Telephone Company.

Mr. Val Sanford, Attorney, and Ms. Jean Nelson, Attorney, P. O. Box =2757, Nashville, Tennessee 37219, appearing on behalf of AT&T Communications, Inc. of the South Central States, Intervenor.

Mr. Gene V. Cocker, Attorney, 1200 Peachtree Street, N. E., Atlanta, Georgia 30357, appearing on behalf of Intervenor, AT&T Communications, Inc. of the South Central States.

Mr. Lon P. MacFarland, Attorney, P. O. Box =1121, Columbia, Tennessee 38401, appearing on behalf of Intervenor, General Telephone Company of the Southeast.

Mr. Dan H. Elrod, Attorney, and Mr. Edward C. Blank, II, Attorney, 26th Floor Life & Casualty Tower, Nashville, Tennessee 37219, appearing on behalf of the State of Tennessee, and Tennessee Association of Radio-Telephone Utilities, Intervenors.

At the hearings, South Central Bell presented the following witnesses:

Mr. J. D. Matheson, Vice-President-Revenue Requirements; Mr. John E. Ebbert, Operations Staff Manager; Mr. E. C. Roberts, Operations Staff Manager; Mr. D. M. Ballard, Assistant Chief Accountant; Mr. E. W. Parish, Jr., Operations Manager; and Mr. James L. Johnson, Vice-President of Tennessee Operations for South Central Bell Telephone Company. The Company also presented the testimony of Mr. J. W. Glass, Operations Manager-Executive Support of the BellSouth Corporation; Mr. Joseph M. Robbins, Division Manager of the Central Services Organization; Mr. David L. Laurent, Jr., Econometrician for BellSouth Services; Mr. Bosworth M. Todd, President of Todd Investment Advisors; Mr. Cornelius B. Prior, Jr., Vice-President for Kidder-Peabody and Co.; and Dr. Eugene F. Brigham, Professor of Finance at the University of Florida.

The Staff presented the testimony and exhibits of Dr. Fred Westfield, Professor of Economics at Vanderbilt University; Mr. Archie Hickerson, Assistant Director of Accounting; and Staff Financial Analysts Mike Gaines, Ronald Sanderson, Robyn Yazdian, and Roger Knight.

AT&T Communications of the South Central States presented the testimony of Mr. Roy A. Billinghurst, External Affairs Division Manager with the Southern Region of AT&T Communications. The Tennessee Association of Radio-Telephone Utilities presented the testimony of Mr. John F. Orman, Jr., Manager of Cellular Planning for the Mobile Communications Corporation of America.

Low Income Telephone Users presented the testimony of Dr. Michael H. Miller, Associate Professor of Economics at Vanderbilt University; Mr. Fred J. Kelsey, regulatory consultant and former public utilities specialist for the Federal Communications Commission; Dr. Lee Richardson, Professor of Marketing at the University of Baltimore; Dr. Robert Leger, Chairman of the Department of Sociology at East Tennessee State University; and Ms. Rozella Peebles, a low income subscriber of South Central Bell.

At the public hearing on December 7, 1983, thirty-two public witnesses including Representatives Martin Sir and Harold Love presented testimony. Petitions protesting the proposed increase were presented to the Commission.

Mr. Wil Dooley, Attorney for the Department of Defense (DOD) and the other Federal Executive Agencies, was unable to appear at the hearing. With the consent of all parties, however, the exhibits and testimony of Dr. Charlie A. McCormick, testifying on behalf of DOD were entered into the record. The testimony of Louis Corning, Vice-President-Administration of United Inter-Mountain Telephone Company, was also entered by stipulation. Although granted leave to intervene in this case on August 17, 1983, Tennesseans for Affordable Telephone Rates did not appear at the rate hearings and no explanation for their absence has been provided.

The Commission considered the petition at a regularly scheduled executive session on January 3, 1984, and again on January 4. On the

with the Commission denied the petition for a $280 million rate increase but determined, by a two to one vote, that an increase of approximately $39.3 million in annual revenues would provide Bell a fair and reasonable rate of return. The Commission directed the Company to file revised tariffs which would produce the indicated additional revenue.

On January 6, 1984, the Company filed its revised tariffs, which we approved in a brief Order issued that same day. In that Order, we also said that the Commission would issue a detailed statement of our findings of fact and conclusions of law in a second Order and Memorandum Opinion no later than January 18, 1984. Counsel for the Company and the Commission Staff stipulated that this procedure and schedule would comply with the six-month time limit set forth in T.C.A. 65-4-203 (b) and also that, for purposes of administrative and judicial review, the Memorandum Opinion would be considered as the Commission's final Order in this proceeding.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

The Commission's statutory duty in the proceeding is to fix just and reasonable rates for the Company as provided by T.C.A. 65-5-203. In so doing, we must take into account the safety, adequacy, and efficiency or lack thereof to the service or services furnished by the utility, and it is our duty to approve all or any portion of a proposed increase in rates if we are satisfied that the increase is just and reasonable.

In this case, we will follow our standard practice of choosing a test period and then making findings of fact in regard to four major areas (1) the size of the Company's rate base; (2) total revenues received during the test period; (3) total expenses during the same period; and (4) the rate of return which the utility should be allowed to earn.

Once these issues are determined, we will then calculate the amount of the revenue award in this case. Finally, we will consider questions of rate design and issues raised by some of the intervenors in this proceeding.

I. TEST PERIOD

Test period is a term peculiar to regulation. It refers to a period of time, usually twelve months, during which the Commission examines the Company's revenues and expenses under existing rates and calculates, for that twelve month period, the Company's rate of return on its rate base investment.

There are generally two types of test periods that are accepted in rate-making proceedings: an historical test period, which looks at a twelve month period in the recent past, and a forecasted test period, which attempts to predict revenues and expenses during the year to come.

The Commission in most cases has used an historic test period rather than a forecast because "prophecy, however honest, is generally a poor substitute for experience." Southern Bell Telephone and Telegraph Co. v. Tenn. Public Service Commission, 304 S.W. 2d 640 (1957), quoting from West Ohio Gas Co. v. Ohio Public Utilities Commission, 294 U.S. 79 (1935). Regardless of the type of test period chosen, however, the ultimate goal of regulation is to select a period of time which will properly reflect the representative relationships between revenues, expenses, and rate base expected to prevail during the period in which the new rates will be in effect. As the Tennessee Supreme Court said in an unpublished opinion and order denying certiorari in Tenn. Public Service Commission v. South Central Bell, 579 S.W. 2d 429 (Tenn. App. 1979) cert. den.:

> (I)t rests within the sound discretion of the Commission to use an historical test period, a forecast period, or a combination of these where necessary or any other accepted method of rate making necessary to give a fair rate of return--the ultimate goal being to assure efficient service to the consumer and a fair return on its investment to the company.

The Company has proposed a forecasted test period-the calendar year 1984-for which it has filed its budget of operations. One forecast, prepared in May, 1983, was filed with the petition in July. A second, updated forecast, prepared in September, was also filed with the Commission and it is the latter view of 1984 which Bell has asked us to adopt in this proceeding.

Because of the changes resulting from divestiture of South Central Bell from its parent, American Telephone & Telegraph, and its effects upon the Company's operations in 1984, the Commission staff also used the 1984 calendar year as the test period in this case. In his direct testimony, staff witness Hickerson explained:

> The staff used a forecast of operations for calendar year 1984, consistent with the test period proposed by the Company. As a result of the reorganization of the Company and the industry as a whole, it is our opinion that the use of this forecast will produce a reasonable basis for the Commission to evaluate the Company's earnings under current rates and to determine the revenue deficiency that might exist.

We agree with Mr. Hickerson's analysis.

Two parties in this proceeding, the State of Tennessee and the Low Income Telephone Users (LITU), have questioned the reliability of the forecasted period in light of the immense changes occuring in the Bell system and the difficulty in predicting the Company's expenses, revenues, and rate base following divestiture. Neither party, however, presented evidence as to the Company's rate base, expenses, and revenues during an historic test period. Furthermore, we cannot close our eyes to the unusual circumstances presented by the reorganization of the Bell system. A forecasted test period is not generally as relaible as an historic period to measure a utility's earnings. In the present case, however, the rate base, revenues, and expenses of South Central Bell during the past twelve months will be affected dramatically both by court-ordered divestiture and regulatory changes mandated by the Federal Communications Commission. "At such times, an honest and intelligent forecast of probable future values, made upon the view of all relevant circumstances is the only organ at hand and hence the only one to be employed in order to make a fair hearing." Southern Bell, supra. Where feasible, we have used historic expenses and revenues to guide us in forecasting those figures in 1984. Furthermore, our use of a forecasted test period in this case should not be interpreted as a change in the Commission's long standing policy of preferring an historic test period for rate making purposes. On the basis of the record before us, however, and the recommendation of the Commission Staff, we find that a forecast of operations for the calendar year 1984 is the appropriate test period to

adopt in this case.

II. COMMISSION STANDARD ADJUSTMENTS

Before discussing the appropriate expenses, revenues, and rate base to use in this case, we will first dispose of certain Staff adjustments to the figures proposed by the Company. These adjustments, collectively referred to as "Commission Standard Adjustments," have been proposed in accordance with prior Commission decisions in cases involving South Central Bell. In the Company's last rate filing, Docket U-82-7161, Bell agreed to all Commission Standard Adjustments (for that case only); and in the present filing, the Company did not present any rebuttal evidence nor cross-examine Staff witnesses about these accounting changes.

In light of the unrefuted adjustments made by the Staff and the Commission's established precedents on each of these issues, we again affirm the use of those adjustments and adopt them in this case. Furthermore, we direct the Company in its next rate petition to include these adjustments in its original filing as an alternative to the Company's unadjusted figures. This will save time and avoid unnecessary discovery procedures for both the Company and the Staff.

The Commission therefore adopts the following standard adjustments to the Company's income statement and rate base.

A. Employee Concessions

Bell managers receive local telephone service free of charge. Non-management employees receive local service at a forty per cent discount. The purpose of this adjustment is to impute revenue to the Company as if the management employees paid the same rate for local service as the non-management employees. This adjustment adds $111,232 to local service revenue to bring the total to $453,674,000. Both employee groups also receive discounts on intra-LATA toll calls out, since we do not know at this time how many such calls the average employee will make, this benefit cannot be quantified and no adjustment can be made in this case. The Company is directed in its next rate filing to provide sufficient information for the Commission to quantify the revenue impact of the toll discount provided to both management and non-management employees.

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The Low Income Telephone Users have suggested that we eliminate all employee concessions for both local and toll service. On the basis of testimony by Company Vice President Johnson, we find that these concessions are considered by Bell and its employees as part of the employees' total benefit package. While management employees do not bargain collectively for their compensation, we believe it appropriate that they should be treated equally to non-management employees for rate-making purposes.

B. Short-Term Interest During Construction

In a prior rate case, the Commission ordered Bell to keep separate records on interest capitalized during short-term construction projects so that the Commission could add it to interest capitalized on long-term projects. See Docket No. U-6936. The capitalization of interest during construction means that the capital cost of funds tied up in a construction project is added to the total cost of the project and recovered gradually as a depreciation expense after the project goes into service. This means that future customers, not present customers, will pay those costs at the time that they are receiving the benefits of the project. This logic applies both to long-term and short-term projects.

By capitalizing rather than expensing these interest costs, the Company's present interest expense is reduced. In accordance with standard accounting practice, this adjustment is made by increasing the Company's interest income.

C. Lobbying Expense Adjustment

The Staff deducted from Bell's proposed budget for 1984 certain expenses relating to lobbying activity. We believe that the first obligation of the Company's lobbyists is to benefit the Company, not necessarily the Company's customers. We maintain our policy that lobbying expenses should not be considered for ratemaking purposes.

The Low Income Telephone Users correctly point out that the Company's expenses in the lobbying account are limited to those lobbying activities defined by T.C.A. 3-6-102(11) and the Staff, while recommending that these expenses be disallowed, has not looked closely at what is included in this account nor considered whether the statutory definition of lobbying in the Tennessee Lobbyist Registration and Disclosure Act is appropriate as a definition of lobbying for ratemaking purposes.

Unfortunately, there is no basis in this record on which to determine whether or by what amount the Company may have under-reported its lobbying expense as LITU alleges. We request the Staff to consider this issue at the Company's next rate filing.

D. Accumulated Deferred Income Tax.

The Staff deducted from Bell's rate base the accumulated deferred tax account which represents non-investor supplied funds, tax payments that have been collected from the ratepayers but not yet paid to the government. The Company uses this customer-contributed capital to finance a portion of its investment.

We agree with the principle that the rate base should represent the investment financed by debt and equity investors, not the ratepayers. We, therefore, adopt the Staff recommendations that accumulated deferred income tax be deducted from the Company's rate base.

E. Unamortized Investment Tax Credit, Pre-1971.

This item represents the unamortized balance of investment tax credits generated under the 1962 tax act. It is non-investor supplied capital used to finance a portion of the Company's investment and, therefore, should be deducted in computing the Company's rate base. Company witness Ballard did not make this deduction. The Company, however, did reduce its revenue requirement so as to produce the same result as if the deduction had been made.

F. Unpaid for Materials and Supplies

The Staff has deducted the unpaid-for portion of the materials and supplies account from the rate base because this portion of the account will remain unpaid during the test period. In other words, the vendors who sell materials and supplies to the Company have become a source of capital to the Company. Since this capital is supplied by the vendor, rather than the Company's stockholders, the Company should not receive a return on this portion of its investment.

advertising expenses increased dramatically in that year over all previous levels. We have not questioned that expense but believe that it is a fair indication of Bell's advertising expenses in the post-divestiture period. The Company's actual expenses in 1983, presently well under the budget according to Staff testimony, reinforce our conclusion that Bell's forecasted, 1984 figures are inflated. Finally, while we agree that it is important to inform customers about changes in the Bell system, we agree with the Low Income Telephone Users that, "Much of the advertising surrounding divestiture is, in actuality, institutional advertising, the most highly disfavored of all advertising with respect to inclusion as an operating expense" (Post-hearing Brief, p. 18).

Witness Lee Richardson from the University of Baltimore provided further evidence that the Company's advertising budget should be reduced. Testifying on behalf of the Low Income Users, Professor Richardson discussed Bell's measured and message service options which he said were being actively promoted by SCB as a marketing device to enhance the Company's revenue stream. Saying that the widespread use of measured and message service would eventually drive up the cost of flat-rate service without any benefit to the ratepayers, Professor Richardson recommended that we order Bell to discontinue its promotional campaign until the Company can demonstrate that the service options are not being subsidized by subscribers of flat-rate service. The Low Income Users further suggest that we freeze at current levels the number of customers who subscribe to measured and message service.

We reject the proposal for a freeze. These are optional services that many customers now use at considerable cost savings. In the absence of any specific evidence that these services are actually priced below cost, we will not deprive other Tennesseans from taking advantage of the savings. We agree, however, that there are sufficient questions surrounding measured and message services to justify reducing Bell's 1984 advertising budget which includes $200,000 to promote these service options.

8. Refund of AT&T Pre-Operational Expense

Through the General Service and License Contract, South Central Bell and all AT&T subsidiaries paid AT&T for costs involved in the formation of a new AT&T subsidiary (originally named ABI) and in the development of customer premise equipment (CPE). Both the subsidiary and the equipment were subsequently deregulated by the Federal Communications Commission. In its Order of November 10, 1982, the FCC directed AT&T to reimburse South Central and the other Bell telephone subsidiaries for these payments. Subsequently, SCB reported to the Commission that it had received a refund from AT&T of $3,294,000.[1/]

The Order required that the refund be recorded in account 174, Other Deferred Credits and that the amount be "cleared from the books once rate making treatment has been afforded those amounts as parts of the reimbursement process or where a Commission has decided no reimbursement is required." In addition the FCC ordered, "In conjunction with the first rate making proceeding following the reimbursement to regulated affiliates, the appropriate BOC shall present the allocated pre-operational expenses again to each state commission for rate making scrutiny." Paragraph 70 of the Order stated, "By requiring AT&T to reflect reimbursement amounts as liabilities on the BOC's and long lines books and requiring special reporting to State Commissions, an adequate mechanism has been established to assure that actual and accurate reimbursement will occur." (Emphasis added.)

There is no mistake that the intent of the FCC was to reimburse the ratepayer for the funds that have been collected through the customers' bills to pay for projects which will only benefit AT&T.

1/ Subsequent to the close of the hearings the Company filed with the Executive Director a supplemental report identifying an additional refund of pre-operational expenses of $1,447,112. This refund will be considered along with the $3,294,011 included as an expense reduction in the Staff's exhibit. This reduces the General Service and License expense on Schedule 4 of the Staff's exhibit from $7,720,000 to $6,273,000.

The Staff is in agreement with the FCC and proposes that reimbursed funds be paid back to the customers in the form of reduced rates. In order to accomplish this objective the Staff has proposed that the entire refund be amortized and credited to the General Service and Licenses expense in 1984.

Company witness Johnson explained that Bell would "like to be able to keep the $3.3 million dollars since we have ups and downs in expenses and revenue through the years." He cited as an example a retroactive $2.6 million increase in the Company's gross receipts tax. He further explained that the Company has not earned its authorized rate of return in 1983 and that the Commission should therefore allow the Company to keep the entire refund.

We recognize that fluctuations in revenues and expenses occur and that unexpected events such as the increase in the gross receipts tax have an impact on the utility's earnings. Such events, however, do not justify the Company's proposal to retain funds that were wrongly collected from the ratepayers to pay for costs related to non-utility operations.

In arguing that it be allowed to keep the refund in light of its current rate of return, the Company has implied that there is some relationship between the refund and the 1983 accounting period. In fact, none of the amount refunded relates to 1983; all of the money was collected from the ratepayers between 1979 and 1982, and in three of those four years, Bell earned more than its authorized rate of return, according to Staff figures. The only factor that links the refund to the 1983 accounting period is the accidental timing of the FCC's investigation and Order. Had the FCC ordered AT&T to delay the refund until 1984, we wonder if the Company would propose to recognize the refund as a revenue or as an expense reduction in the 1984 budget.

We agree with the Staff, the Low Income Users, and the FCC that these funds represent costs improperly collected from the ratepayers who are entitled to be reimbursed. The amortization of the refund over the twelve months beginning January 1, 1984 will provide an equitable method of implementing the refund.

C. Yellow Page Revenues

The Company included in its original prefiled exhibits an estimate of Yellow Page revenues and expenses calculated in accordance with the accounting procedures traditionally used by this Commission in setting rates for South Central Bell.

Two months later, however, in its revised budget figures for 1984, the Company changed its position because of the creation of a new BellSouth subsidiary which will publish all Yellow Pages for South Central Bell and Southern Bell and pay each company a license fee.

The effect of this arrangement in the present case is to increase the rates of Tennessee customers by more than $3 million. Bell's plan will reduce substantially South Central Bell's profits from Yellow Page revenues, profits which help keep down the costs of basic telephone services. Under Bell's proposal, a significant portion of those profits will go to BellSouth's new, unregulated subsidiary rather than to the Bell operating companies.

SCB argues that the consolidation of all Yellow Page business in one subsidiary "should be more efficient and economical" than if each operating company were to handle its own Yellow Pages.

At some time in the future, perhaps, the Company can show us that these savings will increase the amount of Yellow Page profits paid to South Central Bell. Until that time, however, we will not accept Bell's attempt to siphon off part of these revenues which are directly generated from the customer lists developed and maintained by the operating companies. In future cases, we will continue to monitor this situation closely, keeping in mind the requirement of the Modified Final Judgment, a requirement which AT&T opposed, that the Yellow Page business remain with the Bell operating companies and under the jurisdiction of state regulatory commissions so that the profits from that business could be used to keep rates down.

The Staff's estimate of Yellow Page profits was prepared in accordance with the procedure used by the Commission in the past and with

the exhibits originally filed by the Company in this case. In doing so the Staff recognized Yellow Page revenue, the related expenses, and investment as part of SCB's regulated operations. This approach permits full recognition of directory revenues and expenses and provides the Company an opportunity to earn a fair return on the investment related to the directory operations. To recognize the full benefit of Yellow Page profits to local rates, the Commission adopts the Staff's treatment of Yellow Page revenues and expenses.[2/]

D. Toll Revenues

In an earlier Order issued in this proceeding on December 16, 1983, we stated that the parties had agreed upon the dollar amount of access charges to be collected from AT&T by South Central Bell. Counsel for Bell stated that this amount, approximately $61.5 million, would fully reimburse SCB for the loss of inter-LATA toll revenue following divestiture. In light of this agreement, there is apparently no longer a dispute concerning the proper amount of Bell's toll revenue during the test period. The calculation of this amount, $202,606,000, is shown in Appendix A (attached).

E. Gross Receipts Taxes

Two other issues, gross receipts taxes and Bell's proposed payments to the Central Services Organization (CSO), are not raised in the Company's post-hearing brief and proposed findings. We assume that these matters are no longer in dispute. Since they were discussed at the hearings, however, we will briefly explain our findings on both issues.

2/ We also reject Bell's proposal because the Company did not correctly transfer to the new subsidiary all of SCB's Yellow Page expenses. In determining the costs to be transferred from SCB to the new subsidiary, Bell included an amount to provide the new subsidiary a return on its investment in the prepaid directory expense account. This transfer is proper if one assumes that this investment is also transferred from SCB to the new subsidiary. However, the Company made no adjustment to show this reduction in its rate base and therefore failed to transfer to the subsidiary all of the costs related to directory operations. As a result, South Central Bell's projected cost of operations, as reported in the September forecast, is overstated.

At the hearing, Company witness Parrish proposed to increase the budgeted GS&L expense because of additional CSO expenses which would be charged to South Central Bell in Tennessee.

He agreed to furnish after the hearing additional information on how each of the CSO projects would benefit the ratepayers of Tennessee and also a breakdown of the costs involved in each of the projects.

The Commission has reviewed this information and, in our opinion, it is not sufficient to justify the increases in the CSO budgeted expense proposed by Mr. Parrish. We therefore find that the expense shown on Exhibit 28, Schedule 26, should be used as a basis for setting rates in this case. That expense is based on Mr. Parrish's original estimate of the CSO expense as corrected by the Staff. It also includes the FCC ordered refund discussed previously.

G. Low Income User Issues

1. Charitable Contributions

The Low Income Users ask us to reconsider our past policy of recognizing that reasonable charitable contributions by South Central Bell are legitimate, business expenses and may properly be charged to the ratepayers. Our view, which is apparently shared by the majority of state regulatory commissions, is that utility "good will" is a valuable asset, though admittedly difficult to quantify, which ultimately benefits ratepayers. See A.J. Priest, Principles of Public Utility Regulation (1969), Vol. L, p. 87. Utilities, like all major corporations, are expected to contribute their fair share to charitable activities in the community. As long as these contributions are reasonable (there is no evidence in this record to indicate otherwise), we will recognize Bell's charitable contributions and concessions as just and reasonable business expenses.

2. Government Concessions

The Low Income Users also request us to disallow Company concessions to various local governments and agencies. We doubt that we

have the legal authority to take this action in regard to municipal franchises previously approved by this Commission and now in effect. The record indicates, however, that SCB lost $519,000 for the twelve months ended March 31, 1983, on concessions to governmental agencies granted in compliance with various municipal franchises. The revenue loss for 1984 is estimated to be $552,000. To deal with this growing problem, the Staff recommends, and we agree, that from this date forward, the Commission will not approve local franchises that provide for government concessions. Our decision is in concert with Mr. Johnson's testimony that SCB is opposed to franchises that require concessions. The present system is highly discriminatory. Some cities enjoy concessions while others do not. Our policy will help provide uniformity throughout the State in regard to government concessions.

3. Tax Issues

In its post-hearing brief LITU proposed several adjustments to federal income taxes without having presented a witness to set forth the benefits of the proposals. The proposals included the immediate flow through of deferred taxes related to:

(1) Vacation accruals; (2) Capitalized overheads relating to construction work in progress; (3) Accelerated depreciation at rates in excess of 46.; and (4) Pre-1971 investment tax credits.

LITU based its motion to immediately flow through the tax benefits resulting from expensing vacations when accrued for tax purposes on page 15 of its brief on information supplied in late filed Exhibit 13, which was filed after clarifying cross-examination of Company witness Ballard about SCB's tax accounting relating to the four items. The response points out that the $5.3 million deferral deducted from rate base reduced the Company's gross revenue requirements by $1.4 million in 1984. Assuming the balance stayed at the forecast level, reductions in revenue requirements of similar levels would continue in the future, depending, of course, on the rate of return granted. The reduction in rate base is consistent with the proposal on page 5 of LITU's brief but conflicts with

the proposed flow through advocated on page 15 of the brief.

The normalization procedure followed by the Company has been approved by the FCC and has been recognized by the Commission in past cases. LITU has proposed conflicting treatment of this item and in our opinion has not presented sufficient evidence or arguments to justify changing the procedure followed in the past.

LITU next proposed an immediate flow through of prior deferrals relating to the capitalization of relief and pensions and payroll taxes on the books of SCB and the expensing of them on its tax returns. As properly pointed out on page 2 of the Company's responses in Exhibit 13, no deferred taxes exist as the differences in book and tax treatment are permanent. For book purposes relief and pensions, and payroll taxes relating to the salaries capitalized on construction projects are also capitalized. For federal tax purposes these overheads are taken as tax deductions in the year paid.

As the staff has pointed out on many occasions and as this Commission has recognized in several recent cases involving United Inter-Mountain Telephone Company, South Central Bell does flow through the effects of these capitalized overheads as do other telephone utilities. The staff has opposed the normalization of the tax effects of these items and this Commission has agreed. Since the Company is doing what LITU requested us to order them to do, this issue is moot.

LITU also proposed, without quantification or witness on the subject, that this Commission order the Company to immediately refund federal income taxes deferred in previous years when the tax rate was greater than the current 46%. During cross examination, Company witness Ballard pointed out that for a number of years the Bell System had followed the Average Rate Method to flow back these tax deferrals as provided by the Internal Revenue Code, which is consistent with the rate making treatment afforded this item in the past. Again LITU has proposed conflicting treatment in advocating the immediate refund while deducting the deferral from rate base; we do not believe that the intervenor has fully analyzed all the ramifications of the proposal or offered sufficient evidence to change the procedure used in past cases.

The final proposal of LITU at page 17 of its brief was to immediately flow through the pre-1971 investment tax credits of $927,000 proposed as a rate base deduction by the staff and supported by LITU on page 6 of its brief. Again LITU can't have it both ways as proposed. Several years ago this Commission gave the utilities an option as to the treatment of investment tax credit. SCB chose the normalization option. IITU's proposal would have a one time immediate effect while the reduction of federal income tax expense by its amortization has more stable long range benefits. In summary LITU has not presented convincing arguments for us to change our position and has in fact proposed conflicting treatment of the same item.

Cost of Service:

In the hearing and in their brief LITU raised issues concerning the Company's failure to provide detailed cost data concerning various types of telephone service. Although the Company provided its Embedded Direct Analysis (EDA), we believe that this subject warrants additional investigation. Therefore, we direct the Company to conduct a study to select an appropriate methodology which will then be applied to determine the costs of the various types of services provided by the Company, including specifically business, residential, and local measured and message service. The study should specify the service identifications, study methodology, and the uses and limitations of the results. The study should identify the source of all figures and variables used in study so that the data provided can be traced to the Company's books and accounting records.

EDS Study

The study should be submitted to the Commission by June 1, 1984.

G. Cash Advanced Through Operations

Staff also deducted from the rate base cash advanced through operations, the amount of which was determined through the use of a lead-lag study. This figure represents the cash which Bell collects from its customers but has not yet paid to meet expenses. This is another source of non-investor supplied funds which have been used to finance a portion of the Company's investment and should be deducted from Bell's rate base.

H. Customer Deposits and Interest on Customer Deposits

The Staff has properly excluded customer deposits from the rate base because these deposits also represent non-investor supplied funds. In making this adjustment the Staff also recommended that interest paid by the Company on these deposits be considered an above-the-line expense. We will adopt the Staff's adjustment by decreasing net operating income to account for interest on customer deposits.

III. RATE BASE

Company witness Ballard testified that Bell's rate base for the test period would be $1,601,423,000. Staff witness Knight recommended a $1,296,215,000 rate base which reflected the Commission Standard Adjustments.

For the reasons explained above, we approve the use of the Commission Standard Adjustments and adopt the rate base recommended by Mr. Knight.

The Low Income Telephone Users suggested that we should make an additional adjustment to the rate base by deducting all plant under construction. We have consistently held, however, that investors whose capital is committed to construction programs are entitled to a return on that investment. In the long run, we believe this policy encourages new investment and promotes a healthy construction program to maintain and improve service. In the absence of any testimony to the contrary, we will permit the Company to include construction work in progress in the rate base.

The Commission therefore adopts the following rate base as appropriate for use in this case.

SOUTH CENTRAL BELL TELEPHONE COMPANY

TENNESSEE INTRASTATE

AVERAGE RATE BASE

1984 (000)

Line No.		
1.	Telephone Plant in Service	$1,935,663
2.	Telephone Plant Under Construction	32,564
3.	Property Held for Future Telephone Use	88
4.	Materials and Supplies	9,690
5.	Cash Requirements	2,795
6.	Total	$1,980,000
	Deductions	
7.	Depreciation Reserve	$ 417,944
8.	Accumulated Deferred Federal Income Tax	244,050
9.	Unamortized ITC-Pre-1971	927
10.	Unpaid for Materials and Supplies	1,599
11.	Cash Advanced Through Operations	13,565
12.	Customer Deposits	6,500
13.	Total Deductions	$684,585
14.	Rate Base	$1,296,215

IV. REVENUES AND EXPENSES

Although there are a number of differences between the Company's projected revenues and expenses for 1984 and the figures recommended by the Staff, the Company rebutted only two of the Staff's adjustments, the advertising budget for 1984 and the FCC-ordered refund of AT&T pre-operational expenses. In its post-hearing brief and proposed findings of

fact and law, the Company discussed those two issues and two others, revenues from Yellow Pages and from intrastate, inter-LATA toll service. The Low Income Users supported the Staff position on each of these four issues which we will now discuss.

A. Advertising Expense

The Staff recommended that the Company's advertising expense for 1984 be reduced from $5,742,000 to $4,291,000 because $986,000 of toll advertising will be transferred to AT&T and $1,089,000 in advertising for terminal equipment (transferred to AT&T) will be eliminated.

In arriving at the $4.3 figure for 1984, the Staff looked at Bell's actual advertising expense in 1982 ($6 million) and then reduced it by $2 million to account for the reduction in terminal equipment and toll advertising. The result was then increased to reflect the growth in the Consumer Price Index in 1983 and 1984.

Bell opposed the Staff's adjustment on the grounds that its advertising expenses in 1984 are necessary to inform customers of changes in the Bell system during the coming year. Bell argued that the loss of any of its advertising budget at this time will deprive customers of this information.

Staff witness Gaines replied that his method of forecasting Bell's advertising expense recognized the need for more informational advertising since the 1982 base period from which the 1984 budget was developed included a $.6 million increase in informational advertising over 1981. Mr. Gaines also said that he was making no recommendation as to the amount of the advertising budget which Bell should spend on customer information rather than promotional advertising. The Company may spend as much, or as little, of its budget on informational advertising as it feels is necessary.

We agree with Mr. Gaines' recommendation. This Commission has never attempted to tell SCB how to spend its advertising budget; we only require that the total expense be just and reasonable. Because of divestiture, which was announced on January 8, 1982, the Company's

The Court approved Plan of Reorganization for AT&T provides that "the amount of prepaid taxes associated with facilities or functions assigned to AT&T will be assigned to AT&T" (P.O.R. p. 135). As AT&T will take over inter-LATA toll and terminal equipment rental operations, the Staff's position is that AT&T should be required to reimburse SCB for all prepaid taxes associated with these operations. Staff witness Knight, therefore, recommended that SCB bill AT&T $2,470,000 for prepaid gross receipts taxes that relate to revenues from terminal equipment rentals and inter-LATA state toll generated in 1982.

In a letter dated December 21, 1983, to the Commission from the Tennessee Department of Revenue (late filed Exhibit 37), the Department states that the prepaid gross receipts tax relating to AT&T Communications is transferable to AT&T Communications. The Department letter also states, however, that AT&T Information Systems (ATTIS), a telephone equipment company, is not subject to the gross receipts tax. Bell argues that AT&T may therefore refuse, in violation of the POR, to reimburse Bell for taxes associated with the terminal equipment being transferred to ATTIS.

While the ruling of the Revenue Department satisfies part of SCB's concern, the Commission believes that the POR is controlling in this matter and that AT&T is obliged to abide by it. Therefore, the Commission adopts the Staff's level of gross receipts tax expense of $9,702,000 and directs SCB to seek reimbursement of the full $2,470,000 from AT&T and to take appropriate action, if necessary, to enforce the terms of the Plan of Reorganization.

F. CSO Budget

The Staff proposed adjustments to reduce the $12,060,000 General Services and Licenses expense budget to correct $1,050,000 in arithmetical errors which the Staff found in the Company's proposed Central Services Organization (CSO) budget for 1984. These corrections were not challenged by the Company.

V. FAIR RATE OF RETURN

A finding on fair rate of return is one of the most subjective determinations this Commission must make in arriving at a decision concerning the proper level of rates a company charges its customers. We make this determination in light of the controlling legal standards laid down by the United States Supreme Court in the landmark Bluefield and Hope cases. In Bluefield case, the Court stated:

> (A) public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional rights to profits such as are realized or anticipated in highly profitable or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties.

Bluefield Water Works and Improvement Company v. Public Service Commission of the State of West Virginia, 262 U.S. 679, 692-93 (1923).

Later in the Hope case, the Court refined these guidelines holding that: (FPC v. Hope Natural Gas, 320 U.S. 591, 603 (1944))

> "From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise so as to maintain its credit and to attract capital."

With these basic standards in mind, we will discuss some of the important considerations that were presented at the hearing on the subject of fair rate of return. We believe that the standards, as set out in these two decisions, point out an important fact: the setting of a fair rate of return is not an exact science. As the following discussion illustrates, a return that one informed person believes is fair and necessary to provide a comparable return enjoyed by other similar

enterprises and to attract necessary capital may not be the same return as another informed person might believe. Needless to say, our discussion is of necessity limited and cannot and will not be fully comprehensive of all relevant matters and components that go into the make-up of the determination of a fair rate of return.

Four witnesses presented direct testimony concerning the cost of capital for BellSouth. Three witnesses, Matheson, Todd, and Prior, testified on behalf of the Company. Todd and Prior, both investment counselors, said that based on the earnings of other corporations, they would not advise their clients to buy BellSouth stock unless they anticipated at least a 16% return. Mr. Matheson, who also testified that the return on BellSouth's common equity should be in the range of 16-18%, recommended that the Commission grant the Company an overall rate of return of 13.25% based on a debt-equity ratio of 45%, a 16% return on common equity and 9% as the cost of embedded debt.

Testifying on behalf of the Staff, Dr. Westfield recommended an overall return in the range of 10.8 to 11.7, based on an 8.8% cost of debt, a 12.5 to 14% cost of equity, and the same debt-equity ratio used by Mr. Matheson

After reviewing the extensive evidence in the record, which includes the rebuttal testimony of Professor Brigham and the surrebuttal testimony of Dr. Westfield, we find Dr. Westfield's analysis persuasive and adopt the mid-point of his recommended cost of equity. We believe that he underestimated the Company's cost of debt, however, and will adopt an 8.9% cost of debt, mid-way between Westfield and Matheson, for use in this case. Since there is no dispute on the appropriate capital structure, our findings on the costs of equity and debt result in an overall rate-of-return of 11.3% for South Central Bell's investment in intrastate operations for Tennessee.

Dr. Westfield's estimate of the cost of equity was calculated using the Discounted Cash Flow (DCF) formula which both he and this Commission have consistently relied upon in determining the cost of equity capital. Using information contained in AT&T's prospectus describing the soon-to-be divested regional holding companies, analyses prepared by investment firms,

and historical data supplied by South Central Bell, Dr. Westfield arrived at estimates of BellSouth's projected dividends during 1984, the equilibrium price of its stock, and the anticipated growth in the stock price and the Company's dividends. Using this information, he calculated the cost of equity to be approximately 13.3% (midpoint). Dr. Westfield tested the reasonableness of this recommendation by calculating the cost of equity of five, independent telephone companies listed on the New York Stock Exchange. The average, expected rate of return for the five companies is 13.3%, the mid-point of Dr. Westfield's recommended range for BellSouth (Tr. Dec. 8, p. 253). He also calculated the cost of capital for BellSouth using the Capital Asset Pricing Model and once again concluded that the cost of equity was in the range of 12.5 to 14% (Id. p. 256).

Two additional factors lend support to Dr. Westfield's conclusion. BellSouth stock is presently selling at a market-to-book ratio of one which is an indication that the utility is earning a fair rate of return. See Nosh, "Recent Trends in Cost of Capital," 72 Public Utilities Fortnightly, 19, 21-26 (Sept. 26, 1963). BellSouth's two operating utilities, South Central Bell and Southern Bell, earned approximately 13.6% on their combined book equity in 1982 and the first half of 1983 (Id. p. 252). In other words, BellSouth's present rate of return on equity, 13.6%, is a fair guide to its market cost of equity since the stock is presently selling at a market to book ratio of one and it is not anticipated that the Company will need to raise additional equity during the next year.

A second factor to be considered is that, based on testimony in August, 1982, this Commission determined that the cost of equity for South Central Bell was 15.5% in the Company's last rate case. As Dr. Westfield testified (Id. p. 267, 334-336) the dramatic rise in the stock market since the summer of 1982 leaves little doubt that equity is cheaper now than it was at that time when the prime interest rate was two and one-half to five points higher than the present rate.

The Company's witnesses testified that the cost of equity to BellSouth was no lower than that of an average industrial company, a

Dr. Westfield's approach looked specifically at BellSouth and used the Company's actual, past earnings to project dividend growth during the coming year. His methodology was used by one Bell witness (Tr. Dec. 8, p. 82-83), though not to determine the cost of capital for BellSouth, and endorsed by another as one of the generally accepted methods of determining growth (Tr. Dec. 8, p. 263). Furthermore, Dr. Westfield's estimate of BellSouth's dividend yield in 1984 is consistent with the predictions of other analysts (Tr. Dec. 9, p. 297) and his recommended return on equity is approximately the same as the forecasted returns of other telephone companies whose stocks are publicly traded (Tr. Dec. 9, p. 253). For these reasons we find that the appropriate cost of equity to use in this case is 13.25%, the mid-point of Dr. Westfield's range.

VI. DESTIMULATION

In determining the amount of revenue to be generated by the proposed tariffs the Company attempted to quantify the impact of demand stimulation and destimulation resulting from the proposed rate changes. Although the impact as determined from the Company's econometric studies was $11,602,000 only two and one half pages of prefiled testimony were entered into the record.

Dr. Westfield testifying on behalf of the Staff provided the most detailed analysis of the econometric demand models used by the Company in determining the impact and after citing numerous flaws concluded that little if any use could be made of the models used by the Company in this proceeding. He did however, agree that properly developed and utilized the econometric demand studies, and econometric cost studies should be considered in the regulatory process. On the basis of Dr. Westfield's testimony, we find that the studies as used by the Company in this proceeding are inadequate and therefore should not be considered in determining the rates needed to produce the required revenues. In order that we may consider this type of information in future cases, we request the Company to explore further methods for developing economic demand studies in light of the criticisms raised in this hearing.

III. RATE DESIGN

The Company, through the testimony and exhibits of witness John Ebert, sponsored revised tariffs designed to produce an annual revenue increase of $279,555,000 for the forecasted test period ending December 31, 1984. The following schedule summarizes the proposed rate changes of the Company:

South Central Bell Telephone Company

	Annual Value
Basic local flat rate exchange and related services: Including residence and business basic local service, exchange trunks, grouping service, etc.	$ 264,044,000
Long distance service	- 17,014,000
Zone charges	2,349,000
Coin telephone service	6,678,000
Service charges	8,008,000
Directory assistance repricing	10,388,000
Miscellaneous services: Including operator assistance, verification, directory listings, touch tone service, DID service, etc.	7,302,000
Independent company settlements	- 2,200,000
Total annual revenue increase	$ 279,555,000

The Company's proposed tariffs for basic local flat rate exchange service include a reduction in the number of groups used to determine the level of local service rates in each exchange from the existing 12 groups to 5 groups. In addition, customers from exchanges which do not presently have the capability to furnish measured service would receive a 10% lower rate until measured service was provided. Increases range from $14.80 to $16.00 per month for residential flat rate lines, while business flat rate line increases range from $29.35 to $33.55 per month.

The Company proposed to reduce the factors used to determine the PBX Trunk rate and the grouping charge for multi-line systems from 1.75 to 1.55 times the business 1-party flat rate charge. The minimum for measured rate lines would also go down from .70 to .60 times the flat rate line charges.

The proposed tariffs contain rates for long distance service which produce an overall reduction of 30% in long distance Direct Distance Dialed revenues, these reductions would reduce intra-LATA toll revenues by $17,014,000.

The Company's proposal includes an increase in zone charges of approximately 25%. This would increase the zone charge for a 1-party line from $1.35 to $1.70 per month, per zone. This proposed increase will produce $2,349,000 in additional annual revenues.

The local coin telephone rate is proposed to increase from 10c to 25c per call. The Company's revenue projection estimates that the proposed increase in the local coin rate will produce approximately $6,678,000 in additional annual revenues.

Directory Assistance Charges

The Company requested a Directory Assistance Repricing Plan which would establish a charge of 30c per call for all calls to directory assistance above an allowance of five (5) calls per month. The Commission is of the opinion that the Directory Assistance Repricing Plan should be denied. We realize that the general customer body is paying for directory assistance through local service rates; however, we believe that the customer body at this time is satisfied with the current pricing method.

Coin Telephone Rates

South Central Bell has proposed raising the cost of a coin telephone call from 10c to 25c, and presented a study by Shockley Research, Inc. purporting to show attitudes of Tennessee residential customers toward the proposal. The survey revealed that residential customers would rather have the coin rate raised than their residential rates increased. Low-income intervenor witness Dr. Michael Miller testified that the Shockley survey was biased because it induced a specific response; because the question was not neutrally worded.

Because local coin telephone service may be the only telephone service some citizens have available to them and many others use this service as an emergency network, we find that the public's interest is best served by denying the proposed increase in the local coin rate.

Direct Inward Dialing Service

In its March 23, 1983 order in Docket No. U-82-7173, the Commission directed the Company to file tariffs in its next general rate filing to restructure and reprice its DID rates consistent with the AT&T recommendation on DID service. The next general rate filing after that order was this proceeding, and the Company's proposed DID tariffs comply with that order.

Direct Inward Dialing service allows calls to a PBX to be switched directly to a number terminating behind the PBX. The DID service requires central office DID number assignments and specially equipped incoming PBX lines. Under the Company's prior DID offering, the charges for reserving number blocks and for equipping trunks were bundled together. However, under the proposed tariff, the charges for number blocks will be separate from the charges for specially equipping the incoming trunks.

The proposal to unbundle DID service is particularly appropriate, because customer needs for trunks vary widely. Many customers require a specially equipped trunk for every ten DID numbers while other customers, with much shorter holding times, can accommodate 100 DID numbers on two specially equipped trunks. Therefore, the proposed tariff will allow the customer to obtain service tailored to his specific needs but to avoid bundled charges for services that he does not need.

The only party who opposed the DID proposal was the RCC intervenor, TARU. That opposition was based on a desire to continue the present arrangement pursuant to which RCCs purchased DID numbers under contract rates lower than the proposed tariff. The RCCs contend that they are entitled to more favorable rates because (1) they purchase DID numbers in much greater quantity than other subscribers and (2) they use DID numbers, in connection with paging services, for only one-way communications, while other subscribers use the DID numbers for two-way communications.

South Central Bell has indicated that it intends to continue providing DID numbers to RCCs under contract until the Commission decides whether access service tariffs should be applied to RCCs. As a result of a pre-hearing motion by TARU, a separate docket will be established to consider the application of access service tariffs to RCCs. It appears that the issue of DID service to RCCs is related to the access service tariff issue because at least one charge under the DID tariff, the "trunk termination charge," would be also contained in the access services tariff proposed for RCCs.

In view of (1) South Central Bell's expressed intention to continue the contracts with RCCs, and (2) the relationship between the DID service provided to RCCs and the access services tariff proposed for RCCs, the Commission approves the DID tariff as filed, with the exception that the provision of DID numbers to RCCs will continue under present contracts and the level of rates in these contracts will be considered by the Commission in the docket established relative to the application of access service tariffs to RCCs.[5/]

Complex Inside Wiring Service

The Company has proposed a change in its method of charging for complex inside wiring. The flat recurring charges would be eliminated and replaced with a time-and-materials charging (TMC) plan for maintenance functions. The cost of maintenance is currently included in the recurring wiring rate, but the availability of alternative suppliers makes the identification of South Central Bell provided wire difficult. The provision of maintenance under the proposed TMC plan eliminates the mismatches of provision of maintenance and billing for maintenance. The new environment also eliminates South Central Bell's source of information on discrete customer wiring activity, thereby making the continuation of the recurring charges difficult.

The staff proposes the continuation of recurring charges for customers with South Central Bell complex inside wiring for embedded systems as a means of recovering the remaining net investment. The staff also recommends TMC for the maintenance function and the development of a sales plan which would establish purchase prices for complex inside wire based on a relationship to the monthly rate of each customer.

As an alternative that addresses the staff's interests, yet recognizes the administrative problems attendant to their proposal, the Company proposes a "frozen" recurring billing to customers of record on December 31, 1983. The billing to these customers would continue at the December 31, 1983 level and provide a revenue stream toward the embedded investment. Maintenance would be provided under the

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5/ Docket No. U-6703 is a tariff filing by South Central Bell to no longer provide series 5000 wide band channels for new installations after December 31, 1983. That docket has remained open and is superseded by this Order and should be closed by the terms of this Order. [illegible] December 31, 1984.

TMC plan.

The Commission is of the opinion that the monthly recurring charges for complex inside wiring should be continued to aid in the recovery of the cost of this wiring. We also believe that the Company should offer this wiring for sale to its customers at prices based on the recurring monthly billing to each customer. Therefore we direct the Company to file a plan within sixty (60) days of this order, that establishes sale prices for complex wiring, based on the recurring charges customers pay.

Local Measured Service

South Central Bell currently offers three optional local measured service plans to its residence customers. The Commission has previously approved these plans in order to permit customers to choose one of these lower priced options, if their telephone usage is such, that it permits them to save money. The Low Income Intervenors have proposed to halt the offering of all local measured service until studies are conducted showing the costs, impact on universal service and alternative rate designs.

The Commission believes that the continued offering of local measured service is in the public interest. All subscribers, including Low Income Subscribers can elect to receive service under one of these optional plans, which can save a customer up to 60% of the monthly residential flat rate. If experience or future study indicates that equity and fairness to subscribers require changes in the local measured service plans, the Commission will move swiftly to implement those changes.

Telpak Service

On December 5, 1983, as a preliminary matter, the Commission approved the motion of Intervenor, State of Tennessee, to remove from South Central Bell's proposed tariff the elimination of the Telpak offering, subject to the following conditions:

1. Effective January 1, 1984, the Inter-LATA parts of the Telpak offering will be provided by AT&T Communications of the South Central States, Inc. and the Intra-LATA part of the Telpak offering [illegible] by South Central Bell.

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2. Effective January 1, 1984, the applicable rate for both the Inter-LATA and the Intra-LATA parts of the Telpak offering will be increased by 20 over the existing rates.

3. Both the Inter-LATA and the Intra-LATA parts of the Telpak offering will terminate on December 31, 1984.

4. The maximum capacity for each Inter-LATA and Intra-LATA Telpak billing option group, respectively, will be the present combined capacity for existing Telpak billing option groups currently obtaining an Inter-LATA and Intra-LATA mix, and is limited to parallel service between the points currently receiving Telpak service.

Therefore, the tariffs filed should reflect the continuation of the Telpak offering subject to the above stated qualifications.

The Commission further adopts the following, staff recommended, modifications to the tariffs as filed by the Company on July 8, 1983:

A. Basic Local Service Rates:

1. Five group local service rate schedules with no premium for exchanges which have measured service available.

2. PBX and ESSX trunk rate established at 1.75 times the business flat rate charge.

3. Apply a grouping charge of 75¢ uniformly to all classes of customers.

4. Make no changes in the existing rate structure of measured rate service.

B. Service Charges:

1. Eliminate the access line costs from the Central Office Line Connection Rate.

C. Other Services:

1. Reduce the group emergency alerting and dispatch service rate increase to 25%.

2. No change in the existing rates for message toll, WATS, and zone charges.

In summary, the Commission is of the opinion that the tariffs filed by the Company on July 8, 1983 should be denied. The Company has been directed to file revised tariffs which produce the additional annual revenue requirement of $39,301,000[6/] in accord with the findings previously set forth in this order.

6/ See Appendix B for a calculation of the rate award.

IT IS THEREFORE ORDERED:

1. That the tariffs filed by South Central Bell on July 8, 1983, designed to produce $279,555,000 in additional annual revenues be, and the same are hereby, denied.

2. That the tariffs filed by the Company in response to our findings, designed to produce additional annual revenues not to exceed $39,301,000, are hereby made permanent and our Order of January 6, 1984, approving those tariffs is incorporated herein.

3. That the November 25, 1983 Order of Administrative Judge Mack Cherry on the applicability of the Company's intrastate access charges to Radio Common Carriers is incorporated herein by reference. A docket captioned "Proposed Application of Intrastate Access Charges and Direct Inward Dialing Tariffs by South Central Bell to Radio Common Carriers" shall be established as Docket U-84-7279, to deal with these access charges and the DID charges discussed on page 35 of this Order.

4. That our Order of December 22, 1983, relating to the application of the Company's Intrastate Access Charges to authorized inter-LATA toll carriers is incorporated by reference. A docket captioned "Intrastate Access Charge Tariff Filing of South Central Bell Telephone Company" shall be established as Docket U-84-7280.

5. That our Order of December 30, 1983, relating to Wide Area Toll Service (WATS) shall be incorporated by reference.

6. That South Central Bell is ordered to file the "Cost Studies" discussed on page 22 of this Order at least one month before its next general rate filing.

7. That South Central Bell is ordered to file the budget tracking reports discussed on page 23 of this Order with the Commission's Accounting Division on a monthly basis.

8. That South Central Bell is ordered to file a sales plan within sixty (60) days of the date of this Order setting forth sales prices for complex intrasystem wiring as discussed on page 36 of this Order.

9. That the Company in its next rate filing shall incorporate the Commission's Standard Adjustments as an alternative to the Company's unadjusted figures.

10. That the Company's next rate filing shall include a quantification of employee concessions for intra-LATA toll calls.

11. That all motions not previously ruled upon are hereby denied.

12. That any party aggrieved with the Commission's decision in this matter has the right of judicial review by filing a Petition for Review in the Chancery Court of Davidson County within sixty (60) days from and after the date of this order.

CHAIRMAN

COMMISSIONER

COMMISSIONER

ATTEST

EXECUTIVE DIRECTOR

Previously it was explained that as a result of the unusual circumstances in this case we have utilized the forecast of revenues, expenses, and investment for the calendar year 1984. We have adopted the forecast reluctantly and as a result will require the company to file monthly tracking reports showing the actual combined and intrastate revenues, expenses, investment etc. in comparison with the budgeted amount in the same format as identified in the September view of the budget. The company shall also provide a detailed comparison of the actual construction program with the September budget view and shall provide detailed explanations of significant deviations.

In light of these findings, the following table of revenues and expenses incorporates the adjustments heretofore discussed. We find this revised income statement appropriate for use in this proceeding.

SOUTH CENTRAL BELL TELEPHONE COMPANY
Tennessee Intrastate
Revised Income Statement
1984
(000)

Line No.		Staff Exh. Schedule 4	Adjustment	Revised Staff
	Revenues:			
1	Local Service	$ 453,674	$ 0	$ 453,674
2	Toll Service	204,202	-1,596	202,606
3	Miscellaneous	71,382	0	71,382
4	Interest During Construction	3,580	0	3,580
	Less:		0	
5	Uncollectibles	-2,684	84	-2,600
6	Total Revenues	$ 730,054	$ -1,512	$ 729,142
	Expenses:			
7	Interest on Customer Deposits	$ 650	$ 0	$ 650
8	Maintenance	159,210	0	159,210
9	Depreciation	114,414	0	114,414
10	Traffic	37,893	0	37,893
11	Commercial and Marketing	69,700	0	69,700
12	Accounting	14,166	0	14,166
13	General	29,385	0	29,385
14	Operating Rents	17,072	0	17,072
15	Relief and Pensions	48,048	0	48,048
16	General Service and Licenses	7,720	-1,447	6,273
17	Miscellaneous Income Charges	487	0	487
18	Federal Income Tax	47,322	-28	47,294
19	F.O.A.S. and U.C.Tax	15,431	0	15,431
20	State and Local Tax	54,382	-3	54,379
21	CPE Cost Allocated To Interstate	-11,445	0	-11,445
22	Total Expense	$ 604,435	$ -1,478	$ 602,957
23	Net Operating Income	$ 126,219	$ -34	$ 126,185

APPENDIX A

On December 16, 1983, AT&T Communications, South Central Bell, General Telephone of the Southeast, United Inter-Mountain, and the Staff stipulated to an interim procedure providing the use of access charges designed to provide South Central Bell and the other local telephone companies with the level of toll support that would have been realized had the current division of revenue approach been continued in 1984. In an Order issued December 22, 1983, in this proceeding, the Commission approved the interim procedure which reduced the revenue requirements of South Central Bell.

In arriving at the interim settlement, however, the Staff used different figures to calculate ATTCOM's cost of service than were used in developing the Staff's exhibits previously filed in this rate case. In developing the cost of service for AT&T Communications as originally filed in this case, as shown on schedule 10 of the Staffs exhibit, it was assumed that ATTCOM would be liable for the gross receipts tax only on the revenue it will retain after paying access charges to SCB. During the development of the interim access charge arrangement, the Tennessee Department of Revenue determined that AT&T Communications will be liable for gross receipts tax computed on the basis of the total inter-LATA revenues it collects. As a result, AT&T Communications cost of service must be increased. This increase and other changes to recognize interest during construction, capitalized relief and pension cost, and disallowed depreciation resulted in AT&T Communications cost of services being increased from $19,333,000 to $20,929,000. As a result, South Central Bell's toll revenue under current rates as shown on Staff Exhibit 28 schedule 4 was reduced from $204,202,000 to $202,606,000. The revenues and uncollectibles as presented on schedule 4 and as adjusted are presented below:

	Staff Exhibit Schedule 4 (000)	Adjustment (000)	Restated (000)
Revenues:			
Local	$453,674		$453,674

Toll Service	204,202	1,396	202,806[A/]
Miscellaneous	71,882		71,882
Interest During Construction	3,560		3,560
Less:			
Uncollectible	2,684	84	2,600[B/]
	$730,654	$ 1,512	$729,142

A/ Toll Revenue Exhibit 28 Schedule 8 $223,400 + 135 - $20,929 = $202,606

B/ ($453,674 - $202,606 - Access charge revenue $61,358 + 71,882) x .0039 = $2,600.

SOUTH CENTRAL BELL TELEPHONE COMPANY

TENNESSEE INTRASTATE

CALCULATION OF GROSS REVENUE REQUIREMENTS

"000"

Line No.		
1.	Net Operating Income Under Present Rates as Adjusted - Page 23	$126,185
	Net Operating Income Effect for Change in Debt Cost:	
2.	State Excise Tax -	37 A/
3.	Federal Income Tax -	281 B/
4.	Net Operating Income Available for Return (L1+L2+L3)	$126,503
5.	Net Operating Income Required Rate Base Page 11 $1,296,215 X .113 =	$146,472
6.	Additional Net Operating Income Prepaid (L5-L4)	$ 19,969
7.	Additional Gross Revenue Required (L6 x .5081C/)	$ 39,301

A/ Increased Interest using 8.9% debt cost x Excise Tax Ex. 28 Sch. 32, $648 x 5.53% = $37 decrease.

B/ ~~Increased Interest plus excise~~ change x .46 : $648 + (37) = 611 x .46 = $281 ~~decrease~~.

C/ ~~As shown on~~ p1

BEFORE THE TENNESSEE PUBLIC SERVICE COMMISSION

NASHVILLE, TENNESSEE

IN RE: PETITION OF SOUTH CENTRAL BELL TELEPHONE COMPANY TO CHANGE AND INCREASE CERTAIN RATES AND CHARGES FOR INTRASTATE TELEPHONE SERVICE

DOCKET NO. U-83-7248

D I S S E N T

I dissent from the majority decision finding an overall return of 11.3% for South Central Bell in this proceeding. The majority has placed sole reliance on the testimony of the Commission staff witness, Dr. Fred Westfield, and has not given any weight to other evidence submitted by four expert witnesses who also testified on this important issue. In view of the wide variation between the staff witness and the other experts (11.3% vs. 13.25%), I think the conclusion reached is erroneous in light of the entire record.

The determination of the overall cost of capital is, on its face, apparently a simple process. The starting point is the capital structure, and in this record, it is uncontroverted that South Central Bell's capital structure is made up of 45% debt and 55% equity. To obtain the weighted cost of the Company's capital, one must determine the cost of debt and multiply it by 45% and follow the same process using a 55% multiple for the cost of equity. The products are then added together to determine the overall, weighted cost of capital.

My principal concerns arise from clearly erroneous debt and equity costs relied upon by Dr. Westfield. In computing the cost of debt, Dr. Westfield acknowledged he substantially understated the cost of short term debt. Both Chairman Bissell and I commented on that error in the Commission Conference, but the 11.3% overall cost of capital adopted by the Commission does not correct Dr. Westfield's error. The record only supports a conclusion that the cost of short term debt in 1984 will be over 9.0%, not the 8.2% used by Dr. Westfield. Therefore, if Dr. Westfield had made no other errors, the overall cost of debt should be increased by 0.2% to 9% and the overall cost of capital by 0.1%. However, Dr. Westfield also erred in his calculation of the cost of equity.

Dr. Westfield utilized the "Discounted Cash Flow" (DCF) method which, although originally proposed by its author for another purpose, is recognized as a means of determining investor expectations and inferentially the cost of equity capital to the utility. The problem, I find, however, is that in the application of the DCF formula there are judgement decisions on the part of the expert, but unless that judgement is sound and reasonable, it is as with any good computer badly programmed, "garbage in, garbage out." The resulting cost of capital approved by the majority is lower than that approved for this Company by the Commission in 1981 and, according to the statement of the Chairman during the Commission Conference, is the lowest return approved by any of the state commissions for Bell in the country.

The obvious errors in judgement by the staff witness are as follows:

a) Dividend Yield -- To compute the prospective dividend yield in the DCF formula, it is necessary to determine both the prospective annual dividend and the appropriate market price of the stock. Generally, that market price is developed from either the current market price or from some averaged, historical market prices. The record in this case shows that on the two days before Dr. Westfield testified, the closing price for BellSouth stock had been $86.00. The record also shows that the high and low prices at which the stock had ever been traded were $90.50 and $84.75, with the average price being $87.63. Significantly, the market price for BellSouth stock had never been outside the foregoing range.

In his DCF formula computation, Dr. Westfield used a market price range for BellSouth stock of $90.00 to $100.00 with a midpoint of $95.00. The impact of his relying on that erroneous and unrealistic range of market prices is to understate the cost of equity capital by 0.6%. A similar error is also present in his growth range.

b) Growth -- To determine the growth component in the DCF formula, it is possible to rely on different sorts of growth projections related to a particular stock. Two common projections used in calculating a DCF growth rate are projected growth in dividends and in earnings. In fact, Dr. Westfield relied upon dividend growth projections found in Value Line analyses in Exhibit 2 to his testimony.

At the time Dr. Westfield testified a similar, BellSouth-specific Value Line analysis was available. It projected a dividend growth rate for BellSouth of 6.5% and an earnings growth rate of 8.0%. A range of growth estimates between 6.0% and 8.0% was supported by other investment service projections introduced

into the record. However, Dr. Westfield refused to accept such growth rates for BellSouth, despite his reliance on the same estimates elsewhere in his testimony. Instead, he offered his own earnings growth factors of 4.2% to 4.9%, which appear unsupported and arbitrary. The impact of his growth rate error alone was to understate the cost of equity capital by at least 1.1%. The combined impact on the overall cost of capital of Dr. Westfield's DCF input errors is to understate that cost by 1.0%.

The foregoing departures from fact by Dr. Westfield in his application of the DCF formula are obvious and egregious errors which substantially detract from the merit of his testimony. Furthermore, the proof in this record supports the conclusion that there has been no material change in the overall cost of capital since this Commission's decision of September, 1982 in Docket No. U-82-7161 wherein the Commission authorized South Central Bell to earn a 12.5% overall rate of return. The cost of debt and the cost of equity capital, as determined through the DCF formula, were essentially the same in September, 1982 and in December, 1983. Therefore, the significant change in the authorized rate of return ordered in the majority opinion cannot be predicated upon the preponderance of, or even substantial, credible evidence in this record. Additional confirmation of Dr. Westfield's errors is found in the proof regarding the current yield of 12.78% on South Central Bell's bonds. It is generally accepted that a company's long-term debt cost is 2% to 3% lower than the same company's equity cost. Such should be the case here, but isn't.

Moreover, the record contains the testimony of Messrs. Matheson, Todd, Prior and Brigham, all experts in the field, who agree that the proper return on equity would be in the range of 16% - 18%. The lower end of this range, 16%, is significantly higher than the top of Dr. Westfield's range of 14%. To accept Dr. Westfield's mid-range finding without giving any weight to substantial testimony based on experienced judgments, in addition to his misuse of the DCF formula, is not consistent with our statutory duty. In fact, the result is so one-sided as to appear to indicate an objective of reducing the Company's previously authorized return of 12.5% overall, 15.25% on equity, to the lowest possible level. Such action is unrealistic if at the same time one expects the Company to fairly compensate its equity holders under the standards of the Hope and Bluefield decisions and to meet the service demands of its customers and the standards legally required by this Commission.

DANIEL E. [illegible]
COMMISSIONER

Westlaw.

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31 P.U.R.4th 172, 579 S.W.2d 429
(Cite as: 31 P.U.R.4th 172, 579 S.W.2d 429)

C

Court of Appeals of Tennessee, Middle Section.
SOUTH CENTRAL BELL TELEPHONE COMPANY, Petitioners,
v.
TENNESSEE PUBLIC SERVICE COMMISSION, Respondent.
Jan. 3, 1979.
Certiorari Denied by Supreme Court March 19, 1979.

The Public Service Commission denied telephone company's application for rate increase, and company filed petition for review. The 7th Chancery Court, Part 1, Davidson County, Ben H. Cantrell, Chancellor, reversed and remanded for Commission's reconsideration, and Commission appealed. The Court of Appeals, Middle Section, Todd, J., held that: (1) under circumstances, it was not reversible error for chancellor to consider record of informal conference discussion of decision to extent that it may have been material to issues on review; (2) there was nothing in chancellor's memorandum or order which improperly precluded Commission from refusing to consider any proposed company expense or investment which was deemed by Commission to be unnecessary, improvident or improper; (3) chancellor did not err in finding that Commission's order did not take into account nor make proper provision for effect of attrition; (4) chancellor did not err in finding that rate of return found by Commission was not supported by substantial evidence; (5) "bare bones" rates are not reasonable; (6) Commission's order was contrary to uncontradicted evidence that certain expenses and investments of company would substantially increase during 1977 and 1978 and was not based upon substantial evidence but upon speculation, and (7) under circumstances, Court of Appeals, pursuant to its statutory authority, would authorize a temporary implementation of rate increases not exceeding 10% Of existing rates.

Affirmed in part, reversed in part and remanded.

Lewis, J., filed concurring opinion.

Shriver, P. J., filed opinion concurring in part and dissenting in part.

West Headnotes

[1] Public Utilities 317A ⇐194

317A Public Utilities
317AIII Public Service Commissions or Boards
317AIII(C) Judicial Review or Intervention
317Ak188 Appeal from Orders of Commission
317Ak194 k. Review and Determination in General. Most Cited Cases
(Formerly 317Ak32)
Under applicable statute, which contains a list of seven classes of items which shall be included in " record" in a contested administrative case, the making or preservation of a record of informal conference discussion of a decision was not deemed to be mandatory under ordinary circumstances, but, when parties were present to hear such discussion or same was recorded by Public Service Commission, there was no valid reason why it would be reversible error for reviewing court to consider such record to extent that it may be material to issues on review. T.C.A. § 4-514(f).

[2] Telecommunications 372 ⇐973

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k966 Administrative Procedure
372k973 k. Findings and Determination; Modification and Revocation. Most Cited Cases
(Formerly 372k337.1, 372k337)
In proceeding involving Public Service Commission's denial of telephone company's

application for rate increase and chancellor's reversal and remand for Commission's reconsideration, Commission's assignment of error contending that chancellor had exceeded his jurisdiction was overruled for lack of specificity and nonconformity with rules requiring that each assignment of error specify where in record alleged error occurred, wherein action was erroneous, and wherein appellant was prejudiced by alleged error.

[3] Telecommunications 372 ⇐988

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k988 k. Findings and Determination; Modification or Vacation and Further Review. Most Cited Cases
(Formerly 372k343)
In proceeding involving Public Service Commission's denial of telephone company's application for rate increase and chancellor's reversal and remand for Commission's reconsideration, chancellor did not erroneously require Commission to consider set rates based upon company estimates of future expenses and investment, but, rather, merely stated that Commission should take into consideration estimated effect of reasonably expected expenses and investments, and there was nothing in chancellor's memorandum or order which precluded Commission from refusing to consider any proposed expense or investment which Commission deemed to be unnecessary, improvident or improper.

[4] Telecommunications 372 ⇐988

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k988 k. Findings and Determination; Modification or Vacation and Further Review. Most Cited Cases
(Formerly 372k341)
In proceeding involving Public Service Commission's denial of telephone company's application for a rate increase and chancellor's reversal and remand for Commission's reconsideration, chancellor did not err in finding that Commission's order did not take into account nor make proper provision for effect of attrition, since chancellor properly concluded that Commission's decision to deny any increase was conclusive evidence that Commission failed to give sufficient and proper weight to uncontroverted evidence of probable increases in certain expenses and investment during effective period of Commission's order.

[5] Telecommunications 372 ⇐964

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k960 Evidence as to Rates
372k964 k. Weight and Sufficiency in General. Most Cited Cases
(Formerly 372k330)
While, in a proceeding on a telephone company's application for a rate increase, Public Service Commission, utilizing its own special expertise, may disregard some uncontroverted expert testimony, Commission may not arbitrarily and unreasonably disregard uncontradicted testimony; that is, if uncontradicted testimony is to be disregarded, a valid reason for so doing should be stated.

[6] Telecommunications 372 ⇐964

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k960 Evidence as to Rates
372k964 k. Weight and Sufficiency in General. Most Cited Cases
(Formerly 372k330)
In proceeding involving Public Service Commission's denial of telephone company's application for rate increase and chancellor's reversal and remand for Commission's reconsideration, chancellor did not err in finding that 8.7% rate of return found by Commission was not supported by substantial evidence, since expert's testimony that 8.55% was at edge of confiscatory level, was not substantial evidence that such rate of

return was fair and reasonable, and since such expert's testimony that he recommended rate of return of no more than 8.9% would not be equated with an expert's factual opinion.

[7] Telecommunications 372 ⇐933

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k933 k. Reasonableness in General; Confiscatory Rates. Most Cited Cases
(Formerly 372k310)

A telephone company's rate may produce a profit for present that is acceptable, but, if it is so near edge of confiscation that changes in conditions of each succeeding month are calculated to render established rate confiscatory, then established rate is not reasonable; a reasonable rate should not be on outer edge of reasonableness, but should be sufficiently inside bounds of reason to provide some cushion, or room for variation without penalizing company; "bare bones" rates are not reasonable; a reasonable rate is something more than bare minimum.

[8] Telecommunications 372 ⇐988

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k988 k. Findings and Determination; Modification or Vacation and Further Review. Most Cited Cases
(Formerly 372k343)

In proceeding involving Public Service Commission's denial of telephone company's application for rate increase and chancellor's reversal and remand for Commission's reconsideration, chancellor's statement that company would earn only 7.5% to 7.6% in 1978 was a mere reference to conclusions of Commission staff and evidence in record, and did not purport to be findings by chancellor, and even if chancellor had stated such findings in his memorandum, and even if they had been incorrect, error, if any, would be harmless if ultimate conclusion stated in order was correct.

[9] Telecommunications 372 ⇐940(1)

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k937 Determination of Rates
372k940 Expenses
372k940(1) k. In General. Most Cited Cases
(Formerly 372k313)

Telecommunications 372 ⇐964

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k960 Evidence as to Rates
372k964 k. Weight and Sufficiency in General. Most Cited Cases
(Formerly 372k330)

Public Service Commission's express policy to " squeeze" efficiency and economy out of telephone company by maintaining existing rates in face of rising costs was not reasonable; it was unrealistic and unjust to say to regulated utility that Commission would not allow utility a fair profit upon its reasonably anticipated operating statistics, but, rather, utility must derive its profit from economies and efficiencies devised by it to offset normal increases in costs, since such represented a decision based upon speculation, and not substantial evidence.

[10] Telecommunications 372 ⇐986

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k986 k. Standard and Scope of Review; Powers of Court. Most Cited Cases
(Formerly 372k341)

If, in a proceeding on a telephone company's application for a rate increase, Public Service Commission considered all proper factors and arrived at a rate structure which is low, but not unreasonable, courts may not reverse on petition for review.

[11] Telecommunications 372 ⚖986

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k986 k. Standard and Scope of Review; Powers of Court. Most Cited Cases
(Formerly 372k330)
If, in a proceeding on a telephone company's application for a rate increase, Public Service Commission, acting upon pure speculation, ignores uncontradicted material evidence and refuses to give any weight or consideration to it, and if such evidence is of a kind or character that it would naturally be expected to produce a more favorable ruling if considered, then Commission has acted illegally and courts are authorized to vacate order of Commission and to require reconsideration on a proper basis.

[12] Telecommunications 372 ⚖987

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k987 k. Review of Valuation and Fact Questions. Most Cited Cases
(Formerly 372k342)
In a proceeding involving a Public Service Commission's denial of a telephone company's application for rate increase, court, in order to set aside a Commission finding, must find as a matter of law, not fact, that Commission's order is not supported by substantial evidence, is based upon speculation or is contrary to uncontradicted evidence.

[13] Telecommunications 372 ⚖964

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k960 Evidence as to Rates
372k964 k. Weight and Sufficiency in General. Most Cited Cases
(Formerly 372k330)
In proceeding involving Public Service Commission's denial of telephone company's application for rate increase, and chancellor's reversal and remand for Commission's reconsideration, Court of Appeals found as a matter of law that Commission's order was contrary to uncontradicted evidence that certain expenses and investments of company would substantially increase during 1977 and 1978 and was not based upon substantial evidence but upon speculation, and, on such basis, chancellor's action of invalidating Commission order and requiring reconsideration was affirmed.

[14] Telecommunications 372 ⚖988

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k988 k. Findings and Determination; Modification or Vacation and Further Review. Most Cited Cases
(Formerly 372k343)
In proceeding involving Public Service Commission's denial of telephone company's application for rate increase and chancellor's reversal and remand for Commission's reconsideration, chancellor's action and Court of Appeals' action of affirming chancellor had no effect except to declare Commission's order invalid because of failure to give consideration to uncontradicted evidence of certain increased expenses and investment and speculation as to facts without substantial evidentiary basis, to vacate such order, and to remand cause to Commission for reconsideration; court's action did not "mandate" any specific findings by Commission.

[15] Telecommunications 372 ⚖940(1)

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k937 Determination of Rates
372k940 Expenses
372k940(1) k. In General. Most Cited Cases
(Formerly 372k313)

Telecommunications 372 ⚿942

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k937 Determination of Rates
372k942 k. Rate Base; Property and Revenues Included. Most Cited Cases
(Formerly 372k315)

In a proceeding on a telephone company's application for a rate increase, Public Service Commission has power to reject and disregard for cause any projected expense or investment which it considers unwarranted; however, it would be unreasonable and illegal for Commission to require performance or expansion of services for which reasonable allowance has not been made in fixing rates.

[16] Telecommunications 372 ⚿986

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k986 k. Standard and Scope of Review; Powers of Court. Most Cited Cases
(Formerly 372k341)

In proceeding involving Public Service Commission's denial of telephone company's application for rate increase, Court of Appeals, in order to find reversible error, must find error in ignoring uncontroverted evidence or lack of substantial supporting evidence, and prejudice, i. e., that some rate increase would probably have been allowed if Commission had given proper consideration and effect to uncontroverted evidence.

[17] Telecommunications 372 ⚿989

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k989 k. Temporary, Emergency or Test Rates; Procedure. Most Cited Cases
(Formerly 372k344)

In proceeding involving Public Service Commission's denial of telephone company's application for rate increase and chancellor's reversal and remand for Commission's reconsideration, Court of Appeals, pursuant to statutory authority, authorized a temporary implementation of rate increases not exceeding 10% of existing rates, in view of applicable computations and fact that, although such court did not consider that there was a strong probability that entire proposed increase would be approved, such court did consider that there was a substantial probability that some rate increase would ultimately be approved. T.C.A. § 65-520.

[18] Telecommunications 372 ⚿988

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k988 k. Findings and Determination; Modification or Vacation and Further Review. Most Cited Cases
(Formerly 372k343)

Review of a Public Service Commission decision denying a telephone company's application for a rate increase is upon record preserved by Commission and transmitted by it to chancellor. T.C.A. § 4-523.

[19] Telecommunications 372 ⚿986

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k986 k. Standard and Scope of Review; Powers of Court. Most Cited Cases
(Formerly 372k341)

Telecommunications 372 ⚿987

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k987 k. Review of Valuation and Fact Questions. Most Cited Cases
(Formerly 372k342)

Telecommunications 372 ⚿988

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k974 Judicial Review or Intervention
372k988 k. Findings and Determination; Modification or Vacation and Further Review. Most Cited Cases
(Formerly 372k343)
On petition for review of a Public Service Commission's decision denying a telephone company's application for a rate increase, chancellor and Court of Appeals are limited to a determination of whether actions of Commission are unconstitutional or illegal, are arbitrary or capricious, or are unsupported by evidence which is both substantial and material in light of entire record.

[20] Evidence 157 ⇐597

157 Evidence
157XIV Weight and Sufficiency
157k597 k. Sufficiency to Support Verdict or Finding. Most Cited Cases
Substantial and material evidence is such that a reasonable mind might accept as adequate to support a rational construction and furnish a reasonably sound basis for action under consideration.

[21] Public Utilities 317A ⇐123

317A Public Utilities
317AII Regulation
317Ak119 Regulation of Charges
317Ak123 k. Reasonableness of Charges in General. Most Cited Cases
(Formerly 317Ak7.4)
In order to be valid, a rate fixed by a regulatory body must be reasonable not only as to facts in existence on effective date of rate but also for a reasonable time in future.

***432** T. G. Pappas and J. O. Bass, Jr., Bass, Berry & Sims, Raymond Whiteaker, Jr., Gen. Atty., Nashville, for petitioners.
Eugene W. Ward, Gen. Counsel, Thomas E. Midyett, Jr., Asst. Gen. Counsel, Public Service Commission, Nashville, for respondent.

OPINION

TODD, Judge.
The Tennessee Public Service Commission denied an application of South Central Bell Telephone Company for a rate increase. South Central filed a petition for review in the Chancery Court. The Chancellor reversed and remanded for reconsideration by the Commission. The Commission has appealed.

A brief chronology of proceedings will contribute to an understanding of the issues on appeal.

A Previous application for rate increase was filed on November 4, 1976, and the Commission rendered its decision thereon on May 4, 1977. This former proceeding is referred to in the record and briefs and has some relevance to the present proceeding; however, records of the former proceeding or the results thereof are not a part of this record.

On July 1, 1977 (58 days after the previous decision by the Commission) South Central filed with the Commission a petition for approval of rate increases in the total amount of $92,000,000.00 per year. The ***433** petition, itself, specifies no details of the proposed rate increase, but refers to "rates to be filed with the Commission." The voluminous record does contain a volume entitled, "proposed tariffs", and an analysis of the revenue expected to be generated by increases in charges for various services identified by code letters, but nothing has been found in the record to show the amount of present rates in conjunction with amount of proposed increase and proposed new rates. In short, this Court has been unable to ascertain from the record the exact amount of the proposed increase in any given size telephone bill. This difficulty is a significant detail but not material or determinative of the questions on appeal.

On December 30, 1977, after extensive investigation and hearings, two of the Commissioners disapproved of the proposed increase and filed a majority opinion. The third Commissioner's dissenting opinion approved an

increase of $32,992,000.00.

On February 17, 1978, the Company filed its Petition for Review in the Chancery Court.

On March 17, 1978, the Chancellor entered an order denying an application of the Company to place the proposed rates into effect pending the final disposition of the cause, or in the alternative, to place into effect increases to the amount of $32,992,000.00 per year.

On September 26, 1978, the Chancellor entered an order providing:
1. The order of the Commission is declared illegal and void as confiscatory and is vacated and set aside.
2. The cause is remanded to the Commission for setting just and reasonable rates.
3. The Company is authorized to place in effect as of October 6, 1978, all of its proposed rates except pay phone rates and charges for directory assistance.
4. The Company is required to give bond for the refund of any increases not ultimately approved with 8.7% Interest.

The Commission appealed from the action of the Chancellor and, pending the appeal, this Court superseded and suspended the part of the Chancellor's order allowing implementation of proposed rate increases.

Filing of briefs on appeal was completed on November 16, 1978, and, with the consent of counsel, oral argument was specially scheduled and heard on December 1, 1978. The cause has been accorded precedence and its disposition has been expedited to the utmost possible extent by this Court.

The Commission has filed the following assignments of error:
"1. The Chancellor erred in overruling the Tennessee Public Service Commission's motion to strike portions of the Petition for Review and appendices attached thereto which attempted to bring before the Court the transcript of the deliberative session of the Tennessee Public Service Commission pursuant to TCA 8-4401, et seq.
2. The Chancellor has exceeded his jurisdiction.
3. The Chancellor erred in mandating to the Commission specific test period adjustment methodology and in requiring the Commission to consider and set rates based upon company estimates of future expenses and investment.
4. The Chancellor erred in finding that the Commission's Order did not take into account nor make proper provision for the effect of attrition.
5. The Chancellor erred in finding that the rate of return found by the Commission is not supported by substantial and material evidence.
6. The Chancellor erred in finding that a rate of return can be within the zone of reasonableness but yet not be "fair" and therefore be confiscatory.
7. The Chancellor erred in concluding that the company will earn only 7.5% To 7.6% In 1978.
8. The Chancellor erred in finding and concluding that the Commission's Order was illegal and void."

[1] The first assignment of error complains that the Chancellor considered the record of a "deliberative session" of the ***434** Commission which was not a proper part of its record of proceedings. However, the Commission fails to point out, as required by the Rules of this court, wherein such action of the Chancellor was prejudicial to the Commission.

T.C.A. s 4-514(f) contains a list of seven (7) classes of items which Shall be included in the "record" in a contested (administrative) case. The making or preservation of a record of the informal conference discussion of a decision is not deemed to be mandatory under ordinary circumstances. However, when the parties are present to hear such discussion or same is recorded by the Commission, counsel have presented no valid reason, and none occurs to this Court, why it is reversible error for the reviewing court to consider such record to the extent that it may be material to the issues on review.

This Court is not impressed that the refusal to strike the record of "deliberative session" resulted in prejudice to the Commission.

The first assignment of error is respectfully

overruled.

[2] As to the second assignment of error, counsel has again ignored the Rules of Court which require that each assignment of error specify where in the record the alleged error occurred, wherein the action was erroneous, and wherein the appellant was prejudiced by the alleged error. The 124 page brief of appellant is a ponderous and heavily documented treatise on the subject of utility regulation, but it is not specific as to the second assignment. It is assumed that the gravamen of the assignment is that some aspects of the Chancellor's decision were outside his prerogatives in review of administrative decisions. If so, the error, if any, should appear from other, more specific assignments.

For lack of specificity and non-conformity with the Rules of this Court, the second assignment is respectfully overruled.

[3] The third assignment likewise lacks conformity to the Rules of this Court, but an effort will be made to deal with the question presented therein.

The order of the Chancellor makes no specific reference to the matters complained of in the third assignment. The only pertinent language in the order is as follows:
"2. This cause is remanded to the Tennessee Public Service Commission for further proceedings for the purpose of setting rates that are just and reasonable for South Central Bell Telephone Company as required and provided by law." (TR 139-A)

There are no other words in the order which remotely suggest a "mandate".

The "Memorandum" of the Chancellor, incorporated by reference into his order, under the heading, "The Test Period", contains the following material statements:
"The Commission contends that there is no accepted rule that a Commission can follow in selecting a test period. The petitioner agrees with that conclusion and so does the Court. Selection of a test period is simply a way accountants go about matching the property of the utility used in serving its customers with the revenues and expenses connected to such service.
However, rates are set for the future. "The propriety or impropriety of a test period or a test year depends upon how well it accomplishes the objective of determining a fair rate of return in the future." (citing authorities)
The words most often used in the cases are "but also for a reasonable time in the immediate future." (citing authority) Where the order of the Commission entered on December 30, 1977 sets the rates for the company, the Court is of the opinion that the year 1978 is a "reasonable time in the immediate future" which must be taken into account in the Commission's order. This does not mean that the year 1978 must be the test period; it simply means that the test period results must be adjusted to take into account known changes that are likely to occur in the immediate future. (citing authority)
***435** The Commission argues that the test period need only be adjusted to take into account the changes up until the time of the order. The Court is of the opinion that the authority cited above answers that contention contrary to the position of the Commission. A rate order which only takes into account the changes that have taken place before the effective date of the order and ignores changes reasonably certain to occur after the date of the order is looking backward and not to the future.
. . . Only two days after the entry of the Commission's order the company was obligated to pay increased medical insurance premiums, wages, and unemployment compensation. The wage contract with the Union included increases certain to take place in 1978. The construction program of the company projected heavy expenditures for 1978. Although the Commission seeks to minimize this item due to the control exercised over it by the company management, the Court is of the opinion that the estimated effect of the construction program (both for the last nine months of 1977 and for 1978) should have been included in the rate base. To ignore these expenses and changes reasonably certain to occur fails to follow the basic purpose of rate making; to set rates for the future." (TR 127, 128, 129, 130, 131)

This Court interprets the quoted language of the

Chancellor's Memorandum to state that the Estimated effect of reasonably expected increases in expenses and investment should be Taken into consideration in the establishment of a rate structure for the future. So interpreted, it is difficult to conceive how any reasonable person, much less a knowledgeable utilities commission, could differ with the Chancellor's quoted statements.

The Chancellor did Not state that the Commission should set rates based upon company estimates of future expenses and investment. He merely stated that the Commission should Take into consideration the estimated effect of reasonably expected expenses and investments. Moreover, there is nothing in the Chancellor's Memorandum or order which precludes the Commission from refusing to consider any proposed expense or investment which is deemed by the Commission to be unnecessary, improvident or improper. The opinion of the Commission is replete with instances in which the Commission made such determinations as to other matters, and there is nothing in the Chancellor's Memorandum or order to forbid reasonable determinations as to future expenses and investments.

For the reasons stated, the third assignment of error is respectfully overruled.

[4][5] The fourth assignment apparently concedes that the Commission was obligated to consider attrition, but insists that proper consideration was given to this aspect of the case.

The Chancellor's Memorandum states:
"Attrition is a term now familiar to rate regulation since inflation and expansion have become a fact of life. The term describes a decreasing return to the company in the future, at fixed rates, because the cost of building lines and installing telephones will inevitably rise while the income produced by that telephone remains the same. In addition, old lines and telephones are constantly coming out of service as old buildings are torn down, massive relocations are necessitated by construction projects in urban areas, and whole neighborhoods change where telephones were in service. Revenue generated by that investment, which is far below the present cost, is lost. Although generally treated separately in rate orders, perhaps attrition is only one facet of the requirement that a rate order look to the future rather than the present or the past. A forward looking order to forecast the property in use and the revenue it produces is one method of compensating for the effect of attrition. Another is to allow a higher return on the present investment so that an average over the foreseeable future will be just and reasonable.
***436** The Court is of the opinion that the Commission's order does not take into account nor make proper provision for the effect of attrition on the rates of return allowed in the order . . .
The Court concludes that this effect on the rate of return the company is earning is demonstrated by the fact that the Commission staff concluded that the rate of return the company would earn for the year 1978 was only 7.57%, even though the Commission's order found the company was earning for the test year, ending March 31, 1977, 8.7%." (TR 131, 132)

From the naive viewpoint of judicial officers untrained in the intricate mechanics and terminology of utility rate-making, "attrition" appears to be a reduction in rate of return on investment because of increases in expenses and investment without compensating increases in revenue. The Chancellor concluded that the decision of the Commission (to deny any increase) was conclusive evidence that the Commission failed to give sufficient and proper weight to the uncontroverted evidence of probable increases in certain expenses and investment during the effective period of the Commission's order. This Court does not interpret the Chancellor's Memorandum or Order to unduly restrict or mandate the acceptance or rejection of any particular projected or forecast change in expenses, investment or income. The Chancellor simply observed that the results reached were inconsistent with the uncontroverted testimony on the subject. While it is true that the Commission, utilizing its own special expertise, may disregard some uncontroverted expert testimony, it is fundamental that the Commission may not arbitrarily and unreasonably disregard uncontradicted testimony. That is, if uncontradicted

testimony is to be disregarded, a valid reason for so doing should be stated.

The merits of the Chancellor's finding that the decision of the Commission was unreasonable and illegal will be discussed in connection with the next assignment.

The fourth assignment of error is respectfully overruled.

[6] The fifth assignment goes to the merits of the appeal.

The brief of appellant states:
"The Commission, in this case, adopted a historical test period for the 12 months ended March 31, 1977. It adjusted for the annualized effects of all known changes occurring nine months subsequent to the test period. It adjusted for attrition. This produced an 8.7% Rate of return. The Commission then made an analysis to determine if the company would have a reasonable opportunity to earn this rate of return for the foreseeable future. The Commission found that the company would have such an opportunity. After all of this, the Commission found, based on the evidence in the record, that the 8.7% Rate of return was still within the zone of reasonableness." (AE 68, 69)

Appellant cites the testimony of the expert, Kosh, as follows:
"CHAIRMAN: Are you saying 8.55% Is the confiscatory level?
A Just about at that level. You're just at the edge of it, I would say.
Q But you're saying 8.55% Would not be confiscatory?
A I think it is at the level. I don't think it's confiscatory at all. But I think if you go considerably below that you will get into the area of what I call economic confiscation." (AE 70)

While it is true that there is some testimony that 8.55% Is "at the edge of the confiscatory level", this testimony is not deemed to be substantial evidence that such a rate of return is fair and reasonable. If the Commission is resorting to "brinksmanship" by keeping the Company "on the edge of the confiscatory level", the Commission is not acting reasonably. This is so for two reasons, (1) a rate " on the edge of confiscation" is not reasonable, and (2) the trend of attrition is clearly such that a rate " on the edge of confiscation" will become confiscatory in a short time by the advance of inflation and attrition.

***437** Thus, the testimony of Mr. Kosh is not deemed to be substantial support for the action of the Commission.

Kosh stated that he Recommended a rate of return of no more than 8.9%. This Court does not equate the Recommendation of an expert with the factual opinion of an expert. For this additional reason the testimony of Kosh is deemed to be less than substantial support for the Commission's final order. This view of his testimony is strengthened by the fact that all other testimony in the record supports a higher rate of return.

The fifth assignment of error is respectfully overruled.

[7] The sixth assignment is largely argumentative, and ignores the principle previously stated, namely, that a rate may produce a profit For the present that is acceptable; but, if it is so near the edge of confiscation that the changes in the conditions of each succeeding month are calculated to render the established rate confiscatory, then the established rate is not reasonable.

In other words, a reasonable rate should not be "on the outer edge of reasonableness, but should be sufficiently Inside the bounds of reason to provide some "cushion", or room for variation without penalizing the Company.

The expression, "bare bones", has no proper place in establishing reasonable rates. "Bare bones" rates are not reasonable. A reasonable rate is something more than bare minimum.

The sixth assignment of error is respectfully overruled.

[8] The seventh assignment complains that the Chancellor was of the opinion that the earnings of the Company would not exceed 7.5% To 7.6% In 1978. Again, counsel has ignored the Rule of this Court requiring citation to the record where any alleged error occurred. By searching through the Memorandum and Order of the Chancellor, the following is found in the Memorandum:
"The Commission staff also Concluded that the rates in effect under the May 4, 1977 order would produce a rate of return in 1978 at 7.57% On a rate base of $1,860,464,000.00. The Company's evidence using the same adjustments made by the Commission staff Showed a projected rate of return of 7.62% For 1978." (TR 126, 127) (Emphasis supplied)
"The proof in this record, analyzed and carefully audited by the Commission staff, Supports a conclusion that the company will earn only 7.5% To 7.6% On its rate base for the year 1978." (TR 135) (Emphasis supplied)

No other references to 7.5% Or 7.6% Are found in the Memorandum or Order. The quotations above are mere references to Conclusions of the Commission staff and evidence in the record, and do not purport to be findings by the Chancellor. Even if the Chancellor had stated such findings in his Memorandum, and even if they had been incorrect, the error, if any, would be harmless if the ultimate conclusion stated in the order was correct.

The seventh assignment of error is respectfully overruled.

The eighth assignment of error is a general complaint of the finding of the Chancellor that the order of the Commission was illegal and void.

[9] Agreement has already been expressed herein with the view of the Chancellor that the Commission erred in ignoring the uncontroverted evidence that, during the years 1977 and 1978, substantial increases would take place in certain expenses and investment of the Company without compensating increase in revenue. Disapproval has already been expressed in respect to the apparent policy of the Commission to enforce a "bare bones" (minimum possible) rate of return in the face of an established trend of increase in expenses and investment and of earnings and cost of living generally. This Court does not consider reasonable the expressed policy of the Commission to "squeeze " efficiency and economy out of the Company by maintaining existing rates in the face of rising costs. It is unrealistic and unjust to say to a regulated***438** utility: "We will not allow you a fair profit upon your reasonably anticipated operating statistics. You must derive your profit from economies and efficiencies devised by you to offset normal increases in costs." This represents a decision based upon speculation, and not substantial evidence.

[10] If the Commission considers all proper factors and arrives at a rate structure which is low, but not unreasonable, the Courts may not reverse on petition for review.

[11] If, however, the Commission, acting upon pure speculation, ignores uncontradicted material evidence and refuses to give any weight or consideration to it, and if such evidence is of a kind or character that it would naturally be expected to produce a more favorable ruling if considered, then the Commission has acted illegally and the Courts are authorized to vacate the order of the Commission and to require reconsideration on a proper basis.

On these broad considerations, the eighth assignment of error is respectfully overruled.

It should be emphasized that this Court makes no specific finding of fact as to rates, percentages of fair return or any other factor under consideration in this cause.

[12] The finding of the Commission is analogous (though not identical) to a verdict of a jury. In order for this Court (or any court) to set aside a finding of the Commission, the Court must find As a matter of law (not fact) that the Commission's order is not supported by substantial evidence, is based upon speculation or is contrary to uncontradicted evidence.

[13] This Court finds as a matter of law that the

order of the Commission is contrary to uncontradicted evidence that certain expenses and investments of the Company would substantially increase during 1977 and 1978 and is not based upon substantial evidence but upon speculation. On this basis, the action of the Chancellor invalidating the Commission order and requiring reconsideration is affirmed.

[14] In spite of the inclusion of the Chancellor's Memorandum in his order by reference, it is not considered that such order was a specific "mandate" requiring the Commission to make any specific findings. Neither does the opinion of this Court nor its decree "mandate" any specific findings by the Commission.

The action of the Chancellor and of this Court have no effect except to declare the order of the Commission invalid because of failure to give consideration to uncontradicted evidence of certain increased expenses and investment and speculation as to facts without substantial evidentiary basis, to vacate such order, and to remand the cause to the Commission for reconsideration of All proper factors, including any additional evidence offered, and a redetermination of the issues based thereon.

The Commission insists that its previous decision on May 4, 1977, was designed to and did provide a fair rate of return to the Company during the remainder of the calendar year, 1977, and the entire calendar year, 1978. The Chancellor and this Court disagree. However, 1977 and 1978 have now passed, and any rate structure set hereafter will be effective in 1979 and until approval can be obtained for further adjustments. Therefore, after all of the delay heretofore encountered, justice requires that fair rates be expeditiously established and placed into effect without the time-consuming procedure of a new original application to the Commission.

[15] On remand, the Commission will have the benefit of actual operating experience in 1977 and 1978, rather than estimates and projections. It may then hear evidence of probable changes in revenue, expenses and investment during 1979 and succeeding years. As it has done previously, the Commission has the power to reject and disregard For cause any projected expense or investment which it considers unwarranted. However, it would be unreasonable and illegal for the Commission to require the performance or expansion of ***439** services for which reasonable allowance has not been made in fixing rates.

The foregoing disposes of the issues presented by the assignments of error. However, one additional matter before this Court merits discussion, consideration and action. As previously stated, the Chancellor, acting pursuant to T.C.A. s 65-520, authorized the Company to temporarily effectuate its proposed rate increases in their entirety (with certain exceptions); and this Court vacated such action by supersedeas. In so doing, this Court stated:
"T.C.A. s 65-520 authorizes the court having the cause under consideration to permit all Or any part of the proposed increase to be placed in effect under bond. . . .
1. Among the considerations involved in allowance of temporary relief before final decision are:
A. the probability of irreparable harm to the applicant if the relief is not granted.
B. the probability of irreparable harm to the opposite party if the relief is granted.
C. the probability that the temporary relief will be affirmed by the final decision."

Having more adequate opportunity to study the record and having benefit of more comprehensive briefs of counsel since the granting of supersedeas, this Court has found reason to revise somewhat its preliminary findings as to the probability of the approval of a rate increase in the ultimate disposition of the cause.

[16] As previously indicated, in order to find reversible error (illegality) in the order of the Commission, it is necessary for this Court to find (1) error (in ignoring uncontroverted evidence speculation or lack of substantial supporting evidence) And (2) prejudice (in that the result would probably have been different but for the error).

In short, in order for this Court to reverse the

Commission, it is necessary for this Court to find as a matter of law that Some rate increase would probably have been allowed if the Commission had given proper consideration and effect to uncontroverted evidence.

This Court has so found.

[17] Consequently and consistently, this Court considers itself obligated in honor and justice to consider and grant some temporary relief based upon what it considers the probability of ultimate approval of some increase in rates.

This Court does not consider that there is a strong probability that the entire proposed increase will be approved. This Court does consider that there is a substantial probability that some rate increase will be ultimately approved.

A statement filed by the Company indicates that the revenues received from local service in the year ending June 30, 1977, was $298,641,000.00.

The Company proposed to increase its revenue by $92,000,000.00 per year by increasing various charges on local service. This would increase the $298,641,000.00 previous annual local revenue by approximately 31%.

The staff of the Commission estimated the "revenue deficiency" (need for increased revenues) during 1978 at $27,994,000.00. A rate adjustment in this amount would increase the previous annual local revenue by approximately 9.3%.

In view of the computations just stated, the uncontradicted evidence in the record, and the statutory authority granted by T.C.A. s 65-520, this Court deems it proper to authorize a temporary implementation of rate increases not exceeding 10% Of existing rates.

It is recognized that If the Commission had given proper consideration to uncontroverted evidence, and If, as found probable by this Court, the Commission had approved Some increase in its order of December 30, 1977, Such increase would have been reflected in income and earnings of the Company during the entire calendar year, 1978, which will end before the action of this Court becomes final. It is therefore probable that the Company has already irretrievably***440** lost the benefit of some rate increase for the entire year, 1978. This is a matter for some consideration in allowing a temporary increase and in future rate fixing by the Commission.

The bond, heretofore filed with the Chancery Court, will be continued in effect to guarantee proper refund of increased charges collected but not ultimately approved, with interest, as provided in the Chancellor's order. The authority granted herein for such temporary increase shall become effective if and when the decree of this Court becomes final by affirmance or failure to timely seek review and shall continue in effect during the further consideration of the cause by the Commission and during the pendency of any further judicial proceedings for review of further action of the Commission on the presently pending application for approval of rate increases.

This Court has given due consideration to the record, the briefs and arguments of counsel, and authorities cited therein, but has refrained from citations of authorities to support general propositions which are well established or conceded in the abstract.

Among such propositions and authorities, with which this opinion is deemed to be consistent, are the following:

[18] The review of the decision of the Commission has been upon the record preserved by the Commission and transmitted by it to the Chancellor. T.C.A. s 4-523, United Inter-Mountain Telephone Company v. Public Service Commission, Tenn.1977, 555 S.W.2d 389; Public Service Commission v. General Telephone Co. of the Southeast, Tenn.1977, 555 S.W.2d 395.

[19] On petition for review, the Chancellor and this Court are limited to a determination of whether the actions of the Commission are unconstitutional or illegal, are arbitrary or capricious, or are unsupported by evidence which is both substantial

and material in the light of the entire record. Metro. Government v. Shacklett, Tenn.1977, 554 S.W.2d 601.

[20] Substantial and material evidence is such as a reasonable mind might accept as adequate to support a rational construction and furnish a reasonably sound basis for the action under consideration. Pace v. Garbage Disposal District, 54 Tenn.App. 263, 390 S.W.2d 461 (1965) and authorities cited therein.

[21] In order to be valid, a rate fixed by a regulatory body must be reasonable not only as to the facts in existence on the effective date of the rate but also for a reasonable time in the future. Southern Bell Telephone and Telegraph Company v. The Tennessee Public Service Commission, 202 Tenn. 465, 304 S.W.2d 640 (1957).

This Court has likewise refrained from any discussion of the distressing inefficiency of the ponderous judicial procedure prescribed for review of such administrative decisions, the difficulty of a quasi-judicial-quasi-legislative body undertaking to act (through its staff) as an adversary party and at the same time to render an impartial decision, or the position of thousands of small patrons whose individual interests may not be properly represented and protected in such a large, mass proceeding as this. Such matters are of great concern to the members of this Court, but are immaterial to the merits of this appeal and have received no consideration in the disposition of the appeal.

The order of the Chancellor invalidating the order of the Commission and remanding the cause to the Commission for further consideration is affirmed. The supersedeas heretofore granted in respect to other actions of the Chancellor is now reiterated, and his said other actions (in allowing implementation of the full proposed rate increase and enjoining interference with same) are reversed and set aside.

Effective upon the finality of the decree implementing this opinion and continuing until the final determination of the present cause by the Commission and/or the courts, the Company is permitted to place into effect that part of its proposed rate increases which does not exceed 10% Of the previously approved and charged rate for each service.

Affirmed in part, reversed in part, remanded.

***441** LEWIS, J., concurs.
SHRIVER, P. J., concurs in part, dissents in part.LEWIS, Judge, concurring.
I agree that the assignments of error are without merit, that the Chancellor's decree should be affirmed and this cause remanded to the Commission for setting just and reasonable rates.

I also agree that if the Commission had given proper consideration to uncontroverted evidence, it is probable that some increase would have been approved in the Commission's order of December 30, 1977, and such increase would have been reflected in income and earnings during the entire calendar year 1978. I also agree that it is probable the Company has irretrievably lost the benefit of some rate increase for the entire year 1978.

In the present procedural posture and under the confined facts of this case, I agree that this Court, as a court considering an appeal from an order of the Commission, has the power to permit the Company to place all or any part of the rates into effect under bond (see T.C.A. s 65-520(b)), and I am of the opinion, under these confined facts, we have a duty to authorize such a temporary rate increase.

However, I am compelled to point out that the Chancellor, in his order of September 26, 1978, authorized the Company to place into effect as of October 6, 1978, proposed rates and required the Company to give bond for a refund of any increase not ultimately approved with 8.7 per cent interest.

We superseded and suspended that part of the Chancellor's order allowing the implementation of proposed rates and, as such, have denied the Company an increase since October 6, 1978. We now say that at least a part of that rate increase is, under the record before us, justified.

If the Company is ultimately successful, as it was in

the Chancery Court and as it has been in this Court, it will have been caused to suffer great and irretrievable losses. It has no remedy to recoup these losses. If the Commission finally fixes compensatory rates, it has no authority to make them retroactive.

If the Company had been allowed to put the rates into effect, under bond, pursuant to the Chancellor's order, and ultimately the increase had not been allowed, there would have been no loss to the utility's users. They would have received a full refund with 8.7 per cent interest.

The Chancellor's order came to us with a presumption of correctness. The burden of overturning this presumption was upon the Commission. I was of the opinion in my Dissent from the Majority Opinion, upon Petition for Supersedeas filed October 24, 1978, that the Commission had not carried its burden. I am, at this time, of the opinion that the Commission has still failed to carry its burden.

While I reluctantly concur with the holding authorizing the Company to implement a temporary rate increase not exceeding ten (10) per cent of existing rates, I would have reinstated the Chancellor's order of September 26, 1978, allowing the Company "proposed rates, except pay phone rates and charges for directory assistance", because I am of the opinion that T.C.A. s 65-520, the facts of this case and the equities require reinstatement.

As Judge Todd so aptly states, it is ". . . probable that the Company has already irretrievably lost the benefit of some rate increase for the entire year, 1978." By our approval of only a temporary rate increase, not exceeding ten (10) per cent, and if ultimately, as could very well be under the record, the Company is granted compensatory rates in excess of ten (10) per cent by the Commission, we have compounded the irretrievable loss.

On the other hand, if the Company is allowed to put into effect its proposed rates and they are ultimately denied, the Company's users do not suffer irretrievable losses. They will receive a full refund, with interest.

***442** SHRIVER, Presiding Judge, concurring in part and dissenting in part.
In the principal opinion Judge Todd sets forth in chronological order the proceedings before the Public Service Commission and in the courts concerning this rate case, hence, in this opinion I will confine my review to the Chancellor's decision and the steps taken to have that decision reviewed in this Court and the Supreme Court.

On September 30, 1978, a Petition on behalf of the Public Service Commission was filed in this Court seeking to supersede and suspend the decree of the Chancellor entered September 29, 1978, wherein it was ordered that the proposed rates of the Telephone Company become effective immediately. So as to preserve the status of the matters in dispute until requisite notice to opposing counsel could be given and a hearing had, I, as Presiding Judge, entered an order providing in pertinent part
"Upon application of counsel for the Public Service Commission of Tennessee, it is hereby ORDERED, ADJUDGED AND DECREED:
1. That the effectiveness of the aforementioned Decree entered by Chancellor Ben Cantrell in this cause on September 29, 1978 be and the same is hereby suspended pending a hearing of the Petition for Supersedeas, which is set for hearing and consideration on Thursday, October 5, 1978, at 2:00 P.M. in the chambers of this Court.
2. That all other matters herein are reserved.
This 30th day of September, 1978.
/s/ Thos. A. Shriver

Presiding Judge, Court of Appeals"

At the conclusion of the hearing on October 5 an order was entered continuing in effect the Stay Order of September 30, "pending a decision and decree disposing of said Petition for Supersedeas."

On October 11, we filed an Opinion and Decree wherein, Inter alia, we observed that the Commission had filed "Notice of Appeal" from the Chancellor's decree pursuant to T.C.A. s 4-524 and we mistakenly assumed that we might, therefore, allow the case to be presented on the merits. We considered that the previous stay order was

continued in effect and proceeded to hold that the Chancellor's decree was final in substance and therefore subject to appeal as a matter of right.

Upon application to the Supreme Court for a writ of Supersedeas to Nullify and set aside the Court of Appeals' decree of October 11, wherein Judge Lewis had filed a dissent, an Opinion and Order by Mr. Justice Harbison, concurred in by Justices Cooper and Brock, was filed holding that the Chancellor's decree was final and appealable and saying that the issue regarding the Chancellor's decree placing into effect the proposed rates "Is now pending before the Court of Appeals as a result of the filing before it of a Petition for Supersedeas by the Public Service Commission on September 29, 1978." (Emphasis supplied)

Chief Justice Henry filed a separate Opinion concurring in part and dissenting in part stating, "I respectfully dissent from so much of the majority opinion as holds that the decree of the Chancellor is final." After discussing the purpose and function of supersedeas and insisting it is not a proper method of procedure in this case his opinion says, "We first treat the decree of the Chancellor as being final for purposes of this discussion. A simple appeal would obliterate the Chancellor's decree. For reasons heretofore pointed out, the decree has not been so nullified." (Emphasis supplied).

By addendum it was pointed out that, while this matter was not before the appellate courts on appeal, " (it) is appealable at this time" but that no appellate court had up to that time considered the correctness of the Chancellor's action in placing the rates in effect under bond.

Mr. Justice Fones in his partial dissent agreed with the Chief Justice that the Chancellor's decree of September 29, 1978, was not a final decree but he reached a different result in applying the principles governing supersedeas in this case. He states, " Unquestionably the Writ of Supersedeas has as its sole purpose the preservation of the status quo."

***443** On October 18, 1978, following the filing of the foregoing Opinion and Order of the Supreme Court, and the separate partial dissents as above noted, our Court filed an Opinion and Order, Lewis dissenting, noting that the Supreme Court order stated, "The effect of our ruling today is to return this case to that court" (Court of Appeals) "for disposition of that issue" (placing the rates in effect under bond by the Chancellor) "and any other issues which may bear upon the resolution of the Petition for Supersedeas."

Our Order stated:
"It is thus seen that the petition filed by the Telephone Company seeking to have the cause removed from this Court and to stay and superseded the Orders of this Court in this cause was denied and the cause left pending in the Court of Appeals on Petition for Supersedeas . . ."
"Thus, it would seem that the decree entered October 2, 1978 suspending the effectiveness of the Chancellor's decree of September 28, 1978 pending a hearing and consideration of the Petition of the Commission for Supersedeas, and especially this Court's Stay Order entered October 5, 1978 is still in effect."

We then took note of the fact that on that date, October 18, 1978, the Chancellor, pursuant to Motion of the Telephone Company, entered a decree amending his decree of September 29, 1978, by enjoining the Commission, its agents and representatives from attempting to enforce its order of December 30, 1977, or from interfering with the putting into effect the proposed rates. The said decree also granted the Commission an appeal to the Court of Appeals.

We were thus confronted with what appeared to be an anomalous situation. The only way this case has been before the Supreme Court up to this time is by Petition of the Telephone Company for Supersedeas to set aside the orders of the Court of Appeals which had simply issued a stay order to preserve the status quo until the application for supersedeas could be heard and determined. After a third Petition for Supersedeas was filed in the Supreme Court and heard by that Court, another and last order was entered November 8, 1978 Per Curiam (with dissent by the Chief Justice joined in by Justice Fones), which Per Curiam Order is as

follows:

"ORDER

On October 26, 1978, South Central Bell Telephone Company filed in this Court a petition, requesting the Court to supersede an interim order of the Court of Appeals. The appeal of the case is pending on its merits in that Court.
In our opinion, the petition fails to demonstrate a sufficient basis for the extraordinary relief requested, and it is accordingly denied at the cost of the petitioner.
Enter this 8th day of November, 1978.
PER CURIAM"

It thus seems that, although the Supreme Court consistently denied the Petitions for Supersedeas and refused to interfere with the jurisdiction of the Court of Appeals, it, nevertheless, apparently, issued certain instructions to the Court concerning our consideration and decision of the issues involved.

Whether the said pronouncements or instructions be regarded as extra jurisdictional and in the nature of dicta, or otherwise, we respect them and certainly have not intentionally ignored them although we did not interpret them as "Mandates" concerning our procedure and ultimate decision of the issues involved.

ABUSE OF DISCRETION

No reference to the question of abuse of discretion is made in the final Per Curiam Order of the Supreme Court of November 8, 1978, wherein it is stated: "The appeal of this case is pending on its merits in that Court."

One reference was made to that issue in a previous order of the Court denying supersedeas. However, the Chief Justice in his dissenting opinion of November 8th discusses the question at length and notes that the ***444** Court of Appeals had not addressed that subject in its previous orders in this case.

Now addressing this question, it was my conception and that of Judge Todd as we considered the Petition of the Commission for Supersedeas, that the final decree of the Chancellor wherein he reversed and set aside the Commission's order, was based squarely on the facts as he found them and on his conclusions of law, and was, in no sense, a mere matter of exercising his discretion. Our preliminary examination of the record together with the briefs and arguments of counsel led to the conclusion that the stay order previously entered should remain in effect pending a hearing and determination on the merits regardless of whether the question of judicial discretion or abuse thereof was involved.

This was true because, on its face, the complex rate structure proposed by the Company and sought to be put into immediate effect by the Chancellor, appears to be highly discriminatory, preferential and lacking in uniformity. If this is true, it would seem to follow that the Chancellor's action was erroneous and, if his action was merely the exercise of his judicial discretion, I would have to say that it might reasonably be characterized as an abuse of discretion.

On the other hand, considering the Chancellor's action in granting the Company's motion to enter an amendatory decree on October 18, 1978, Enjoining the Commission, its agents and representatives from attempting to enforce its order of December 30, 1977, or from interfering with the putting into effect the proposed rates, this action was taken while the case was pending in the Court of Appeals on the Commission's Petition for Supersedeas and while this Court's stay order was in effect ordering the preservation of the status of matters involved pending further action.

In these circumstances, it seems that propriety would have impelled the Chancellor to refuse to entertain the motion for injunction and, certainly, if the injunction meant what, on its face it appeared to mean, it was improper and I do not hesitate to hold was an abuse of discretion.

THE MERITS

We begin our deliberations concerning the merits of this case by remembering that rate making of a public utility such as the Telephone Company is a legislative function which has been delegated by the Legislature to the Public Service Commission. Hence, the primary duty of regulating and fixing rates to be charged telephone subscribers by the Company rests with the Commission and not with the courts. When the Commission, pursuant to its statutory power and duty hears evidence and reaches a decision fixing rates to be charged by the utility, that decision is binding on said utility unless, on appeal to the courts the presumption of correctness is overcome by a showing that the decision of the Commission is arbitrary, capricious or illegal and/or that it will result in economic confiscation of the company's property.

As to the factual grounds of the Commission's decision, the courts, in applying the statute, T.C.A. ss 65-501, et seq., if the order is supported by any material, substantial evidence it will not be set aside or disturbed by the reviewing court. Thus, even though the court may not agree with the conclusions reached by the Commission on the facts appearing in the record, it will not substitute its judgment for that of the Commission in the absence of a clear showing of capriciousness or arbitrariness. McCullom v. Southern Bell Tel. Co., 163 Tenn. 277, 43 S.W.2d 390; R. R. Co. v. Pub. Utilities Commission, 38 Tenn.App. 212, 271 S.W.2d 23; Hoover Motor Exp. Co. v. R. R. & Pub. Utilities Com., 195 Tenn. 593, 261 S.W.2d 233.

Section 65-401, T.C.A., defines Public Utilities as including telephone, telegraph or any other like system dedicated to public use.

Section 65-404 vests control and regulation in the Public Service Commission.

Section 65-422 prohibits any regulation, practice, or measurement which is unjust, unreasonable, unduly preferential or discriminatory.

***445** Section 65-514 makes preferences to any person or locality unlawful.

Section 65-520, Change of utility rates, fares, schedules Suspension Bond Refunds, inter alia, provides that any increase or change placed in effect pursuant to this subsection (b) under bond may be continued in effect by the utility pending a final determination by the Commission or, if the matter be appealed, by final order of the Appellate Court. In the instant case, there was no increase or change put into effect by the Commission. The statute continues:
"In the event that all or any portion of such rates or charges have not been placed into effect under bond before the commission, the court considering an appeal from an order of the commission shall have the power to permit the utility to place all or any part of said rates or charges into effect under bond."

While the Court had the power to permit the utility to place all or any part of the said rates or charges into effect under bond, in my view of the matter there was not a proper exercise of discretion on the part of the Chancellor to order the rates or charges placed in effect if, as is seen in this record, the proposed rates, on their face, appear to be excessive and/or discriminatory.

Section 65-521 prohibits unjust rates, schedules or classifications. It provides:
"65-521. Unjust rate, fare, schedule or classification prohibited. No public utility shall
Make, impose, or exact any unreasonable, unjustly discriminatory or unduly preferential individual or joint rate, or special rate, toll, fare, charge, or schedule for any product, or service supplied or rendered by it within (the) state."

In the Brief and Argument filed by counsel for the Commission in support of its Petition for Writ of Supersedeas, it is asserted, "This is the largest utility rate increase ever requested or granted in the State of Tennessee. Examples of the magnitude of this increase for residence one-party lines and business one-party lines, respectively, are: Chattanooga 41% (Residence) 40% (Business); Clarksville 47% (Residence) 49% (Business); Knoxville 41% (Residence) 40% (Business); Lynchburg 69% (Residence) 85% (Business);

Memphis 40% (Residence) 39% (Business); Murfreesboro 47% (Residence) 49% (Business); Nashville 41% (Residence) 40% (Business); Springfield 58% (Residence) 65% (Business)."

We have searched this voluminous record for evidence supportive of the above quoted argument and data showing the effect of the proposed rates as applied to the various localities mentioned. Much of the record in the seven or eight volumes of tariffs and other exhibits are well nigh unintelligible to one who is not trained in the rate-making process. However, in the testimony of witnesses and the various exhibits I have found evidence supporting the above quoted statement and figures.

For example we find among the exhibits certain estimated monthly increases per line ranging from $1.85 to $20.40. In Book III, Ex. 5 "Data Supporting Filing T.P.S.C. Docket U 6493 July 1977," various rate groups are listed showing " Present IFB rates," also there are schedules showing "Proposed IFB rates" along with proposed revenues as compared with existing revenues and many variations are to be observed in the schedules as they apply to the several groups.

In this volume rate changes in the proposed schedule as compared to the existing schedule of charges are shown as they apply to various cities and towns in Tennessee and these together with other evidence in the record support the above quoted statements made in the Brief and Argument of counsel for appellant.

This being true, it appears to me that the proposed rates, on their face, are unduly preferential and discriminatory. In view of these facts how can it be successfully argued that the proposed rates are just and uniform across the State as is required by the statutes of Tennessee?

For the reasons indicated I conclude that the Chancellor's decree putting the proposed rates into effect should be reversed.

***446** Accordingly, I concur in the opinion written by Judge Todd in overruling Assignments 1, 2 and 3 for the reasons given therein.

As to the fourth assignment, I do not fully agree with the Chancellor's conclusions regarding attrition and the alleged lack of consideration given it by the Commission, hence, I do not fully agree with Judge Todd's conclusions concerning the assignment. However, I would not reverse the Chancellor on this assignment alone.

I would sustain Assignment No. 5 which charges error in finding that the rate of return found by the Commission is not supported by substantial, material evidence.

I would also sustain Assignment No. 8 which charges error in concluding that the Commission's Order is illegal and void.

As to Assignment No. 6, it seems to me that if a rate is found to be within the range and zone of reasonableness it is illogical to hold that, nevertheless, it is confiscatory.

In Southern Bell Tel. & Tel. Co. v. Pub. Serv. Com., 202 Tenn. 465, 304 S.W.2d 640, it was held:
"What is a reasonable rate of return for utility is not necessarily any particular figure or decimal point but is one that is in the zone of reasonableness."

Concerning Assignment No. 7, I think the Chancellor's conclusion as to the rate of return to the Company afforded by the rates in effect is not fully supported by the record. However, I do not find it necessary to discuss and pass on these two assignments (6 and 7) in view of my decision as to the other assignments.

MY CONCLUSION

Thus it is that I concur in the results stated in the last two paragraphs of Judge Todd's Opinion, as follows:
"The order of the Chancellor invalidating the order of the Commission and remanding the cause to the Commission for further consideration is affirmed. The supersedeas heretofore granted in respect to other actions of the Chancellor is now reiterated, and his said other actions (in allowing

implementation of the full proposed rate increase and enjoining interference with same) are reversed and set aside.
"Effective upon the finality of the decree implementing this opinion and continuing until the final determination of the present cause by the Commission and/or the courts, the Company is permitted to place into effect that part of its proposed rate increase which does not exceed 10% Of the previously approved and charged rate for each service."

Tenn.App., 1979.
South Central Bell Tel. Co. v. Tennessee Public Service Commission
31 P.U.R.4th 172, 579 S.W.2d 429

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(Cite as: 660 S.W.2d 44)

C

Supreme Court of Tennessee.
POWELL TELEPHONE COMPANY, Appellant,
v.
TENNESSEE PUBLIC SERVICE COMMISSION and Frank D. Cochran, Keith Bissell and Jane Eskind, Commissioners, Appellees.
Nov. 14, 1983.

Telephone company appealed from judgment of the Equity Court, Davidson County, Robert S. Brandt, Chancellor, upholding accounting method used by the Public Service Commission in determining appropriate rate increase to be awarded. From affirmance by the Court of Appeals, telephone company applied for discretionary review. Upon grant of application, the Supreme Court, Fones, C.J., held that the Public Service Commission was not required to use year-end rate base rather than average year rate base in determining appropriate rate increase to be awarded to telephone company.

Affirmed.

West Headnotes

Telecommunications 372 ⇐945(1)

372 Telecommunications
372III Telephones
372III(G) Rates and Charges
372k937 Determination of Rates
372k945 Valuation
372k945(1) k. In General. Most Cited Cases
(Formerly 372k318.1, 372k318)
Public Service Commission was not required to use year-end rate base rather than average year rate base in determining appropriate increase to be awarded to telephone company.

***44** Rebecca Thomas, Howser, Thomas, Summers, Binkley & Archer, Nashville, Hermann Ivester, H. Edward Skinner, Little Rock, Ark., for appellant.
Henry Walker, Attorney for the Tennessee Public Service Commission, Nashville, for appellees.

OPINION

FONES, Chief Justice.
We granted the Powell Telephone Company's [Company] application for discretionary review that presented a single issue which, in essence, was whether the evidence required the Public Service Commission [Commission] to use a year end rate base rather than the average year rate base in determining the appropriate increase to be awarded.

The Commission held extensive hearings and heard highly disputed testimony and evidence concerning which method to use in determining a proper rate base upon which ***45** the Company should be allowed to earn a fair rate of return. The Company sought an annual increase in revenues of $760,422. The Commission used the average year rate base method, which the Commission staff had advocated, which resulted in approval of an increase designed to yield $484,444 in additional annual revenues. The chancellor found that he must give deference to the Commission's expertise and technical competence in the rate making process and found substantial evidence "for the Public Service Commission's decision on rate of return on equity" and affirmed the Commission's order. The Court of Appeals affirmed the chancellor's decree. We also affirm.

The issue of whether and under what circumstances a regulatory commission should use an average rate base or a year end rate base has been frequently litigated in our sister states but the issue has not been addressed in any reported decision of Tennessee courts. *See, Legislative Util. Consumers' Council v. Granite State Elec. Co.,* 119 N.H. 359, 402 A.2d 644 (1979); *Citizens of Florida v. Hawkins,* 356 So.2d 254 (Fla.1978); *Providence Gas Co. v. Burman,* 376 A.2d 687

(R.I.1977); *Pub. Serv. Com'n. of Maryland v. Baltimore Gas & Elec. Co.,* 273 Md. 357, 329 A.2d 691 (1974).

The weight of authority appears to favor use of an average rate base on the premise that in normal economic times average rate base is more realistic and projects more accurately the cost of plant that produces the revenue under investigation. However, there is well recognized authority that in an abnormal and less stable economic climate, year end rate base may be more appropriate and should be used to balance out the financial problems caused by an abnormal and uncertain economy.

The Tennessee Public Service Commission has utilized both accounting methods in determining rate base. According to the Commission one of the key factors in choosing one method over another is a company's rate of return. The ratio of the company's net income to its rate base provides its rate of return. The Commission contends that when a company's return on investment is relatively stable the average rate base method is used. Conversely, when a company is experiencing extraordinary growth which outstrips growth in revenues, then an end of year rate base method is used.

In this case both the Commission staff and the Company used as the test period the calendar year 1979. The use of the average investment over the test year assumes that, even though the actual figures for expenses and revenues will rise in the future, the relationship between investment and income will not change significantly.

The Company concedes that the average rate base method may be appropriate during times of stable prices, wages and investment but asserts that it is " clearly inadequate when the utility faces the ravages of inflation."

Suffice it to say there was an abundance of evidence and argument presented to the Commission by the Company in support of its position that the year end rate base should be used in this case and the Commission staff presented an abundance of evidence and argument in support of the use of the average rate base.

The Commission decided that the average rate base developed by the staff presented a proper and accurate indication of the results of operations to be expected in the immediate future of the Company, and set rates accordingly.

Appellant relies heavily upon language from an unpublished opinion and order denying certiorari in *South Central Bell Telephone Co. v. Tenn. Pub. Serv. Comm'n,* 579 S.W.2d 429 (Tenn.App.1979), cert. den. The statement relied upon is:
We do not construe the opinion of the Court of Appeals as mandating the use of a forecast year test period, but merely as requiring that the Commission take into consideration not only all known changes but also all that are fairly and reasonably anticipated, with due consideration to past expenditures and those required to permit the Company to render efficient service.

***46** The Company asserts that the above statement mandated the use of the year end rate base method because the difference between the Company's 12-31-79 rate base and its average 1979 rate base is a known and measurable change in investment.

The Company makes no reference to the paragraph in that order immediately following the above-quoted statement, which paragraph reads as follows:
Moreover, it rests within the sound discretion to use an historical test period, a forecast period, a combination of these where necessary or any other accepted method of rate making necessary to give a fair rate of return-the ultimate goal being to assure efficient service to the consumer and a fair return on its investment to the company.

We find it unnecessary to analyze what this Court said in denying certiorari in *South Central Bell Telephone Co. v. Tenn. Pub. Serv. Comm'n., supra,* in the context of the Court of Appeals' opinion in that case. The controlling exposition of the law applicable to the instant case was set forth in the later case of *CF Industries v. Tenn. Pub. Serv. Comm.,* 599 S.W.2d 536 (Tenn.1980). Therein,

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the Court clearly negated the idea that the Commission is bound to follow any particular rate making methodology.
There is no statutory nor decisional law that specifies any particular approach that must be followed by the Commission. Fundamentally, the establishment of just and reasonable rates is a value judgment to be made by the Commission in the exercise of its sound regulatory judgment and discretion. *Id.* at 542.

The Court also held that the scope of review was governed by T.C.A. § 4-5-117, now T.C.A. § 4-5-322, which restricts reversal or modification to those cases where the reviewing court finds that the Commission's decision is
(4) Arbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion; or
(5) Unsupported by evidence which is both substantial and material in the light of the entire record. In determining the substantiality of evidence, the court shall take into account whatever in the record fairly detracts from its weight, but the court shall not substitute its judgment for that of the agency as to the weight of the evidence on questions of fact.

We find that the Commission's use of the average year rate base was supported by ample material and substantial evidence and involved no abuse of discretion.

The judgment and opinion of the Court of Appeals is affirmed. Costs are adjudged against Powell Telephone Company.

BROCK, HARBISON and DROWOTA, JJ., and HUMPHREYS, Special Justice, concur.
Tenn.,1983.
Powell Telephone Co. v. Tennessee Public Service Com'n
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599 S.W.2d 536
(Cite as: 599 S.W.2d 536)

C

Supreme Court of Tennessee.
CF INDUSTRIES, Appellee,
v.
TENNESSEE PUBLIC SERVICE COMMISSION et al., Appellants.
May 19, 1980.

Public Service Commission appealed from order of the Court of Appeals reversing the Chancery Court's affirmance of a natural gas rate increase approved by the Commission. The Supreme Court, Henry, J., held that: (1) Commission's action in eliminating the special rate given to the largest industrial user of natural gas and raising rates for other industrial users was supported by material and substantial evidence; (2) Commission's findings of fact were adequate for judicial review; (3) Commission did not exceed its regulatory judgment and discretion in changing rate design without use of a cost of service study; and (4) there was a lack of pleading and procedural predicate for consideration of the issue that exempting residential customers from the rate increases was discriminatory, and there was no evidence that there was no material basis for the differing rates, and thus, Commission did not establish unjustly discriminatory or preferential rates.

Reversed.

West Headnotes

[1] Administrative Law and Procedure 15A 683

15A Administrative Law and Procedure
15AV Judicial Review of Administrative Decisions
15AV(A) In General
15Ak681 Further Review
15Ak683 k. Scope. Most Cited Cases
Supreme Court cannot, as a general rule, afford any broader or more comprehensive review to cases arising under Uniform Administrative Procedures Act than is afforded to them by trial court in the first instance. T.C.A. §§ 4-5-117, 4-5-117(g, h).

[2] Administrative Law and Procedure 15A 683

15A Administrative Law and Procedure
15AV Judicial Review of Administrative Decisions
15AV(A) In General
15Ak681 Further Review
15Ak683 k. Scope. Most Cited Cases
Concurrent finding between agency and trial court on any issue of fact is conclusive upon Supreme Court.

[3] Public Utilities 317A 195

317A Public Utilities
317AIII Public Service Commissions or Boards
317AIII(C) Judicial Review or Intervention
317Ak188 Appeal from Orders of Commission
317Ak195 k. Presumptions in Favor of Order or Findings of Commission. Most Cited Cases
(Formerly 317Ak33)
There is presumption that rates established by Public Service Commission are correct and any party who attacks Commission's findings has burden of proving that they are illegal or unjust and unreasonable. T.C.A. § 65-520.

[4] Gas 190 14.3(3)

190 Gas
190k14 Charges
190k14.3 Administrative Regulation
190k14.3(3) k. Proceedings in General. Most Cited Cases
Action of Public Service Commission in eliminating special rate given by utility to largest industrial user of natural gas and raising rates for other industrial

users was supported by material and substantial evidence. T.C.A. §§ 4-5-117(h)(5), 65-520.

[5] Administrative Law and Procedure 15A 489.1

15A Administrative Law and Procedure
15AIV Powers and Proceedings of Administrative Agencies, Officers and Agents
15AIV(D) Hearings and Adjudications
15Ak489 Decision
15Ak489.1 k. In General. Most Cited Cases
(Formerly 15Ak489)
Requirement under Uniform Administrative Procedures Act that "A final decision shall include findings of fact, conclusions of law, and reasons for the ultimate decision," is a statutory imperative; it is not a mere technicality but is an absolute necessity without which judicial review would be impossible. T.C.A. § 4-5-113.

[6] Administrative Law and Procedure 15A 486

15A Administrative Law and Procedure
15AIV Powers and Proceedings of Administrative Agencies, Officers and Agents
15AIV(D) Hearings and Adjudications
15Ak484 Findings
15Ak486 k. Sufficiency. Most Cited Cases
Where there is no disputed issue of fact and sole question before agency is proper conclusion to be drawn from undisputed facts and application of the correct legal rules, record need not be burdened with detailed findings of fact; in such a case facts need only be recited.

[7] Administrative Law and Procedure 15A 486

15A Administrative Law and Procedure
15AIV Powers and Proceedings of Administrative Agencies, Officers and Agents
15AIV(D) Hearings and Adjudications
15Ak484 Findings
15Ak486 k. Sufficiency. Most Cited Cases
In cases wherein issues of fact before agency are sharply contested and proof is conflicting, a detailed finding of fact dovetailed to the record is a practical and legal imperative.

[8] Gas 190 14.4(1)

190 Gas
190k14 Charges
190k14.4 Reasonableness of Charges
190k14.4(1) k. In General. Most Cited Cases
Cost of service is not an exclusive method of determining rate design.

[9] Gas 190 14.3(4)

190 Gas
190k14 Charges
190k14.3 Administrative Regulation
190k14.3(4) k. Findings and Orders. Most Cited Cases
In proceeding resulting in elimination of special rate for natural gas provided to largest industrial customer of gas utility, Public Service Commission's findings of fact were adequate to allow judicial review. T.C.A. § 4-5-113.

[10] Public Utilities 317A 120

317A Public Utilities
317AII Regulation
317Ak119 Regulation of Charges
317Ak120 k. Nature and Extent in General. Most Cited Cases
(Formerly 317Ak7.1)
Establishment of just and reasonable public utility rates is a value judgment to be made by Public Service Commission in the exercise of its sound regulatory judgment and discretion. T.C.A. § 65-518.

[11] Public Utilities 317A 165

317A Public Utilities
317AIII Public Service Commissions or Boards
317AIII(B) Proceedings Before Commissions
317Ak165 k. Evidence. Most Cited Cases
(Formerly 317Ak15)

Public Service Commission in rate making and design cases is not solely governed by the proof, although there must be adequate evidentiary predicate; Commission may consider all relevant circumstances shown by the record, all recognized technical and scientific facts pertinent to the issue under consideration and may superimpose upon entire transaction its own expertise, technical competence and specialized knowledge. T.C.A. § 4-5-1097.

[12] Gas 190 ⚿14.1(2)

190 Gas
190k14 Charges
190k14.1 In General
190k14.1(2) k. Uniformity of Charges; Discrimination. Most Cited Cases
Action of Public Service Commission in changing rate design so as to eliminate special rate for natural gas provided to largest industrial customer of gas utility without use of a cost of service study did not exceed its regulatory judgment and discretion. T.C.A. § 65-518.

[13] Gas 190 ⚿14.5(6)

190 Gas
190k14 Charges
190k14.5 Judicial Review and Enforcement of Regulations
190k14.5(6) k. Scope of Review and Trial De Novo. Most Cited Cases

Gas 190 ⚿14.5(9)

190 Gas
190k14 Charges
190k14.5 Judicial Review and Enforcement of Regulations
190k14.5(9) k. Determination and Disposition. Most Cited Cases
In rate-making cases, sole concern of courts, at each stage of appellate review, is to determine whether Public Service Commission's action on the matters raised by the application meets the requirements of the law; rate making is not a judicial function and courts are powerless to remand for determination of a new cause of action.

[14] Gas 190 ⚿14.5(9)

190 Gas
190k14 Charges
190k14.5 Judicial Review and Enforcement of Regulations
190k14.5(9) k. Determination and Disposition. Most Cited Cases
If Public Service Commission's action in rate-making cases is invalid in that rate design approved is discriminatory and without rational basis, only appellate remedy is to strike the increase, in whole or in part, or remand for reconsideration of respective rights of contending parties.

[15] Gas 190 ⚿14.3(3)

190 Gas
190k14 Charges
190k14.3 Administrative Regulation
190k14.3(3) k. Proceedings in General. Most Cited Cases
In proceeding before Public Service Commission involving natural gas rate increase for industrial customers, there was no pleading or procedural predicate for consideration of issue that exempting residential customers from rate increase was discriminatory, and there was no evidence that there was no material basis for the differing rates, and thus, Commission did not establish unjustly discriminatory or preferential rates. T.C.A. § 65-518.

[16] Gas 190 ⚿14.1(2)

190 Gas
190k14 Charges
190k14.1 In General
190k14.1(2) k. Uniformity of Charges; Discrimination. Most Cited Cases
A public utility may impose differing rates among customer classes.

***537** Eugene W. Ward, Gen. Counsel, Mack H. Cherry, Asst. Gen. Counsel, for appellant Public Service Commission.
Eugene N. Collins, City Atty., Gary D. Lander, Sp.

Counsel, Chattanooga, for City of Chattanooga.
Jack M. Irion, Bomar, Shofner, Bomar & Irion, Shelbyville, W. D. Spears, Spears, Moore, Rebman & Williams, W. L. Taylor, Jr., Chattanooga, for Chattanooga Gas Co.
James Clarence Evans, Nashville, Anthony E. Cascino, Jr., Longrove, Ill., for appellee.

OPINION

HENRY, Justice.
This is a utility rate case.

I.

A. Pleadings and Proceedings before the Public Service Commission

On May 31, 1977, Chattanooga Gas Company, a division of Jupiter Industries, filed its application before the Tennessee Public Service Commission seeking to place into effect a revised natural gas tariff and to amend a special contract with CF Industries, Inc. Chattanooga Gas is a natural gas distribution company serving franchises in Chattanooga, Cleveland and environs in Hamilton and Bradley County. CFI is its largest consumer, using approximately 30% of the petitioner's total gas supply.

The proposed rate increase applied to large industrial and commercial customers but did not affect small commercial users nor residential customers. The basic ***538** premise of the application is that a declining gas supply has prohibited the pursuit of practices designed to increase sales volumes to offset heavy increases in operational costs, resulting in an inadequate rate of return. Thus, Chattanooga Gas urges upon the Commission a need to redesign its rates.

It is the theory and philosophy of Chattanooga Gas that there has been a regulatory shift from the traditionally accepted criteria for valuing utility service from "cost of service" to an "intrinsic value" rationale and that this operates to protect residential consumers from absorbing more than their fair share of rates. Chattanooga Gas insists that volume discounts resulting in price advantages to industrial users tend to encourage over-consumption at a time when conservation is a national priority.

CF Industries protested the petition, taking the position that it is the largest customer of Chattanooga Gas, using the gas as a raw product ingredient in the production of fertilizer, and that this unique use justifies a separate rate classification and a continuation of its contract with Chattanooga Gas. [FN1] Its unique use can best be summarized by noting that it is the only customer of Chattanooga Gas which utilizes gas as a raw material; all others use it only as a fuel. CFI can use no other fuel because of the design of its nitrogen complex. It is CFI's further position that its proposed share of the rate increase is disproportionate and discriminatory. CFI insists on the cost of service vis-a-vis the intrinsic value approach.

> FN1. CF Industries relies heavily on the terms of a contract entered into July 6, 1966, between Chattanooga Gas and its predecessor, Farmer's Chemical Association. This contract was assigned to CFI on May 20, 1976.

The Town of Lookout Mountain, Tennessee, intervened in opposition to the increase. The City of Chattanooga intervened for the purpose of preserving its contracts with Chattanooga Gas and protecting the interests of its citizens and rate payers.

To put the entire controversy into focus, we point out that essentially the contending parties are the Chattanooga Gas Company and CF Industries. Under the scheme proposed by Chattanooga Gas the Commission was asked to approve a two-step approach. First, the special rate to CFI would be eliminated and the Gas Company's industrial rate schedule would be made applicable to CFI. Secondly, a general rate increase would be applied to all industrial users, including CFI. The first step would increase CFI's rates by approximately $562,867 annually; the general rate increase would add approximately $157,133. The result would be a

total increase of approximately $720,000, with CFI assuming the same proportionate burden as all other industrial consumers.

B. Findings and Order of the Commission

On November 30, 1977, the Public Service Commission entered its findings and order. The Commission approved the increase in net operating income in the amount of $910,226. It ordered that CFI be charged at its "existing I-1 rate tariff," with the result that approximately $394,866 or 43.4% of the total increase was assessed against CFI with approximately 56.6% being assessed against the remaining 742 industrial consumers. The 25,000 residential users were not affected. The result was that other industrial users were raised and CFI continued to pay at a lower rate. After discussing the testimony relating to the cost of service versus intrinsic value approach, the Commission noted that "CFI is receiving gas at bargain prices under the special contract at a time when natural gas is a scarce commodity."

The Commission treated "cost of service" as "one of many approaches" but held that it was "not bound to a strict cost of service approach in designing rate schedules." The Commission summarized its holding:
Rate-making is an extremely complex process which involves much more than inputting cost figures into a computer and waiting for the results of the machine's mathematical functions. We ***539** must consider all aspects surrounding the determination of just and reasonable rates. In our opinion, a strict cost of service approach is not at this time of decreasing energy supplies the best approach to setting rates. . . . We, therefore, order the company to change the existing rates charged to CF Industries for firm gas to the existing I-1 rate tariff.

The Commission pointed out that "CFI will still be able to purchase gas at a lower effective rate than other industrial customers due to its high load factor. " Further the Commission specificized this finding by noting that "on average the industrial customers other than CF Industries are paying $1.46 per McF under existing rates, while CFI will pay $1.35 per McF under the same rate schedule."

It should be noted that while under the Commission's holding CFI's rate was increased to that being paid by other industrial users at the time the petition was filed, it was not subjected to the general rate increase with the result that it continues to pay at a lower rate than all others in the same class.

C. Action of the Chancery Court

Pursuant to a petition for judicial review, the Chancery Court of Davidson County affirmed the Public Service Commission. Citing Allied Chemical Corp. v. Georgia Power Co., 236 Ga. 598, 224 S.E.2d 396 (1976), the Court held that the failure of the Commission to follow a cost of service approach "does not make its decision unjust and discriminatory." Further citing the requirement of Section 65-518, T.C.A., that the Commission modify any rates found to be "unjust, unreasonable, excessive, insufficient, or unjustly discriminatory or preferential," the Chancellor noted that CFI "had been obtaining gas at special contract rates lower than other industrial users." The Court held that the Commission's findings were supported by substantial and material evidence.

D. Action of the Court of Appeals

The Court of Appeals for the Middle Section reversed, disagreeing with the Commission and the Chancellor in every material particular. The Court held that (1) the Commission violated Section 4-519, T.C.A., by failing to make findings of fact; (2) that the Commission failed to require and consider cost of service data; (3) that with a general cost of service study there is a reasonable probability that the result would have been different; and (4) that there was no substantial evidence to support the action of the Commission and its action was "discriminatory" and "patently arbitrary."

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The thrust of the opinion of the Court of Appeals is that the Commission increased rates to large commercial and industrial users to the exclusion of smaller commercial and residential users "without any evidence to justify the discrimination." The matter was remanded to the Public Service Commission for a "redetermination of rates of the customers of Chattanooga Gas Company," to include small commercial and residential users.

We sustain the Public Service Commission and the Chancellor and reverse the Court of Appeals.

II.

Standard of Review

Section 4-5-117, T.C.A., covers judicial review under the Uniform Administrative Procedures Act. Sub-section (g) provides that review shall be " confined to the record." Sub-section (h) restricts reversal or modification of the agency's decision to those cases where the decision violates constitutional or statutory provisions, or is in excess of the statutory authority of the agency, or is made upon unlawful procedure, and to those instances where the decision is
arbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion; or
unsupported by evidence which is both substantial and material in the light of the entire record.

***540** Further narrowing and restricting the review in the Chancery Court is the statutory command:
In determining the substantiality of evidence, the court shall take into account whatever in the record fairly detracts from its weight, but the court shall not substitute its judgment for that of the agency as to the weight of the evidence on questions of fact. (Emphasis supplied). Section 4-5-117(h) (5), T.C.A.

Thus the UAPA requires that the trial court review factual issues upon a standard of substantial and material evidence. But this is not a broad, de novo review. It is restricted to the record and the agency finding may not be reversed or modified unless arbitrary or capricious or characterized by an abuse, or clearly unwarranted exercise, of discretion and must stand if supported by substantial and material evidence.

[1][2] The same standard of review prevails on the appellate level. We cannot, as a general rule, " afford any broader or more comprehensive review to cases arising under the Act than is afforded to them by the trial court in the first instance . . . ." Humana of Tenn. v. Tenn. Health Facilities Com'n., 551 S.W.2d 664, 668 (Tenn.1977). Further a concurrent finding between the agency and the trial court on any issue of fact is conclusive upon this Court. This Court so held in Blue Ridge Transportation Co. v. Hammer, 203 Tenn. 398, 313 S.W.2d 433 (1958):
Unless there is a plain abuse of discretion by the Commission, its orders will not be disturbed on appeal. And more especially where the Chancellor has considered the record on the common-law writ of certiorari and affirmed the order of the Commission, we feel that this concurrent finding is conclusive of the issue. (Emphasis supplied). 203 Tenn. at 404, 313 S.W.2d at 436.

The Uniform Administrative Procedures Act, to the extent of the standard of review, did not make significant changes in prior decisions and statutory law. In view of the fact that the functions of the Commission are solely administrative or legislative as distinguished from judicial, this Court has consistently held that the review is for the "very limited purpose of determining whether the Commission has acted arbitrarily, or in excess of jurisdiction, or otherwise unlawfully." City of Whitwell v. Fowler, 208 Tenn. 80, 83, 343 S.W.2d 897, 899 (1961).[FN2] This, of course, would require that it be supported by substantial and material evidence.

FN2. See also, Hoover Motor Exp. Co. v. Railroad & Public Util. Com'n., 195 Tenn. 593, 261 S.W.2d 233 (1953), for complete

discussion of the legislative character of the Public Service Commission.

[3] Moreover, under Section 65-520, T.C.A., the power to determine whether rates are "just and reasonable" is reposed in the Commission. There is a presumption that the rates so established are correct and any party who attacks the Commission's findings has the burden of proving that they are illegal or unjust and unreasonable. Southern Bell T. & T. Co. v. Tenn. Pub. Serv. Com'n., 202 Tenn. 465, 304 S.W.2d 640 (1957).

Consideration must also be given to the statutory recognition of the "agency's experience, technical competence, and specialized knowledge." Section 4-5-1097, T.C.A. See also, Blue Ridge Transportation Co. v. Hammer, supra ; Section 65-209, T.C.A.

[4] When the evidence is considered "in light of the entire record," Section 4-5-117(h)(5), T.C.A., and in accordance with the established statutory and decisional law, we find and hold that the Commission's action was supported by ample material and substantial evidence. We have neither the disposition nor the power to substitute our judgment for that of the Commission as to the weight of the evidence on any factual issue. This leaves only questions of law for our determination.

III.

The Sufficiency of the Commission's Finding of Fact

The UAPA provides that:
***541** A final decision shall include findings of fact, conclusions of law, and reasons for the ultimate decision. Findings of fact, if set forth in statutory language, shall be accompanied by a concise and explicit statement of the underlying facts supporting the findings. Section 4-5-113, T.C.A.

[5] This is a statutory imperative; it "is not a mere technicality but is an absolute necessity without which judicial review would be impossible." Levy v. State Bd. of Examiners, Etc., 553 S.W.2d 909, 911 (Tenn.1977).

Able counsel representing CFI earnestly urges that the Commission's order was fatally defective. The Court of Appeals held that the Commission's order " fails to disclose any finding of fact supporting the apparent discrimination against the appellant." The Chancellor, on the other hand, correctly noted that " (t)he purpose of findings and conclusions is to aid the court in determining the reasons behind the agency decision, and whether the agency's conclusion is based on sufficient evidence," and held that "the order . . . reflects findings of fact and conclusions of law which are sufficient to enable this court to review the decision."

[6] The sufficiency of an agency's findings of fact must be measured against the nature of the controversy and the intensity of the factual dispute. It is obvious that where there is no disputed issue of fact and the sole question before the agency is the proper conclusion to be drawn from the undisputed facts and the application of the correct legal rules, the record need not be burdened with detailed findings of fact. In such a case the facts need only be recited.

[7] At the other end of the spectrum are those cases wherein the issues of fact are sharply contested and the proof is conflicting. There a detailed finding of fact dovetailed to the record is a practical and legal imperative. Thus, the nature of the finding necessarily varies from case to case.

The Commission had before it in this case other significant issues which normally carry through to the chancery and appellate review, but which are no longer at issue. Among these was the basic rate increase, an issue separate and apart from rate design. In reaching a decision on this threshold question the Commission was required to consider the rate base, revenues and expenses of the utility, and the significant matter of a fair rate of return based on the petitioner's long term, debt, common equity, and other underlying considerations. These are issues that normally provoke controversy and prompt appeals, and on them the Commission made

detailed findings of fact.

We have examined CFI's 15-point proposed finding of fact filed with the Commission. The first two suggest that the Commission find that CFI is the largest customer of Chattanooga Gas using approximately 30% of the total gas supply. There was no dispute as to this and its inclusion in the finding would have served no useful purpose.

[8] The third proposal related to the uniqueness of the use CFI makes of the gas, a fact that we find to have no material bearing on any issue. Number 4 sets out that the rate originally approved by the Commission was based on a cost of service presentation and was fair and reasonable. Number 5 relates to the original gross profit increases and would have the Commission hold that in the absence of a cost of service study, it cannot ascertain gross profits or the trend thereof in relation to other classes of customers. The original rate has no controlling significance and cost of service is not an exclusive method of determining rate design.

The proposed sixth finding sets forth the reasons Chattanooga Gas has not found it necessary to request a rate increase since 1959. This is argumentative and not of controlling significance. The proposed seventh finding merely relates to an amendment to the pleadings.

The eighth proposal basically relates to an item not allowed by the Commission. The ninth, tenth and eleventh proposals deal with the results of the requested increase.***542** Some of the figures are admittedly incorrect. These three proposals relate basically to discriminatory aspects of the rate design and are argumentative in nature. All concerned knew the end results; there was no basic dispute and its inclusion in the finding would have served no useful purpose.

The twelfth proposal was that Chattanooga Gas had used the intrinsic value approach and the thirteenth asserted a general practice to include a cost of service approach. This is the crux of this controversy and the Commission made full conclusions in this regard. The fourteenth proposal merely argues CFI's insistence that a full cost of service study would substantially decrease its share of any increase. The last proposal urges hardship on farmers and on CFI and is not sufficiently documented to form a basis for a finding.

In summary, the proposed findings incorporate agreed facts, background information, results and argument. Pertinent and essential to this issue are only those relating to cost of service data vis-a-vis intrinsic value. These call for conclusions of law and, as to them, the findings and conclusions contain full discussion.

The primary difficulty in proposing and making findings of fact in this case is that there were no disputed facts pertinent to the issue. Essentially, this controversy raises a single issue, a question of law, viz.: May the Public Service Commission adopt a rate design without having before it for consideration a cost of service study? [FN3] A secondary issue relates to a charge of discrimination against CFI.

> FN3. Counsel for CFI made it clear in beginning colloquy that the controversy was "basically in the area of allocation of cost of service to different customers, and the rate structure as to who is going to bear the burden."

[9] We hold, in the context of this case, that the Commission's finding was adequate and proceed to discuss the controlling questions of law.

IV.

Cost of Service versus Intrinsic Value

[10] The polestar of public utility rate establishment and regulation is the "just and reasonable" requirement of Section 65-518, T.C.A. There is no statutory nor decisional law that specifies any particular approach that must be followed by the Commission. Fundamentally, the establishment of just and reasonable rates is a value judgment to be

made by the Commission in the exercise of its sound regulatory judgment and discretion.

Specifically, there is no requirement in any rate case that the Commission receive and consider cost of service data, or that such data, if in the record, are to be accorded exclusivity. It is self-evident that cost of service is of great significance in the establishment of rates but is of lesser value in arriving at rate design. A fair rate of return to the regulated utility is one thing; the establishment of rates among various customer classes is quite another.

Moreover, the intrinsic value of the service rendered, while not controlling, is a proper element of consideration and is, perhaps, of more value in establishing rates among customers than in determining a fair rate of return to the utility itself.

The criteria by which the Commission should be guided have received only generalized comments in our reported decisions. This is proper because the courts are playing a limited role in reviewing actions which essentially are legislative in character. Rate making is not a judicial function and we accord the Commission great deference in reviewing its decisions. On fixing rates in general the Court has spoken in terms of what is just and reasonable "under the proven circumstances," of " regard to all relevant facts" and to a rate "in the zone of reasonableness." Southern Bell Telephone & Telegraph Co. v. Tennessee Public Service Com'n., 202 Tenn. 465, 304 S.W.2d 640 (1957).

The Uniform Administrative Procedures Act authorizes the agency to take notice of "generally recognized technical and scientific***543** facts within the agency's specialized knowledge," and in the evaluation of evidence the agency is specifically authorized to utilize its "experience, technical competence, and specialized knowledge." Section 4-5-1097, T.C.A.

[11] Thus, the Public Service Commission in rate making and design cases is not solely governed by the proof although, of course, there must be an adequate evidentiary predicate. The Commission, however, is not hamstrung by the naked record. It may consider all relevant circumstances shown by the record, all recognized technical and scientific facts pertinent to the issue under consideration and may superimpose upon the entire transaction its own expertise, technical competence and specialized knowledge. Thus focusing upon the issues, the Commission decides that which is just and reasonable. This is the litmus test nothing more, nothing less.

In United Inter-Mountain Telephone Co. v. Public Service Com'n, 555 S.W.2d 389 (Tenn.1977), this Court noted that "(t)he impact of the Administrative Procedures Act on the review of the decisions made by state boards, commissions and agencies, including the Public Service Commission, is massive " (emphasis supplied), and pointed out that "(i)t casts upon the Commission the heavy burden of a sound, reasoned, and judicious approach in the exercise of its jurisdiction." 555 S.W.2d at 392.

We reiterate that neither the legislature nor the courts have established any precise formula or yardstick to guide the Commission. As pointed out by the Georgia Supreme Court in Allied Chemical Corp. v. Georgia Power Co., 224 S.E.2d 396 (Ga.1976):
The process of setting rates is not required to follow any particular course, so long as the end result does not violate the "just and reasonable requirement" requirement . . . . 224 S.E.2d at 399.

The Oklahoma Supreme Court, in Application of Arkansas Louisiana Gas Co., 558 P.2d 376 (Okl.1976), pointed out:
Commission is not bound by a single formula or a combination of formulas in fixing rates and none is exclusive or more favored than the others. (citation omitted) There is no precise statutory or court announced basis for determining the justness or reasonableness of class rate level structures or relationships, the Court generally holding that rate making is the responsibility of a regulatory commission effectively exercising its discretion upon sufficient evidence before it. 558 P.2d at 379.

Finally, we adopt the concise and correct

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conclusions of the Minnesota Supreme Court in St. Paul Area Chamber of Commerce v. Minnesota Public Service Com'n., 312 Minn. 250, 251 N.W.2d 350 (1977):

(W)e must presume that the members of the commission itself, with their supporting staff, have in their grasp practical knowledge in the field of utilities regulation not possessed by either the courts or laymen in general.

The commission, in order to carry out its mandate from the legislature to establish "just and reasonable " rates, must be able to draw on its own internal sources of knowledge and experience. As with the legislature itself, we assume that it does so in each instance and that we ought not to interfere unless it should clearly exceed its statutory powers. 251 N.W.2d at 354.

[12] We cannot say on this record that the Commission exceeded its regulatory judgment and discretion in acting without a cost of service study in a rate design case. The imposition of this requirement would be an unwarranted intrusion into the rate making process.

The record shows that the Commission reached a result that was just and reasonable and equitable.

V.

Discriminatory Rate Structure

CFI contends that the Commission acted discriminatorily and without any rational basis in imposing a rate increase on "743 ***544** large users to the exclusion of the 25,000 smaller users" without any evidence to justify the discrimination." The Court of Appeals so held.

We should point out at the onset that 742 of the 743 large users have voiced no complaint.

The following tabulation is significant:

	Net Increase	Increase	Consumption	Generated Gross Profit
CFI	$394,866	43.4	34.1%	15.7%
742 others	515,360	56.6	56.6	65.2
25,000 residential	-0-	-0-	9.3	19.1

Thus, it will be seen that while CFI buys approximately one-third of the total output of Chattanooga Gas, it accounts for only 15.7% of the profit. It uses almost four times as much as the 25,000 residential customers but contributes less to gross profit. The 742 other industrial users consume 22.5% more gas than CFI, but contribute 49.5% more to the gross profit.

Additionally, as found by the Commission, CFI pays $1.35 per McF, while the 742 other industrial users pay $1.46, and is "receiving gas at bargain rates."

But this is not the discrimination that CFI has in mind. Its insistence and that of the Court of Appeals was that exempting the 25,000 residential customers from the increases was discriminatory. It was apparently the view of the Court of Appeals that when the rates charged one class of customers are raised, all others must also be raised. This does not necessarily follow.

[13] There was no pleading or procedural predicate in this case which would have justified a revision of residential rates. Remanding this case to the Commission to adjust the rates of residential customers is beyond the purview of judicial review. The sole concern of the courts, at each stage of appellate review, is to determine whether the Commission's action on the matters raised by the application meets the requirements of the law. Rate making is not a judicial function and the courts are powerless to remand for the determination of a new cause of action.

[14] If the Commission's action was invalid in that the rate design approved was discriminatory and without rational basis, the only appellate remedy is to strike the increase, in whole or in part, or remand for reconsideration of the respective rights of the contending parties.

The fact that residential consumers pay at a lesser rate is of no patent significance. Utilities traditionally have charged differing rates among classes of customers. Many factors enter into the determination of rates among classes of consumers. This record is silent in this regard and we will not assume from a silent record that there is no material basis for the differing rates.

[15] Section 65-518, T.C.A., gives the Public Service Commission the express power to adjust rates that are "unjust, unreasonable, excessive, insufficient or unjustly discriminatory or preferential." Again, we are not willing to assume from an incomplete record that the Commission deviated from its sworn duty; to the contrary, we presume its compliance. We are unwilling to hold, in the posture of this case, that the Commission established unjustly discriminatory or preferential rates.

[16] While we hold, without hesitation or equivocation, that a public utility may impose differing rates among customer classes, we do not deem it necessary or proper to explore or delineate the criteria that must be met.

We are content to rest our holding on the lack of pleading and procedural predicate for a consideration of the issue involving the residential customers. The discrimination involving the remaining industrial users may be more apparent than real. In any event, their situation is not presented for review.

The judgment of the Court of Appeals is reversed; the Trial Court and the Public Service Commission are affirmed.

BROCK, C. J., FONES and HARBISON, JJ., and BLACKBURN, Special Justice, concur.
Tenn., 1980.
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Resolution on Energy Efficiency and Innovative Rate Design

WHEREAS, The National Association of Regulatory Utility Commissioners (NARUC), at its July 2003 Summer Meetings, adopted a *Resolution on State Commission Responses to the Natural Gas Supply Situation* that encouraged State and Federal regulatory commissions to review the incentives for existing gas and electric utility programs designed to promote and aggressively implement cost-effective conservation, energy efficiency, weatherization, and demand response; *and*

WHEREAS, The NARUC at its November 2003 annual convention, adopted a *Resolution Adopting Natural Gas Information "Toolkit,"* which encouraged the NARUC Natural Gas Task Force to review the findings and recommendations of the September 23, 2003 report by the National Petroleum Council on *Balancing Natural Gas Policy – Fueling the Demands of a Growing Economy* and its recommendations for improving and promoting energy efficiency and conservation initiatives; *and*

WHEREAS, The NARUC at its 2004 Summer Meetings, adopted a *Resolution on Gas and Electric Energy Efficiency* encouraging State commissions and other policy makers to support expansion of energy efficiency programs, including consumer education, weatherization, and energy efficiency and to address regulatory incentives to inefficient use of gas and electricity; *and*

WHEREAS, These NARUC initiatives were prompted by the substantial increases in the price of natural gas in wholesale markets during the 2000-2003 period when compared to the more moderate prices that prevailed throughout the 1990s; *and*

WHEREAS, The wholesale natural gas prices of the last five years largely reflect the fact that the demand by consumers for natural gas has been growing steadily while, for a variety of reasons, the supply of natural gas has had difficulty keeping pace, leading to a situation where natural gas demand and supply are narrowly in balance and where even modest increases in demand produce sharp increases in price; *and*

WHEREAS, Hurricanes Katrina and Rita, in addition to damaging the States of Alabama, Mississippi, Louisiana, and Texas, significantly damaged the nation's onshore and offshore energy infrastructure, resulting in significant interruption in the production and delivery of both oil and natural gas in the Gulf Coast area; *and*

WHEREAS, The confluence of a tight balance of natural gas supply and demand and these natural disasters has driven natural gas prices in wholesale markets to unprecedented levels; *and*

WHEREAS, The present high and unprecedented level of natural gas prices are imposing significant burdens on the nation's natural gas consumers, whether residential, commercial, or industrial, and will likely be injurious to the nation's economy as a whole; *and*

WHEREAS, The recently enacted Energy Policy Act of 2005 contains a number of provisions aimed at encouraging further natural gas production in order to bring down prices for consumers,

but these actions, together with any further action on energy issues by Congress, are unlikely to bring forth additional supplies of natural gas in the short term; *and*

WHEREAS, Energy conservation and energy efficiency are, in the short term, the actions most likely to reduce upward pressure on natural gas prices and to assist in bringing energy prices down, to the benefit of all natural gas consumers; *and*

WHEREAS, Innovative rate designs including "energy efficient tariffs" and "decoupling tariffs" (such as those employed by Northwest Natural Gas in Oregon, Baltimore Gas & Electric and Washington Gas in Maryland, Southwest Gas in California, and Piedmont Natural Gas in North Carolina), "fixed-variable" rates (such as that employed by Northern States Power in North Dakota, and Atlanta Gas Light in Georgia), other options (such as that approved in Oklahoma for Oklahoma Natural Gas), and other innovative proposals and programs may assist, especially in the short term, in promoting energy efficiency and energy conservation and slowing the rate of demand growth of natural gas; *and*

WHEREAS, Current forms of rate design may tend to create a misalignment between the interests of natural gas utilities and their customers; *now therefore be it*

RESOLVED, That the National Association of Regulatory Utility Commissioners (NARUC), convened in its November 2005 Annual Convention in Indian Wells, California, encourages State commissions and other policy makers to review the rate designs they have previously approved to determine whether they should be reconsidered in order to implement innovative rate designs that will encourage energy conservation and energy efficiency that will assist in moderating natural gas demand and reducing upward pressure on natural gas prices; *and be it further*

RESOLVED, That NARUC recognizes that the best approach toward promoting energy efficiency programs for any utility, State, or region may likely depend on local issues, preferences, and conditions.

Sponsored by the Committee on Gas
Recommended by the NARUC Board of Directors November 15, 2005
Adopted by the NARUC November 16, 2005

Resolution on Gas and Electric Energy Efficiency

WHEREAS, The National Association of Regulatory Utility Commissioners (NARUC), at its July 2003 Summer Meetings, adopted a *Resolution on State Commission Responses to the Natural Gas Supply Situation* that encouraged State and Federal regulatory commissions to review and reconsider the level of support and incentives for existing gas and electric utility programs designed to promote and aggressively implement cost-effective conservation, energy efficiency, weatherization, and demand response in both gas and electricity markets; *and*

WHEREAS, The National Petroleum Council (NPC), in its September 25, 2003 report on *Balancing Natural Gas Policy – Fueling the Demands of a Growing Economy*, found that greater energy efficiency and conservation are vital near-term and long-term mechanisms for moderating price levels and reducing volatility and recommended all sectors of the economy work toward improving demand flexibility and efficiency; *and*

WHEREAS, The NPC, in its report, identified key elements of the effort to maintain and continue improvements in the efficient use of electricity and natural gas, including (but not limited to):

(i) enhanced and expanded public education programs for energy conservation, efficiency, and weatherization,

(ii) DOE identification of best practices utilized by States for low-income weatherization programs and to encourage nation-wide adoption of these practices,

(iii) a review and upgrade of the energy efficiency standards for buildings and appliances (to reflect current technology and relevant life-cycle cost analyses) to ensure these standards remain valid under potentially higher energy prices

(iv) promote the use of high-efficiency consumer products including advanced building materials, Energy Star appliances, energy "smart" metering and information control devices

(v) on-peak electricity conservation to minimize the use of gas-fired electric generating plants,

(vi) the use of combined-cycle gas-fired electric generating units instead of less-efficient gas-fired boilers, and

(vii) clear natural gas and power price signals; and

(viii) remove regulatory and rate structure incentives to inefficient use of natural gas and electricity; and

WHEREAS, The NARUC, at its November 2003 annual convention, adopted a *Resolution Adopting Natural Gas Information "Toolkit"* which encouraged the NARUC Natural Gas Task Force, to review (among other things) the findings and recommendations in the NPC report that have regulatory implications for State commissions for improving and promoting energy efficiency and conservation initiatives, including consumer outreach and education, review of regulatory throughput incentives; *and*

WHEREAS, The American Council for an Energy-Efficient Economy ("ACEEE"), in its December 2003 report on *Responding to the Natural Gas Crisis: America's Best Natural Gas Energy Efficiency Programs*, (i) identified States and utilities with programs that many would consider best practice or model programs for all types of natural gas customers and all principal natural gas end-use technologies, and (ii) found that these programs are concentrated in relatively few States and regions and could be expanded in other parts of the country to great benefit; *and*

WHEREAS, the Natural Resources Defense Council (NRDC), the American Gas Association (AGA) and the ACEEE have recently adopted a Joint Statement noting that traditional rate structures often act as disincentives for natural gas utilities to aggressively encourage their customers to use less gas. Therefore, the NRDC, AGA, and the ACEEE have urged public utility commissions to align the interests of consumers, utility shareholders, and society as a whole by encouraging conservation. Among the mechanisms supported by these groups are the use of automatic rate true-ups to ensure that a utility's opportunity to recover authorized fixed costs is not held hostage to fluctuations in retail gas sales; *now therefore be it*

RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners (NARUC), convened in its 2004 Summer Meetings in Salt Lake City, Utah, encourages State commissions and other policy makers to support the expansion of natural gas energy efficiency programs and electric energy efficiency programs, including those designed to promote consumer education, weatherization, and the use of high-efficiency appliances, where economic, and to address regulatory incentives to address inefficient use of gas and electricity; *and be it further*

RESOLVED, That the Board of Directors of the NARUC, encourages State and Federal policy makers to: (i) review and upgrade the energy efficiency standards for buildings and appliances, where economic, to ensure these standards remain valid under potentially higher energy prices, and (ii) promote the use of high-efficiency consumer products, where economic, including advanced building materials, Energy Star appliances, and energy "smart" metering and information control devices; *and be it further*

RESOLVED, That Board of Directors of NARUC encourages State Commissions to review and consider the recommendations contained in the enclosed *Joint Statement of the American Gas Association, the Natural Resources Defense Council, and the American Council for an Energy-Efficient Economy; and be it further*

RESOLVED, That the Board of Directors of the NARUC recognizes that the best approach towards promoting gas energy efficiency programs and electric energy efficiency programs for any single utility, State or region may likely depend on local issues, preferences and conditions.

Sponsored by the NARUC Natural Gas Task Force, Committee on Gas, Committee on Consumer Affairs, Committee on Electricity, and Committee on Energy Resources and the Environment
Adopted by the NARUC Board of Directors July 14, 2004