BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of	DOCKET NO. 980696-TP
Determination of the cost of basic local telecommunications service, pursuant to Section 364.025, Florida Statutes.	

VOLUME 18

Pages 2096 through 2162

PROCEEDINGS: HEARING

BEFORE: CHAIRMAN JULIA L. JOHNSON
COMMISSIONER J. TERRY DEASON
COMMISSIONER SUSAN F. CLARK
COMMISSIONER JOE GARCIA
COMMISSIONER E. LEON JACOBS, JR.

DATE: Thursday, October 15, 1998

TIME: Commenced at 9:10 a.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: H. RUTHE POTAMI, CSR, RPR
Official Commission Reporter

APPEARANCES:

(As heretofore noted.)

DOCUMENT NUMBER-DATE
11554 OCT 15 98
FPSC-RECORDS/REPORTING

I N D E X

WITNESSES

NAME	PAGE NO.
D. DAONNE CALDWELL	
Direct Examination By Ms. White	2098
Prefiled Direct Testimony Inserted	2102
Prefiled Rebuttal Testimony Inserted	2120
Cross Examination By Mr. Melson	2135

EXHIBITS

NUMBER		ID.	ADMTD.
73	Revised DDC-1	2100	

PROCEEDINGS

(Hearing reconvened at 9:10 a.m.)

(Transcript follows in sequence from Volume 17.)

CHAIRMAN JOHNSON: We're going to go back on the record today. Any preliminary announcements before we go to the witness?

MR. COX: Staff isn't aware of any preliminary matters.

CHAIRMAN JOHNSON: Okay. I think we're prepared.

- - - - -

D. DAONNE CALDWELL

was called as a witness on behalf of Bellsouth Telecommunications, Inc. and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. WHITE:

Q Ms. Caldwell, would you please state your name and address for the record?

A Yes. My name is Doris Daonne Caldwell. My address is 675 West Peachtree Street N.E., Atlanta, Georgia 30375.

Q By whom are you employed and in what capacity?

filed as revisions and so indicated on each page.

Q Was that exhibit prepared by you or under your direction and supervision?

A Yes, it was.

Q Do you have any substantive corrections or changes to that exhibit at this time?

A No, I do not.

MS. WHITE: Madam Chairman, I'd like to have the DDC-1, revised DDC-1 that's attached to Ms. Caldwell's direct testimony labeled as the next exhibit.

CHAIRMAN JOHNSON: It will be marked as 73.

(Exhibit 73 marked for identification.)

Q **(By Ms. White)** Ms. Caldwell, you also filed rebuttal testimony in this docket consisting of nine pages; is that correct?

A That is correct.

Q Do you have any additions or changes to your rebuttal testimony at this time?

A No, I do not.

Q If I were to ask you the same questions that are posed in your prefiled rebuttal testimony today, would your answers be the same?

A Yes, they would.

MS. WHITE: I would like to have the

rebuttal testimony of Ms. Caldwell inserted into the record.

CHAIRMAN JOHNSON: It will be so inserted.

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF D. DAONNE CALDWELL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 980696-TP

AUGUST 3, 1998

Q. Please state your name, occupation and address.

A. My name is D. Daonne Caldwell. I am a Director in the Finance Department of BellSouth Telecommunications, Inc. (hereinafter referred to as "BellSouth" or "the Company"). My area of responsibility relates to economic costs. My business address is 675 W. Peachtree St., N.E., Atlanta, Georgia, 30375.

Q. Please state your professional experience and education related to the issues in this proceeding?

A. I joined South Central Bell in 1976 in the Tupelo, Mississippi, Engineering Department where I was responsible for Outside Plant Planning. In 1983, I transferred to BellSouth Services, Inc. in Birmingham, Alabama, and was responsible for the Centralized Results System Database. I moved to the Pricing and Economics Department in 1984 where I developed methodology for service cost studies until 1986 when I accepted a rotational assignment with Bell Communications Research, Inc. (Bellcore). While at Bellcore, I was responsible for development and instruction of the

Service Cost Studies Curriculum including courses such as "Concepts of Service Cost Studies", "Network Service Costs", "Nonrecurring Costs", and "Cost Studies for New Technologies". In 1990, I returned to BellSouth and was appointed to a position in the cost organization, which is now a part of the Finance Department, with the responsibility of managing the development of cost studies for transport facilities, both loop and interoffice. Since mid-1996, I have been dedicated to reviewing BellSouth's cost methodology and cost study results.

I attended the University of Mississippi, graduating with a Master of Science Degree in mathematics. I have attended numerous Bellcore courses and outside seminars relating to service cost studies and economic principles.

Q. Please state your relevant experience in testifying.

A. I have testified in each of the nine BellSouth states in the local competition dockets, including arbitration dockets and/or generic cost dockets. Additionally, I have testified in Alabama, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee in universal service hearings. My extensive involvement in these dockets has provided me with the opportunity to evaluate numerous cost models and methodologies used by BellSouth and other parties to estimate the cost of providing unbundled network elements and universal service.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to explain and support the cost inputs used in the Benchmark Cost Proxy Model 3.1 (BCPM 3.1) by BellSouth to develop universal service costs for Florida. Further, I will explain why these inputs are appropriate to use and show why the inputs I recommend produce more realistic results than other parties' inputs. I will also address Issue 4 of Order No. PSC-98-1008-PCO-TP, Issued July 24, 1998.

The universal service cost proxy model selected in this proceeding must accurately determine the cost an efficient carrier would incur in providing universal service to high cost areas in the state of Florida. In this regard, Dr. Duffy-Deno's, Dr. Bowman's and Mr. Martin's testimonies discuss the reasons this Commission should select the BCPM 3.1 as the model to be used to determine the cost of universal service in Florida. As I have stated previously, my testimony explains why BellSouth's inputs, used in conjunction with the BCPM 3.1, enable the Commission to determine the appropriate costs of universal service in Florida.

BellSouth conducted a study utilizing BCPM 3.1 and BellSouth-specific inputs for Florida. The results from that study, supporting documentation and data, and a CD-ROM are submitted as Exhibit DDC-1 attached to this testimony.

Q. What are the appropriate inputs to be used in determining the costs of universal service?

A. In accordance with the Federal Communications Commission's (FCC's) Universal Service Order, only inputs reflective of forward-looking economic costs should be used to determine the costs of providing universal service. Additionally, in order to accurately determine costs representative of providing service in high cost areas in the state of Florida the inputs must be as specific as possible. The inputs contained in Exhibit DDC-1 meet both these criteria; they are forward-looking and they reflect BellSouth's provisioning practices and costs in Florida.

Q. Should Universal Service cost studies be company specific or generic?

A. The cost study approach, i.e. the underlying model used to process the input data, should be generic. A generic cost proxy model determines the costs of a network designed to serve existing customer locations, assuming existing wire center locations, without regard to the specific company serving the area. The model can be used, with the appropriate inputs, to identify the costs an efficient provider would incur to provide universal service in Florida, specifically in the high cost areas of the state. Furthermore, Florida Statutes, Section 364.025 requires the Commission to determine "the total forward-looking cost, based upon the most recent commercially available technology and equipment and generally accepted

design and placement principles, of providing basic local telecommunications service on a basis no greater than a wire center basis using a cost proxy model to be selected by the commission..."

Q. Are BellSouth's universal service cost estimates based on national default input values or BellSouth-specific values?

A. In contrast to the model itself, the inputs to the model should be company-specific by territory. For example, BellSouth inputs should be used to calculate universal service costs in BellSouth's territory in Florida. BellSouth is a large, efficient provider of quality telecommunications service in this state and its cost inputs reflect economies of scale and vendor discounts that an efficient provider would be expected to achieve on a going forward basis. Additionally, BellSouth has experience providing service in the high cost areas that are identified by the cost proxy model.

Even though we are dealing with a hypothetical network designed by a cost proxy model, the cost of that network should be as real world as possible. That is, it should reflect the costs of an efficient provider building and operating that network. The inputs used by BellSouth reflect the most accurate view of conditions and experiences that an efficient carrier would experience in providing universal service in BellSouth territory in Florida.

The national default values of both the Hatfield Model and BCPM are not necessarily reflective of the costs of providing service in Florida. Instead, these defaults are designed to represent an average cost across the nation. Since the purpose of this proceeding is to determine the costs of providing service in rural, insular, and high cost areas of Florida, it makes no sense to use only national average inputs which tend to equalize the costs in all areas.

BellSouth has used, whenever possible, Florida-specific cost inputs which reflect the forward-looking cost of providing service in BellSouth territory in Florida. These input values include BellSouth specific costs for cable, structures, switches and other network components of universal service. BellSouth reviewed the BCPM 3.1 default inputs. Defaults which were found to be representative of BellSouth's Florida costs, were used when BellSouth-specific data was not available in the format, or at the level of detail, required by the BCPM 3.1.

We recommend to the Commission that the BCPM 3.1 with the values included in BellSouth's filing be used to determine the cost of universal service for BellSouth's Florida territory.

Q. Please list the categories of inputs for which BellSouth used BellSouth-specific values rather than BCPM 3.1 default values.

A. BellSouth-specific input values were used for the following categories of cost inputs:

Category 1 - contractor costs of placing cable, conduit and poles
Category 2 - sharing percentage associated with structures
Category 3 - cable material and labor unit costs
Category 4 - cable sizing/utilization
Category 5 – drop terminal cost
Category 6 - feeder/distribution interface costs
Category 7 - switch costs
Category 8 - interoffice transport and signaling costs
Category 9 - network interface device and drop costs
Category 10 - land and building loading factors
Category 11 - depreciation lives, survivor curves and net salvage percentages
Category 12 - cost of capital
Category 13 - actual wire center line count
Category 14 - expenses and support assets
Category 15 – taxes

Q. What are the major categories of inputs in BCPM 3.1?

A. Following is a list of major user input groups which significantly impact the BCPM 3.1 cost results. Additionally, the cost category and issue numbers, as designated by the commission order, are indicated in the parentheses for reference.

Network Interface Device (NID) and Drop (Category 9, Issues 4j and 4k)

Terminal Investment (Material plus Engineering and Installation Costs) (Categories 5 and 6, Issue 4n)

Distribution Investment (Material plus Engineering and Installation Costs) (Category 3, Issue 4i)

Copper Feeder Investment (Material plus Engineering and Installation Costs) (Category 3, Issue 4i)

Fiber Feeder Investment (Material plus Engineering and Installation Costs) (Category 3, Issue 4h)

Structure Costs (Category 1, Issues 4d and 4g)

Structure Sharing (Category 2, Issue 4e)

Copper and Fiber Fill Factors (Category 4, Issue 4f)

Digital Loop Carrier (DLC) Investment (Issue 4m)

Interoffice Investment (Category 8, Issues 4q and 4r)

Central Office Switching Investment (Material plus Engineering and Installation Costs and Switch Traffic Characteristics) (Category 7, Issues 4o and 4p)

Expense Factors (Category 14, Issue 4s)

Cost of Capital (Category 12, Issue 4b)

Depreciation Lives (Category 11, Issue 4a)

Q. Are BellSouth's BCPM 3.1 studies and input values reflective of forward-looking costs?

A. Yes. All inputs used by BellSouth are designed to represent forward-looking costs. BellSouth used current material prices, labor costs, and contractor costs that are adjusted by Telephone Plant Indices (TPIs) to reflect 1998-2000 costs. In certain plant accounts, the TPIs add inflation estimates to the costs. However, in other accounts, the TPIs actually result in lower costs when material prices are forecasted to decline in a particular type of telephone plant. The use of BCPM's forward-looking network designs combined with forward-looking 1998-2000 input values, definitely produce forward-looking results.

Q. How were Digital Loop Carrier (Issue 4m) inputs developed?

A. BellSouth's Network experts reviewed the BCPM 3.1 default inputs and found them to be reasonable and reflective of BellSouth's operation in Florida. Additionally, BellSouth does not deploy systems less than 96 lines and therefore, had no data on small systems. Thus, the default inputs were used in this filing.

Q. How were BellSouth's contractor costs and structure sharing percentages inputs (Categories 1 and 2) developed?

A. BellSouth's structure placement costs (contractor costs) for placing conduit, trenching/plowing buried cable, and placing poles are based on an average of the 10 existing BellSouth contracts with outside plant contractors in Florida. These 10 contracts cover the entire BellSouth

territory in Florida. BellSouth also used BellSouth-specific inputs from these contracts for the costs for manholes and handholes in Florida.

BellSouth does not have data that identifies the percentage of time associated with each activity in the structure tables. Therefore, BellSouth Network experts reviewed the BCPM defaults. Since these experts found the values to be reasonable and representative of BellSouth's operations in Florida, the defaults were used.

BellSouth used structure sharing percentages that are BellSouth-specific values representative of BellSouth's sharing arrangements in Florida.

BellSouth is a large efficient provider of telecommunications services in Florida. Thus, BellSouth-specific investments and installation costs, as well as structure sharing arrangements reflect economies of scale that an efficient provider would be able to expect to achieve on a going- forward basis.

Q. How were BellSouth's cable costs inputs (Category 3) developed for BCPM 3.1?

A. BellSouth used BellSouth-specific costs for both copper and fiber cable. Material prices for copper and fiber cable were obtained from procurement records that reflect actual BellSouth purchase prices and contractual agreements. As previously explained, future inflation trends (TPIs) were

also taken into consideration in order to reflect forward-looking costs. Telephone company engineering and labor costs were derived from BellSouth's Florida in-plant loading factors. In-plant factors convert material prices to a Florida-specific installed investment (less contractor costs that are handled separately in the structure tables of BCPM 3.1). BellSouth-specific cable costs reflect economies of scale and vendor prices that an efficient provider would be able to expect to achieve on a going forward basis.

Q. How was the outside plant mix (Issue 4I) determined for BCPM 3.1?

A. BellSouth analyzed the BCPM 3.1 default values at the wire center level. The distribution between aerial, buried, and underground placement was found to be reasonable. Thus, the BCPM 3.1 defaults were used.

Q. What utilization factors (Category 4) are included in BellSouth's BCPM 3.1 study?

A. Universal service costs should be based on a forward-looking projection of actual utilization. BCPM 3.1 determines the network design required to provide quality service to an area, calculates the cost of that network, and then determines a cost per line based on the number of lines served by the network. Thus, BCPM 3.1 uses an actual, or average, utilization to determine universal service costs. BCPM 3.1 requires a cable sizing factor input which, along with standard cable sizes and number of distribution

pairs per housing unit, is used to determine distribution cable requirements. BellSouth used a distribution cable sizing factor of 100% and 2 distribution pairs per housing unit to size distribution cable. These factors are designed to produce a fill representative of BellSouth's projection of actual fill, based on experience over time, for Florida. The feeder cable sizing factor is designed to produce a fill for feeder cable representative of the projection of actual fill of copper feeder plant experienced in Florida over time. The cable sizing factors are located in Exhibit DDC-1 Bates Stamp 000244.

Q. Please explain BellSouth's BCPM 3.1 input values for drop terminal and feeder distribution interface costs (Categories 5 and 6)?

A. BellSouth's drop terminal costs for line sizes below 100 pairs are included as exempt material in the in-plant factors used to develop the installed investments of cable. Therefore, terminal costs are not included in BellSouth's BCPM 3.1 study as a separate input. BellSouth used BellSouth-specific feeder distribution interface costs to reflect BellSouth's costs in Florida. The material prices were obtained from procurement records and were adjusted for inflation. The engineering and labor costs were developed from Florida-specific in-plant factors. As previously explained, the in-plant factor converts material prices to installed investments.

Q. How were BellSouth switch cost inputs (Category 7) developed?

A. BellSouth Florida-specific analyses were used to provide the detailed data for wire centers in the state. State-specific information on calling rates, usage rates, loading factors and host/remote characteristics were used along with company average data and line counts that are consistent with data generated from other BCPM modules. ARMIS data was used for items such as percentages of residence, business, local and toll traffic.

Q. How were BellSouth's interoffice transport and signaling cost inputs (Category 8) developed?

A. Transport costs are determined from the BCPM interoffice transport module. This module incorporates the forward-looking Synchronous Optical Network (SONET) ring architecture in determining network design and subsequent costs. Inputs to this module reflect BellSouth-specific costs for Florida. They include fill factors, SONET material prices, number of nodes on a ring, air-to-route factor, the mix of aerial, underground and buried fiber in the interoffice transport.

Signaling costs are determined in BCPM 3.1 based upon two investments for signaling; investment per line for residence and investment per line for business. Default values were found to be representative of BellSouth's forward-looking signaling costs.

Q. Please describe how network interface device (NID) and drop inputs (Category 9) were developed?

A. BellSouth used BellSouth-specific costs for the material, travel, and installation labor associated with the NID and the drop in BCPM 3.1. These costs are based on material prices for equipment/material and BellSouth's expertise and experience in placing the equipment/material. The costs represent the costs an efficient provider would be able to expect to achieve on a going-forward basis. The model, through internal calculations determines the appropriate drop length.

Q. Did BellSouth use BCPM 3.1 default input values for land and building factors (Category 10)?

A. No. BellSouth-specific land and building loading factors were used which reflect the relationship between equipment investment and its associated land and building investments as they occur in Florida. Since these factors are calculated from BellSouth's accounting records and the projected view of BellSouth's future additions in these accounts, these values reflect land and building costs that an efficient provider would be able to expect to achieve on a going forward basis.

Q. Should forward-looking economic costs reflect prescribed depreciation lives (Category 11)?

A. No. The appropriate lives to use in depreciation calculations in a forward-looking cost study are economic lives, as opposed to prescribed lives. Economic lives reflect the useful, or revenue-producing, life of an item of plant and are appropriate for use in economic cost studies to ensure that costs are recovered over a time period equal to the revenue-producing life of the plant. BellSouth witness David Cunningham is filing direct testimony that provides support for the proposed depreciation parameters used in BellSouth's BCPM 3.1 study. Therefore, BellSouth recommends that the Commission use the projected economic lives and net salvage percentages proposed by BellSouth in its study.

Q. What cost of capital (Category 12) did BellSouth use in the determination of universal service costs?

A. BellSouth used a cost of capital of 11.25% that reflects forward-looking expectations of the debt rate, cost of equity, and debt/equity ratio. BellSouth witness Dr. Randall Billingsley is filing direct testimony that supports these inputs.

Q. Does the BCPM 3.1 meet the criteria of the FCC that requires "wire center line counts should equal actual ILEC wire center line counts" (Category 13)?

A. Yes. BellSouth's filing is based on actual line counts by wire center as of December 31, 1997.

Q. Did BellSouth use default support investments and operating expenses from BCPM 3.1 (Category 14)?

A. No. BellSouth developed BellSouth-specific support investment ratios for input into BCPM 3.1 and also developed BellSouth-specific expenses using 1998-2000 period total regulated expenses.

Q. How does BCPM 3.1 handle expenses?

A. Expenses are handled in BCPM 3.1 in two ways. Certain categories of expenses, including retail expenses, are expressed on a per line basis using 1998 -2000 projected lines. However, the other category of expenses is directly related to investments (e.g., copper cable expenses). These expenses are calculated based on BellSouth plant-specific expense factors specific to Florida.

Q. How did BellSouth determine the expenses for BCPM 3.1?

A. The plant-specific expenses consist mainly of maintenance expenses. These types of expenses are considered to be causally related to investment and are developed from three years of projected expense data relative to the same period projections for investment. The result is an expense per dollar of investment for these plant-specific expense accounts. Non-plant specific expenses, such as Network Operations and

Executive and Planning, are not causally related to investment. These expenses are determined on per line per month basis using projected forward-looking expenses and projected number of lines to derive an expense per line.

Q. What tax factors (Category 15, Issue 4c) did BellSouth use for BCPM 3.1?

A. BellSouth has input Florida-specific tax rates for the following categories; effective federal tax rate, state tax rate, ad valorem, and other taxes (e.g. gross receipts tax).

Q. Please summarize your testimony.

A. BellSouth has entered inputs in BCPM 3.1 that reflect the costs BellSouth will incur to provide universal service in Florida. Costs for structures, cable, and other components of the network reflect BellSouth contract prices with vendors, including discounts provided to BellSouth as a large telecommunications carrier. Installation and engineering costs are based on actual experience by BellSouth network personnel. These inputs are reflective of costs that a large, efficient telecommunications carrier would expect to achieve on a going-forward basis. We therefore recommend to the Commission that the BCPM 3.1 with the input values included in BellSouth's filing be used to determine the cost of universal service in BellSouth's territory in Florida.

Q. Does this conclude your testimony?

A Yes.

BELLSOUTH TELECOMMUNICATIONS, INC.

REBUTTAL TESTIMONY OF D. DAONNE CALDWELL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 980696-TP

SEPTEMBER 2, 1998

Q. Please state your name, occupation and address.

A. My name is D. Daonne Caldwell. I am a Director in the Finance Department of BellSouth Telecommunications, Inc. (hereinafter referred to as "BellSouth" or "the Company"). My area of responsibility relates to economic costs. My business address is 675 W. Peachtree St., N.E., Atlanta, Georgia, 30375.

Q. Are you the same D. Daonne Caldwell who filed direct testimony in this docket?

A. Yes.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my testimony is to respond to the direct testimonies of Joseph Gillan on behalf of the Florida Competitive Carriers Association,

Don Wood on behalf of AT&T and MCI, and James W. Wells, Jr. on behalf of MCI Telecommunications Corporation.

Q. **On page 18 of his testimony, Mr. Gillan states that the same cost analysis should be used to determine universal service subsidy and to establish network element prices. Do you agree?**

A. No. While I agree that the relevant standard for both studies should be forward-looking, least cost technology, I do not agree that one cost analysis can accurately determine the cost of both universal service and unbundled network elements (UNEs). While there is nothing wrong with using one model for both UNE costing and universal service costing if the model **accurately** identifies costs for each, I know of no model that currently provides such flexibility. UNEs are wholesale network elements while universal service is just that -- a retail service. By their very nature, the costs of UNEs are very different than the costs of a retail service. While BellSouth does not use one model to calculate both UNE costs and universal service costs, consistent methodology has been used in calculating the costs of both UNEs and universal service. Both studies are forward-looking in nature and employ consistent inputs. When two models using consistent inputs produce costs for UNEs and universal service more accurately than one model, there is no incentive to abandon accuracy provided by the two just to have one inaccurate cost model.

Q. On page 5 of Don Wood's testimony, he states that Kentucky and Louisiana have selected the HAI Model for universal service funding. Please comment.

A. It is true that the Kentucky and Louisiana Commissions chose the HAI Model for universal service funding. However, Mr. Wood fails to mention that while selecting the HAI Model, both Commissions rejected the values proposed by the HAI sponsors for the significant cost drivers in the model. For example, the Kentucky Commission Order in Administrative Case No. 360 found that "**some** of the inputs that are used in the default version of the HAI Model are reasonable and accurate. Others will be changed to reflect the conditions in Kentucky..." (emphasis added). While choosing the HAI Model as the platform, the Kentucky Commission chose HAI Model input values filed by the Georgetown Consulting Group on behalf of BellSouth as the most appropriate values for the significant cost drivers. This, of course radically changed the outputs from those that were yielded by the use of the Hatfield default inputs. The Georgetown Consulting Group has also filed rebuttal testimony in this docket which discusses why the HAI Model's national default inputs as proposed by AT&T and MCI are inappropriate. Examples of Georgetown Consulting Group's input

values selected by the Kentucky Commission in lieu of the HAI default values are:

> Distribution Cable Investments, Fiber Feeder Investments, Copper Feeder Investments, Underground and Buried Excavation Costs, Aerial and Buried Drop Placement Costs, Outdoor Serving Area Interfaces Investments, Copper and Fiber Feeder Fill Factors, Buried Cable Jacket Multiplier, Network Interface Device Costs, Digital Loop Carrier Costs.

Furthermore, the Kentucky Commission adopted the HAI Model with the following footnote,

> "The Commission acknowledges that universal service models will continue to evolve while the FCC continues to investigate crucial aspects of model design and the model developers continue their work. Therefore, the Commission may, in the future, reconsider its decision of the model to be used."

This is certainly less than the ringing endorsement implied by Mr. Wood.

The Louisiana Commission, in Docket U-20883 (Subdocket A) also selected the HAI Model as its platform for determining universal service costs. However, the Commission not only rejected the HAI default

input values for all of the significant cost drivers, but then made "adjustments" to the output of the HAI Model even when used with the Commission's input values. In other words, while on the surface "selecting" the HAI Model, the Louisiana Commission in reality did not accept the model's output even when used with their own input values! Again, the "bottom line" result was drastically different than what was advocated by the Hatfield proponents in the case.

Not surprisingly, Mr. Wood does not mention that the BCPM 3.1 was selected over the HAI Model in two other states in BellSouth's region. North Carolina, in its 4/20/98 Order, concluded that "the BCPM 3.1 is more reasonable, more accessible, and more appropriate than the Hatfield [HAI] Model for determining the forward-looking economic cost of providing universal service in North Carolina." In its May 6, 1998 Order, the South Carolina Public Service Commission stated: "after careful consideration of the evidence presented on this subject, the Commission concludes that BCPM 3.1's network design is superior to HM 5.0a's" and adopted the BCPM 3.1 as the universal service model for that state.

Q. **Mr. Wells spends a great deal of time in his testimony discussing the HAI OSP Engineering Team. How does the process utilized by**

this team differ from the process BellSouth utilized in establishing input values?

A. BellSouth's BCPM 3.1 cost inputs are based on actual experience in terms of material prices paid and actual labor costs incurred by BellSouth. These actual costs have been projected forward, to include adjustments for inflation/deflation as well as productivity improvements, to reflect the forward-looking economic costs, of providing service to customers in BellSouth's Florida territory. While the HAI Model OSP Engineering Team certainly has a number of years of experience, no one, regardless of experience, can better estimate the costs of providing service in BellSouth's territory in Florida than BellSouth's own engineers and BellSouth's own actual cost records. As Mr. Wells admits on page 12 of his testimony, "The input values to the HAI Model were derived directly from the ***judgment*** of the OSP Engineering Team." (emphasis added). In other words, the HAI input values are based on their team's **opinions** as to what costs **should** be on a nationwide basis in contrast to BellSouth's BCPM input values that reflect real-world costs in Florida.

Q. On page 19 of his testimony, Mr. Wells states that HAI national default OSP input values produce results appropriate for Florida. Do you agree?

A. No. The Florida Public Service Commission, along with other regulatory authorities in BellSouth territory, are well aware that costs vary by state. For that reason, BellSouth typically files state-specific ;sts in support of tariff filings. A prime example of this is the Florida-specific UNE costs filed by BellSouth. Varying only a few categories of the one thousand plus HAI Model **national default** user adjustable input values will not produce Florida-specific results as Mr. Wells implies. Specifically, AT&T has only modified national default HAI 5.Oa values in these input categories: depreciation lives and salvage, cost of money parameters, an End Office Traffic Sensitive fraction input, and a regional labor adjustment factor. On the other hand, BellSouth has input over 10,000 BellSouth-specific input values into BCPM 3.1 which result in a cost that is specific to BellSouth's territory in Florida.

Q. Mr. Wells recommends the use of a "best in class" approach to selecting input values in which a company would determine the "benchmark", or lowest cost provider of a particular item, and then emulate that company's costs. Is this a realistic approach to developing cost inputs?

A. Absolutely not. In reality, BellSouth awards master outside plant contracts for a particular geographic area by evaluating the overall bids submitted by outside plant engineering contractors for that area. The contractor selected by BellSouth will be the one providing the best **overall** contract proposal considering price, quality and ability to

provide the quantity needed by BellSouth in a timely manner. On any given master contract, the selected contractor may not offer the lowest price for each and every item in the contract, but does provide the best **overall** value to BellSouth.

Mr. Wells' proposal can be looked at in two ways, neither of which is realistic. One way of looking at Mr. Wells' proposal would result in BellSouth working with many, many different contractors on a single job. For example, BellSouth would buy poles from one contractor who offers the best material price for a pole, and purchase installation of the poles from another vendor who offers a better price on the labor to install the pole. Every job would require coordination with multiple outside plant contractors providing various parts of the job. The second way to interpret Mr. Well's proposal is to erroneously assume that the one contractor who wins the bid to provide services to BellSouth in a given area will offer the lowest price on every item of plant.

Neither option is achievable. It is not realistic to expect to be able to pick and choose the cheapest plant items among multiple contractors within a given geographic area. Neither is it realistic to expect to ever get one contractor to be the low cost provider on every item offered in a contract. Therefore, Mr. Wells' proposal of a "best in class" approach to establishing input values is not a realistic method for determining cost study inputs that reflect **real world**, forward-looking costs.

Q. Does this conclude your testimony?

A. Yes.

Q (By Ms. White) Ms. Caldwell, you had no exhibits to your rebuttal testimony, did you?

A Correct.

Q Have you prepared a summary of your testimony?

A Yes, I have.

Q Would you please give that?

A Okay. Good morning. The last few days you've heard a lot about the two cost models that are being looked at here; the BCPM and the HAI 5.0a.

My purpose is not to discuss the models themselves, but rather to discuss the user adjustable inputs that we put into those models. So I make no comments about whether the models are correct in any of their design assumptions, but rather just concentrate on the inputs.

If you think about the models, there are thousands of inputs. You have all of the CBG data, you have household accounts, you have terrain data. That type data is pretty common in both models. There's not a lot of differences there. If there are, they're just very minor. They're not big drivers.

Where you really see the difference in the inputs is what you call the user adjustable inputs. These are things such as your material prices, the

installation for that material, your percent distribution to code, aerial, buried, underground; your cable fields; things of that type.

These inputs are very important because they allow the user to take a purely hypothetical theoretical design of the network, which is what both models do, and make it more real world or actual; more costs that you would actually see and incur in that network.

And in looking at that, you have to consider the geographical area you work in and the territory, and we firmly believe that the inputs should be territory specific; not necessarily company specific, but territory. If I'm looking at costs associated with the BellSouth territory, we need to consider the costs that are in that territory. If you're looking at Sprint, GTE, the small LECs, that would be the same for them.

So what we are proposing is that we look at user adjustable inputs that are BellSouth-specific for their territory. And the reason you want to use BellSouth numbers is they are indicative of the type costs you would incur going forward.

BellSouth is a large corporation with many access lines in the state of Florida. We have

significant discounts on purchases for material, for our switches especially. Those type discounts are a result of being a large carrier.

We're also efficient. We have been regulated by this Commission for years. We have abided by the rules and regulations. We are an efficient provider in the states in our territory. So we feel that's the type user inputs you should use.

Another important aspect of these user inputs is that we have engineers with experience specific to this state. They know about the Keys. They know about Miami. They know about the different areas that BellSouth serves. So based upon that information, it helps them to look at the inputs and see if they are appropriate for inputs into this model.

And we have relied very heavily upon our network personnel with their many years of experience in the state, and they are qualified engineers. And we have produced quality telecommunications service for many years with the result of using these engineers.

Just to give you an idea of the number of inputs we're talking about, the user adjust inputs is approximately 12,000 for the BCPM. Out of the 12,000,

what BellSouth did was look at each one of these inputs and determine whether or not we had Florida-specific data or some type of company-specific data. In most cases, well over 90% of those numbers we used were actually Florida-specific.

But out of those 12,000, we determined that 88% of those we could identify and include Florida-specific, BellSouth-specific data for; and those are your major cost drivers. Out of the others, we did use some defaults. If we used a default, we went to our network personnel, or if it happened in the purchasing area we would talk with them, but normally it was in the network area.

We talked with our personnel to see if they felt those defaults were reasonable, and if they did, we used the defaults. So that would be for 12%. There were just a handful, I think about 50, that we just went with the defaults, but they're very minor. They're in the area of the -- like the terrain data, you would increase the cost by 1.2 due to the level of the terrain. Those type inputs, those are not real significant cost drivers, so we felt we were okay with those.

The one thing -- I think that two points I want to make about the particular inputs we used is

the following: You've heard several times that we use forward-looking -- that we did not use forward-looking data, that we've used embedded data.

In some cases BellSouth did start with accounting data off of our records, but that was only a starting point. In every case we adjusted that data to make it forward-looking.

In the area of maintenance, we have recognized productivity changes. In the area of expenses, we have recognized personnel decreases. During the last three to four years, BellSouth has decreased personnel by 11,300 employees. That's a well-announced number, and, as you know, in fact, in that area we have decreased to the point in the network area that in the state of Florida we are actually hiring technicians again so that we could have service.

I think there's been some information in the paper about that. Florida is not the only state. We're also looking at hiring in Georgia. So we're actually in the process now of adding those technicians in some areas where we need them. I think in a way you might could think of it as rebalancing the forces to really get them where you need them.

So I think it's important to realize you can

start with an embedded historical number as long you adjust it and still get a forward-looking study.

The other point is we use master contracts in the state of Florida. We have 10. And we look at the ones that are vendor bid contracts. They cover 10 geographical areas. The important point of these contracts is, is those are competitive bids and they are the prices BellSouth pays for trenching, plowing, placing poles, things of that type.

And when one of those contracts is bid it is bid as a whole, and vendors know that when they come in and bid. In other words, if we buy a pole from them, we're going to buy installation from them. And it is written in the contract that if an item is in their contract, we cannot go to someone else and buy it. That's in violation.

The only thing is, is if that job was to exceed a certain amount -- and in most cases it's around $100,000 -- we could have a separate bid, but in talking with our network personnel, that doesn't mean I'm going to get a lower bid. If I'm placing cable in the Keys across wetlands, it will even be higher than what's in the master contract. And we filed data requests with network backing that information up, and I think that's what's significant

when we look at this.

When you look at our user adjustable inputs, you need to look at all of them, not just take one by itself and try to analyze it. It is the whole package you need to consider.

I think that pretty well covers the high points of my user adjustable inputs. The one thing I would just like to ask is that this Commission consider those inputs and consider our model and rule upon our inputs as the ones that should be used for the BellSouth territory.

Thank you.

MS. WHITE: Ms. Caldwell is available for cross-examination.

CROSS EXAMINATION

BY MR. MELSON:

Q Good morning, Ms. Caldwell. Rick Melson representing MCI.

A Good morning.

Q How are you doing?

A Just fine.

Q Would you agree that the purpose of this proceeding is to establish the forward-looking cost of providing basic local service?

A Yes. I think I said a little bit more as

in -- kind of like in detail. It also looks at determining the cost model to do that and then the inputs to that model to establish it.

Q Okay. And would you agree in doing all of that the Commission shouldn't be looking for the cost of a particular carrier, but should be looking for the forward-looking costs that would be incurred by an efficient carrier?

A Yes, I agree with that, and I think I said in my summary that in that particular instance, I feel that in the BellSouth territory our inputs provide that -- exactly what you need.

Q And would you agree with me also -- I believe you said in your summary that BellSouth was a -- you believed BellSouth was a large, efficient carrier.

Would you agree with me that just because a carrier is large doesn't necessarily mean it's efficient?

A Oh, I would agree that, but I think our indication in our performance in quality of service has by far indicated we are an efficient provider.

Q Is it fair to say that it's your judgment that nobody could serve BellSouth's territory more efficiently than BellSouth?

A In looking at the territory as a whole, I think we would be the efficient provider.

Q I believe you told us that in looking at the user adjustable inputs, that if you had specific Florida experience, then you used BellSouth data; correct?

A That is correct.

Q And if you didn't have Florida-specific data, either in the level of detail or in the format required by the model, then you used the default values that were supplied by the model; is that correct?

A Yes; after we had our network personnel review them.

Q Now, when you had that review done, your network personnel were obviously looking at things where you did not have specific data in the model format.

A In the model format; that's correct.

Q So is it fair to say that they had to exercise some degree of engineering judgment in determining whether they felt the inputs in the format required for the model were reasonable for Florida and for BellSouth?

A Yes, I agree that they used their judgment,

and I think I point out in my summary they do have a lot of experience on which they base that judgment.

Q And you're relying for those inputs on the judgment of your network engineering people. Those are not inputs about which you have personal knowledge; is that correct?

A In most cases I would say that. In -- for instance, in some of the -- let me just give you an example of where I would have had some personal knowledge. I'm just looking at the contracts and the material prices.

In the digital loop carrier environment we use the defaults because we do not have the information in the format. BCPM requires a -- different sizes of systems; a 24, a 48, a 96, a 192, and so forth. BellSouth does not deploy anything smaller than a 96. So we stay with the defaults because we didn't have the right format of our inputs, but we analyze, like the 96 system, and I was part of that analysis because I do have the material prices and the physical makeup.

Q Ms. Caldwell, I know we've done this before. You're anticipating a lot of future questions. If you could answer the questions I ask, I think I will get to questions that allow you to say everything you want

to say this morning.

A Okay.

Q On the other hand, do feel free to expand on an answer if you need to.

And for about 50 of the default values, I believe you said BellSouth did not perform any sort of reasonableness inquiry; is that correct?

A Yes; after we determined they were not significant cost drivers, too.

Q So there are how many total user definable inputs?

A Approximately 12,000.

Q So if 12% were reviewed by your engineers, that's roughly 1400, give or take?

A Give or take.

Q All right. Of those default values reviewed by your engineers, how many were modified or rejected?

A They did not change any of them. They stayed with the defaults.

Q And the default values in the model were based on a survey, nationwide survey, of information from incumbent LECs; is that correct?

A That's my understanding.

Q And you did not personally participate in the development of those default values; is that

right?

A That is correct.

Q To the extent that those values represent averages of nationwide survey data, do you know if any of the outlier information was discarded before averages were calculated?

A No, I do not. I do not know how the data was processed in the survey.

Q So if we wanted to understand how those 1400 default values were developed, you're not the person really to answer those questions in detail?

A That is correct.

Q Now, for the 88% of the user definable inputs where BellSouth had its own data and you did not rely on the default value, did you make any comparison of the BellSouth numbers to the default values?

A No, I did not. If I had BellSouth data, I used BellSouth data.

Q All right. So that in every instance where you had to rely on default data, you found that it was reasonable, but in every area where you had data of your own you made no sanity check, if you will, against the default data?

A That's right.

Q You mentioned during your summary that BellSouth has a series of 10 master contracts, I believe. Is that correct?

A That's correct.

Q And are those -- those are divided by geographic area in Florida; is that correct?

A Yes, they are.

Q And a master contractor, if I understand correctly, does all of the small jobs in the territory, for example, small scale pole placements and so forth, and gets some of the large jobs; is that right?

A I'm trying to think -- I think the answer to that is yes, but let me just be sure that I'm clear on that. There is a dollar limit, I think I mentioned; like the $100,000. If a job is less than $100,000, then they're going to get that job. There are a few extreme exceptions.

That would be like a major, I think some of -- like the major road moves or something. Those do not always follow under that limit. And something like that there may be like a special bid, timing or something on that.

So there are those minute cases, but in most, I would say 99% of the time they are going to

get all the small jobs and then some portion of the large jobs.

Q And will they get some portion of the jobs over 100,000?

A Oh, yes.

Q And do those contracts spell out which large jobs the master contractor will get and which ones BellSouth will put out for bid?

A Based on my understanding, it does not. It just -- the only thing that I'm aware of is the dollar amount, which then leads it to the possibility of bidding.

Q So the price reflects -- the price implicit in those contracts reflects a mix of small and large jobs, but does not reflect all of the work that's done in that geographic territory?

A That is correct.

Q Now, the 10 geographic areas aren't all the same size; is that correct?

A That is correct.

Q And is it also fair to say that BellSouth's outside plant is not evenly distributed amongst those 10 geographic areas.

A Yes, due to the geographic size and then the density of the areas.

Q Can you tell us anything -- what's the largest area, either in terms of geography or dollar volume?

A I'm not going to be able to do that. I'll just give you an idea. You have the Dade County area, you have a south Dade, and then you have a north and central joined together. So that kind of gives you an idea of how they're set up, but in terms of just naming which one would be the largest, I can't really do that.

Q Now, I understand that for purposes of developing the inputs you took a simple average of the prices of the 10 contracts; is that correct?

A Yes, we did. That was a decision by the network personnel.

Q I'd like to ask you to assume hypothetically that one contractor works in an area where the BCPM model would place 25% of the total amount of poles that are placed statewide in BellSouth's territory.

As I understand your methodology, that contractor's price for pole placement, even though he'd be installing 25% of the poles, got only a 10% weight in determining the input price; is that right?

A Yes, based on the simple average.

Q Do you know what the vintage is of these

master contracts; how old they are?

A No, I don't know the vintage. I do know -- I had looked a little bit into that after a question in the deposition I wasn't able to get the dates. I do know that the most current one is the Indian river. I don't know the vintage of it, but it is the most current one that was bid.

Q So I take it you don't know the last time that any of these contracts was bid?

A No, just the one that was the most current. They are continual -- the contracts are continually bid as they become ready -- reach expiration. So it's a continuing process. I just don't know the dates on them.

Q Well, are they continually bid, or in some cases is contract simply renewed with the existing contract or without an additional bid?

A In some cases they would be renewed.

Q Have you attempted to give any consideration to how the master contract prices might vary if the contractor knew that he was going to get 100% of all the jobs in the area rather than just a percentage of the jobs?

A No, I have not.

Q Let's talk about a few of the specific

inputs. I believe you indicated that -- well, let me ask. Is outside plant mix one of the inputs in which you relied on the BCPM default values rather than on Florida-specific data?

A Yes, it is. We did not have the data broken down by density zones. We only had some data at a wire center level or statewide level. So it didn't have the format.

Q All right. Could you turn to Page 181 of your exhibit, Exhibit 73?

COMMISSIONER DEASON: Which numbering system are you using, Mr. Melson?

MR. MELSON: The Bates stamp numbers on the bottom of the page.

Q **(By Mr. Melson)** It's a sheet entitled "BCPM Loop Costs Inputs," and at the bottom of the page there's a section labeled "Indoor -- I don't know whether it's "SAI" or "SA1".

A SAI.

Q Can you tell me what an indoor SAI is?

A It stands for serving area interface. It's a point of interconnection where the outside cable comes into the building and connects to the cable that then feeds the working phones within that building; cross-connect point.

Q And looking at the -- 4200 indicates a 4200-pair serving area interface; is that correct?

A That's correct.

Q And BellSouth's total installed cost for that serving area interface as shown over the last column is $85,789; is that correct?

A That's correct.

Q And of that amount, the thirteen, six eighty-eight in the first column is the material cost; is that right?

A Correct.

Q Focusing on the total cost of 85,000, can you provide any explanation for why that is more than three and a half times the BCPM default value, which is also the value used by GTE in this proceeding, or why it's more than two and a quarter times the $37,000 cost used by Sprint?

A In terms of what the other companies used, I cannot explain what they particularly included. I can only explain what I have included in my numbers.

And what I have picked up is the material price. And what you do is you buy these components in 100-block connecting blocks with the protections on them. So I have picked up the costs associated with, in this particular case, 4200 100 blocks, and that's

material price from our catalog for that item.

The other information includes the cost associated with the labor and the engineering that we would incur in BellSouth associated with this. And that is what is included in my numbers.

Q This essentially is a panel or a wall mounted frame in the basement of a building where wires come in from outside and connect to wires going up in the building; is that right?

A That, I think, oversimplifies it. At a minimum, what you're going to have is you're going to have a piece of cable that comes in from the outside. Once it reaches the inside of that building, it has to be fire retardant cable. From that it goes to a connection point where we connect it to the outside cable to inside. That is a panel. From there we jumper it over to another panel where it is cross-connected into the building.

So you have several pieces of connect -- excuse me -- points of connection, and you have -- excuse me -- the cost of all of those jumpers, that connection, as well as the connecting blocks with protection on it.

And one of the things I think you may see in our numbers is we -- there is no cost in BCPM for

entrance cable. We didn't include entrance cable, but we did include labor associated with that type of placement. So those -- that would be something else that you see here.

Q Well, to come back to my question, do you have any reason to believe that a price which is three and a half times the price used by GTE for a similar SAI, in fact, represents the most efficient cost for installing 4200-pair SAI?

A In terms of -- as I said, I have no idea how GTE established their numbers, and I've explained how ours are. If you look at our records, this is the cost we would incur.

Q All right. Turn, if you would, to Page 236. I'd like to you look here under the -- this is a sheet entitled "BCPM Manhole Inputs". Under the normal manhole conduit per duct foot, we see a material cost of 224 of which -- $2.22 gets assigned to telephone. Do you see that?

A Yes.

Q Do you have any explanation for why BellSouth's cost of conduit is more than three times Sprint's cost of 73 cents or more than one and a half times GTE's cost of a $1.39?

A I believe my answer would be the same thing

there. I don't know what they've put in their numbers.

The 224 is a result of what is included in the master contracts for BellSouth. And this is the one number -- let me do point out this is a region number for conduit. There is not a significant amount of placement of conduit at this point in time. So that is -- it is, to the best of my knowledge, the only really true regional number that we used. But that would be the number that we incur, and that's what we pay. I just don't know what they have in theirs.

Q Well, you say you know what's in that number is simply the material cost of a 4-inch conduit; is that right?

A That is correct, and that is taken directly from the contracts. That's what we pay.

Q And that's what you believe an efficient carrier would pay?

A I believe if you look at all of the -- let me just answer yes first. And you have to consider that the master contracts cover multiple items. So all of my numbers that -- whether it be for a pole or if it be for conduit or buried placement are a result of those contracts.

In some cases it may be lower, some cases it may be higher, but when you take it as a whole, we've covered the cost, and it would be competitively bid. So it's a real problem when you just start looking at one individual number and try and analyze it. It's the collection of numbers from the contracts that make it an efficient provider.

Q Let me ask you this: Have you done any analysis of the whole collection of BellSouth input numbers versus the whole collection of Sprint or GTE input numbers?

A No, I have not.

Q If you turn to Page 246 of your exhibit BCPM DLC -- which I guess is digital loop carrier -- and electronic inputs, this is a place where I believe you said during your summary that BellSouth uses default values because you don't normally place anything smaller than a 96-line DLC system; is that right?

A That's correct.

Q And you do place the larger DLC systems; is that right?

A Yes.

Q And I believe -- is it true that the reason you used the default values was that since you didn't place anything smaller than 96, you felt it would be

approach.

Q Let's turn back to Page 180.1. And dot is telephone terminology for a little period. I learned that in a prior lifetime.

COMMISSIONER CLARK: Are you looking at another page?

Q **(By Mr. Melson)** 180.1, which is entitled "BCPM Loop Costs Inputs," and the top of the page is "24-gauge cable underground copper." Are you with me there?

A Yes.

Q Now, in this situation I noticed that the price for the 25-pair cable, the 18-pair cable, and the 12-pair cable is all the same; is that correct?

A That is correct.

Q And this is a situation which the smallest cable that BellSouth actually deploys in its network today is 25-pair; is that right?

A Yes. We do that for inventorying and placement purposes.

Q And the BCPM model when it models the network will place a 12-pair cable or an 18-pair cable if that's sufficient to serve the demand calculated by the model; is that correct?

A The model allows that placement. That is

inappropriate to use that higher price for the smaller systems, and also that you wanted the numbers to be on a consistent basis, so you used the default values as being both consistent and covering the whole range of sizes.

I apologize. That was a complicated question. Do I need to do it again?

A Well, what I got lost on, when you said the higher price back on -- that's what threw me.

Q Okay. Would you agree with me that it would be inappropriate to use the cost of the smallest system that Bell uses, the 96-line system, as a surrogate for the smaller size DLCs?

A This particular scenario I agree with that because of the way the BCPM models the number of lines. You would have such an excess capacity on that 96, it would distort the cost in this particular area.

Q And for that reason, since you did not have BellSouth actual costs for the smaller units, you used the default costs for all of the DLC sizes?

A That is correct, but after we tested the sizes that we did have. Like we looked at the 192 and the 672, and our numbers were reasonable. I think in most cases they were actually a little bit higher, but we stayed with the defaults for that consistency

correct.

Q And yet given the fact that you use the same input cost for the 25-pair, 18-pair and 12-pair cable, the USF cost calculation gets charged with the cost of the larger 25-pair cable even where BCPM is deploying one of the smaller sizes; is that correct?

A It would be based on the 25, but the real cost of burying the cable is the cost of placing it in the ground. It's not the pair itself. So that's the reason we've chosen this.

Q And it's my understanding smaller size cables are available, BellSouth just doesn't use them today; is that right?

A Yes. I believe we stated it's easier to inventory, maintain and just place the 25.

COMMISSIONER CLARK: Easier or more efficient?

WITNESS CALDWELL: More efficient.

Q **(By Mr. Melson)** Now, in the prior TSLRIC and TELRIC models that were used to price UNEs, one of the inputs was a fill factor; is that correct?

A Yes.

Q Could you define, if you would, for me what a fill factor is as it relates to distribution plant?

A The fill factor is the -- if you look at the

number available pairs and the relationship to the working pairs. So you take the working pairs divided by the available, and that is your fill factor. In other words, if you had 100-pair cable and it had a fill factor of 70%, that would mean 70 were working.

Q And is fill factor synonymous with utilization factor, which I believe may be the term used in your testimony?

A Yes.

Q And would you agree with me that the fill factor, or utilization factor, is a significant driver in determining the cost of distribution plant?

A Yes, it is.

Q Now, in BCPM, fill factor is not a specific model input; is that right?

A That is correct. They use something called a cable sizing factor.

Q And if I understand what BellSouth did, you chose a cable sizing factor and a number of lines per residential and business unit that would result, when the model was finished performing its calculations, with an output of a fill factor that's equal to the fill factor BellSouth has in its distribution network today; is that correct?

A Yes. For the distribution, we used a number

of lines at the -- each customer premises for your residence of two, and then we used a fill factor -- excuse me -- a cable sizing factor of 100%. So they work together to produce the distribution fill.

Q And what they actually -- and what using those two numbers produces is a utilization factor of roughly 40% for distribution cable; is that correct?

A We believe it's somewhere in that particular neighborhood. The number that we have in our distribution plant is -- to the best of my recollection is 41% for distribution.

Q And your attempt was to select inputs that got as close as possible to that 41% as an output. Is that fair to say?

A Yes.

Q Now, BellSouth has got about 6.4 million lines in Florida today; is that correct?

A That sounds reasonable. I think that's about right.

Q I think it's actually 6,444,000 that's used in the model.

A Could be.

Q And just so I can do the math, I'm going to round that down to 6 million, and I'm going to round your 41% fill factor down to 40%.

That means that in the network model by BCPM, given the inputs that you used, there would be about 6 million working pair of distribution cable and a total of about 15 million pair of available cable, which means there are 9 million for spares or growth, et cetera. Did I do the math right?

A I'd have to work through it, but that sounds fairly reasonable in terms of in the percentages. Subject to check, you calculated the math right.

Q Okay. Well, let's -- 15 million total. What's 40% of 15 million?

A (Pause) Trouble getting the zeros straight.

Q It will be millions. (Laughter)

A That's true. It comes back to your 6 million. I agree with you.

Q Okay. And then 15 million total, less 6 million, leaves 9 million that are spares for future growth?

A Yes, I agree with you on that.

Q Now, if those results are used to calculate the amount of universal service funding, then for every working line in a high cost area, the fund would pick up the difference between some price or revenue benchmark on the one hand, and the cost on the other hand of two and a half pair of distribution cable; is

that correct?

A That's correct; and it should, because the fact that that is the cost of doing business. A distribution plant is sized at the level it is because as of -- I think I've probably talked about this in the UNE dockets -- is that it's the distribution to your home. And when you size that plant you do not want to go back into that neighborhood again and place it.

The real cost is in the placing of that cable, and so that's the reason the network is built that way. It's a function of building the network and, therefore, it's a cost of the network that should be included in universal service fund.

Q Is it fair to say that BellSouth has not presented in this proceeding any study or analysis to demonstrate that a 40% distribution fill factor is a forward-looking factor as opposed to a historical one?

A The only data we have -- excuse me. The only data we have presented is we filed a revised data request that listed, I believe, two years' worth of data, and then with the -- that shows what this -- actually what's occurring; and then our network personnel looked and said that's how they feel it would go forward. That's what's been filed into the

record.

Q All right. Let me ask you -- I want to change -- we've been talking about various inputs that drive plant investment.

I now want to talk about the expense side for just a moment. If you could turn to Pages 159 and 160 of your exhibit.

A Okay.

Q Now, looking on Page 159 in the lower right-hand corner I see a 9.136. Does that indicate that every line bears a monthly expense of $9.13?

A Yes. When you -- I think that number actually gets rounded to 9.14 when it's moved forward; but yes.

Q Now, one of the expenses that is figured into the cost of each line is an amount for uncollectible revenues; is that right?

A Correct.

Q And if we look on the next page, on Page 160, we see that the total amount of uncollectible revenues that is allocated to basic local service for BellSouth Florida is $98 million a year; is that right? I'm looking there on Line 11.

A Yes. I was just double-checking on the -- my total. Just give me one minute, please. (Pause)

Yes.

Q When we turn back to the preceding page, to Page 159, we see that that translates to 32 cents per line per month; is that right?

A That is correct.

Q And so hypothetically if BellSouth served 1 million lines in high cost areas where it was going to be entitled to receive a check from the universal service fund, it would receive an additional $320,000 a month, or roughly 3.8 million a year, as a result of including uncollectibles in the calculation of the per-line cost. Would you agree with that?

A That is correct. And this is -- again, uncollectibles is a cost of doing business and, therefore, it's a cost and it's just expressed here on a per-line basis.

Q Don't you believe it would be more appropriate to reflect uncollectibles as a reduction in revenue rather than as an expense to be borne by universal service fund?

A No, I do not. It's a cost of doing business.

MR. MELSON: That's all I've got. Thank you, Ms. Caldwell.

COMMISSIONER DEASON: Let me ask a quick

question. The amount of uncollectibles, is that uncollectibles for what type services? All services?

WITNESS CALDWELL: This would be for basic local service. We develop this number by taking a relationship between the basic local exchange revenues and then the total revenues. It works out to be -- on this page it shows that it's 61%.

So we only took 61% of total uncollectibles. So it's basic local exchange revenues.

COMMISSIONER DEASON: So you took a percentage of total uncollectibles to the -- you compared total uncollectibles and the amount of revenue that's derived from local service to get the percentage -- I'm sorry. Explain to me again how you did that.

WITNESS CALDWELL: Okay. If you look at the ARMIS data, it gives you your total revenues, operating revenues. And then we took a relationship between basic local exchange revenues and total operating revenues, and that gave us the 61%. Then we apply that percentage to total uncollectibles.

COMMISSIONER DEASON: Is that a reasonable assumption? It seems like most people would -- if they pay anything, they're probably going to pay their basic service so they don't get terminated.

WITNESS CALDWELL: Well, we base that on the fact that the uncollectibles would follow the particular revenues, so basic local -- I mean, that was our assumption.

COMMISSIONER CLARK: Well, what all is included in total revenue other than basic service?

WITNESS CALDWELL: In this particular case it would be all the revenues that would come to BST. So that would be all of your toll revenues as well as all of your access revenues.

COMMISSIONER DEASON: Are there any unregulated services revenue included in total revenue?

WITNESS CALDWELL: No.

MR. MELSON: If I could ask one follow-up.

Q **(By Mr. Melson)** Were ECS revenues and revenues for vertical services counted as basic local service revenues in your calculation?

A Yes, they would be.

COMMISSIONER CLARK: Ms. Caldwell, I would just like to ask, do you know what the fill factor for distribution plant is for the other companies in Florida? Do you know what they've used?

WITNESS CALDWELL: I'm sorry. I don't.

COMMISSIONER CLARK: Would you know what was

used in the Hatfield?

WITNESS CALDWELL: On the Hatfield I'm not going to know the distribution. I know on our feeder we're very close because we used the -- we actually used Hatfield to derive our effective fill because BCPM does not produce that number for us. So we know in the -- as far as they're very close on the feeder. I just do not remember the distribution number.

COMMISSIONER CLARK: On a feeder what would the fill factor be?

WITNESS CALDWELL: The actual fill factor is 65.4% for the state of Florida. So you input into the model a cable sizing factor of about 71.

COMMISSIONER CLARK: That number would be available for the distribution plant; we could readily get that from the Hatfield model?

WITNESS CALDWELL: I believe you could.

- - - - -

(Transcript continues in sequence in Volume 19.)

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of	DOCKET NO. 980696-TP
Determination of the cost of basic local telecommunications service, pursuant to Section 364.025, Florida Statutes.	

VOLUME 18

Pages 2096 through 2162

PROCEEDINGS: HEARING

BEFORE: CHAIRMAN JULIA L. JOHNSON
COMMISSIONER J. TERRY DEASON
COMMISSIONER SUSAN F. CLARK
COMMISSIONER JOE GARCIA
COMMISSIONER E. LEON JACOBS, JR.

DATE: Monday, October 15, 1998

TIME: Commenced at 9:10 a.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: H. RUTHE POTAMI, CSR, RPR
Official Commission Reporter

APPEARANCES:

(As heretofore noted.)

$

$1.39 2148/24
$100,000 2134/19, 2141/16
$2.32 2148/18
$320,000 2159/9
$37,000 2146/16
$85,789 2146/6
$9.13 2155/11
$98 2158/22

1

1 2159/7
1.2 2133/20
10 2134/4, 2134/5, 2141/2, 2143/18, 2143/23, 2145/13
10% 2143/22
100 2146/25
100% 2144/21, 2158/3
100,000 2143/4
100-block 2146/23
100-pair 2154/4
11 2158/23
11,300 2133/12
12% 2132/16, 2139/13
12,000 2131/25, 2133/6, 2139/12
12-pair 2153/14, 2153/23, 2153/3
1400 2139/14, 2140/9
148 2096/19
15 2096/16, 2156/4, 2156/10, 2156/11, 2156/16
159 2155/6, 2158/9, 2159/3
160 2158/7, 2158/20
17 2098/4
18 2096/9, 2098/6
18-pair 2153/13, 2153/23, 2153/3
186.1 2152/2, 2152/7
181 2148/9
192 2130/18, 2151/22
1982 2098/23
1998 2096/16

2

2094 2096/10
2098 2097/8
2100 2097/11
2102 2097/8
2120 2097/6
2135
2162 2096/10
234 2148/18, 2149/3
236 2148/14
24 2130/18
24-gauge 2152/9
246 2159/13
25 2153/7, 2153/15
25% 2143/12, 2143/22
25-pair 2153/13, 2153/18, 2153/3, 2153/5

3

3.8 2159/10
30375 2098/23
32 2159/3
364.025 2096/6

4

4-inch 2148/14
40% 2155/7, 2155/25, 2156/11, 2157/17
4075 2096/20
41% 2155/11, 2155/13, 2155/25
4300 2146/1, 2146/25
4300-pair 2146/2, 2148/9
48 2130/18

5

5.0n 2129/10
50 2133/17, 2139/3

6

6 2158/24, 2156/3, 2156/18, 2156/17
6,444,000 2155/20
6.4 2155/16
61% 2160/7, 2163/8, 2160/20
65.4% 2163/13
672 2151/23
675 2098/22

7

70 2154/8
70%
71 2163/13
73 2097/11, 2100/13, 2100/13, 2145/10, 2149/23

8

85,000 2146/13
88% 2133/7, 2149/13
8th 2099/23

9

9 2156/5, 2156/17
9.136 2155/10
9.14 2155/13
90% 2133/4
96 2130/18, 2130/17, 2130/19, 2150/25, 2151/17
96-line 2150/18, 2151/13
900/96-TP 2096/4
99% 2141/25
9:10 2094/17, 2098/2

A

a.m 2094/17, 2098/2
abided 2131/6
access 2136/25, 2161/10
accounting 2133/8
accounts 2129/19
adding 2133/21
additions 2100/18
address 2098/20, 2098/22
adjust 2131/24, 2134/3
adjustable 2129/12, 2129/24, 2130/20, 2136/2, 2136/7, 2137/6
adjusted 2133/6
ADMTD 2097/9
aerial 2130/2
agree 2136/22, 2136/4, 2136/9, 2136/13, 2136/17, 2136/20, 2137/25, 2151/10, 2151/14, 2154/10, 2156/15, 2156/19, 2159/13
allocated 2150/21
allow 2130/5, 2136/25
allows 2153/25
amount 2134/18, 2143/11, 2143/18, 2146/8, 2149/6, 2155/21, 2156/16, 2158/20, 2160/1, 2160/13
analysis 2130/20, 2156/9, 2157/16
analyze 2136/4, 2136/19, 2156/5
announcements 2098/6
answer 2130/24, 2130/4, 2140/11, 2141/13, 2148/25, 2149/21
answers 2096/13, 2100/23
anticipating 2130/23
apologize 2151/6
APPEARANCES 2096/23
apply 2160/21
approach 2152/1
appropriate 2131/15, 2159/18
area 2130/11, 2132/12, 2132/13, 2132/19, 2133/8, 2133/9, 2139/14, 2139/15, 2140/22, 2141/6, 2143/2, 2143/5, 2143/17, 2144/22, 2145/21, 2146/2, 2146/5, 2151/17, 2156/23
areas 2131/13, 2132/22, 2134/6, 2143/18, 2143/23, 2145/25, 2159/7
ARMIS 2148/17
aspect 2131/9
assigned 2148/18
associated 2099/19, 2130/14, 2146/24, 2147/3, 2147/4, 2148/2
assumption 2160/23, 2161/6
assumptions 2128/15
Atlanta 2096/23
attached 2140/9
attempt 2158/13
attempted 2154/19
available 2130/12, 2153/12, 2154/1, 2154/3, 2156/4, 2162/15
average 2143/12, 2143/24
averages 2148/4, 2148/6

B

backing 2134/24
base 2130/5, 2161/1
based 2131/13, 2130/21, 2143/9, 2143/24, 2153/7
basement 2147/7
basis 2151/3, 2159/16
Bates 2148/13

BCTM 2129/10, 2131/25, 2138/14, 2143/17, 2145/3, 2146/16, 2146/14, 2147/25, 2148/16, 2150/13, 2151/15, 2152/8, 2153/21, 2153/5, 2154/14, 2156/2, 2163/6
bears 2150/11
Bell 2151/13
Bellsouth 2098/14, 2099/1, 2130/15, 2130/22, 2130/24, 2131/13, 2132/1, 2133/4, 2133/11, 2134/8, 2135/11, 2136/11, 2136/14, 2136/15, 2136/25, 2137/5, 2137/24, 2138/16, 2139/6, 2140/14, 2140/16, 2140/18, 2140/19, 2141/2, 2143/8, 2147/4, 2148/4, 2150/9, 2150/16, 2151/19, 2152/17, 2153/12, 2154/18, 2154/23, 2155/16, 2157/15, 2158/22, 2159/6
Bellsouth's 2136/24, 2143/21, 2143/19, 2146/4, 2148/22
Bellsouth-specific 2130/20, 2133/8
benchmark 2156/24
Betty 2096/19
bid 2134/5, 2134/16, 2134/11, 2134/12, 2134/19, 2134/21, 2141/22, 2143/8, 2144/7, 2146/9, 2144/12, 2144/15, 2144/17, 2158/3
bidding 2152/12
bids 2134/7
big 2128/22
bit 2130/25, 2144/3, 2151/24
blocks 2146/22, 2146/25, 2147/22
borne 2159/19
bottom 2145/14, 2145/15
broken 2146/5
BST 2161/8
building 2148/23, 2148/24, 2147/7, 2147/9, 2147/13, 2147/18, 2157/12
built 2157/11
buried 2130/2, 2140/24
burying 2153/8
business 2154/20, 2157/3, 2159/14, 2159/22
buy 2134/12, 2134/13, 2134/15, 2146/22

C

cable 2130/3, 2134/22, 2146/22, 2148/23, 2147/12, 2147/14, 2147/16, 2148/1, 2152/9, 2153/13, 2153/14, 2153/17, 2153/22, 2153/3, 2153/5, 2153/8, 2154/4, 2154/17, 2154/19, 2155/3, 2155/7, 2156/3, 2156/4, 2156/20, 2157/11, 2163/13
cables 2153/13
calculate 2156/20
calculated 2140/6, 2153/23, 2156/9
calculation 2153/4, 2159/11, 2161/18
calculations 2154/21
CALDWELL 2097/4, 2098/13, 2098/21, 2153/18, 2160/3, 2160/16, 2161/1, 2161/7, 2161/14, 2161/24, 2163/2, 2163/11
call 2129/24
capacity 2098/25, 2151/16
carrier 2131/3, 2136/6, 2136/8, 2136/16, 2136/18, 2138/12, 2149/19, 2150/14
case 2099/5, 2135/6, 2136/20, 2161/7
cases 2132/4, 2132/4, 2134/18, 2138/7, 2141/24, 2146/16, 2146/18, 2150/1, 2151/24
catalog 2147/1
caused 2098/4
CBG 2128/18
Center 2096/19, 2148/7
central 2143/7
cents 2148/23, 2158/3
CHAIRMAN 2096/13, 2098/2, 2098/10, 2099/17, 2100/2, 2100/12, 2101/3
change 2130/18, 2158/3
changes 2099/2, 2098/6, 2100/18, 2133/9
charged 2153/4
check 2140/23, 2156/9, 2159/2
chose 2154/19
chosen 2153/20
CLARK 2096/14, 2152/5, 2153/16, 2161/2, 2161/20, 2161/25, 2163/9, 2163/14
clear 2161/14
close 2158/13, 2163/4, 2163/7
code 2128/2
collection 2158/6, 2158/9, 2159/10
column 2146/6, 2146/9
Commenced 2096/17
comments 2129/14
COMMISSION 2096/1, 2096/22, 2131/5, 2136/2, 2136/2
COMMISSIONER 2096/13, 2096/14, 2096/15, 2148/11, 2152/2, 2153/16, 2158/22, 2160/10, 2160/22, 2161/2, 2161/11, 2161/20, 2161/25, 2163/9, 2163/14
common 2128/20
companies 2146/16, 2161/22
company 2128/13
company-specific 2133/3
compared 2148/13
comparison 2148/16

competitive 2134/7
competitively 2150/3
complicated 2151/6
components 2146/22
concentrate 2139/16
conduit 2148/17, 2148/22, 2149/6, 2149/7, 2149/14, 2149/24
Conference 2096/19
connect 2147/8, 2147/15, 2147/19
connecting 2146/23, 2147/22
connection 2147/15, 2147/20, 2147/22
connects 2146/23
consideration 2144/19
consistency 2151/25
consistent 2151/3, 2151/4
contained 2099/13
continual 2144/11
continuing 2144/13
contract 2134/14, 2134/15, 2134/23, 2144/16, 2144/17, 2144/20
contractor 2141/8, 2142/7, 2143/17, 2144/21
contractor's 2143/21
contracts 2134/3, 2134/5, 2134/7, 2134/10, 2138/10, 2141/2, 2143/6, 2142/14, 2143/13, 2144/1, 2144/9, 2144/11, 2148/4, 2149/17, 2149/22, 2149/[illegible] 2150/6
copper 2153/9
corner 2138/10
corporation 2136/24
correct 2100/16, 2100/17, 2120/3, 2130/14, 2137/6, 2137/7, 2137/12, 2137/19, 2138/6, 2138/7, 2139/22, 2140/2, 2140/12, 2141/3, 2141/4, 2141/5, 2143/17, 2143/19, 2143/20, 2143/13, 2146/2, 2146/3, 2146/5, 2146/7, 2146/11, 2149/16, 2150/19, 2151/21, 2153/14, 2153/15, 2153/24, 2153/1, 2153/6, 2153/21, 2154/16, 2154/24, 2155/7, 2155/17, 2157/1, 2157/3, 2159/18, 2159/5, 2159/13
corrections 2100/5
correctly 2141/9
cost 2096/5, 2099/2, 2129/9, 2132/9, 2132/20, 2132/22, 2138/23, 2136/2, 2136/5, 2139/9, 2146/4, 2146/9, 2146/12, 2146/17, 2147/2, 2147/21, 2147/25, 2148/5, 2148/13, 2148/17, 2148/22, 2148/23, 2148/24, 2149/14, 2150/3, 2151/11, 2151/17, 2153/3, 2153/4, 2153/5, 2154/12, 2156/22, 2156/24, 2157/3, 2157/10, 2157/13, 2158/16, 2159/7, 2159/12, 2159/14, 2159/15, 2159/21
costs 2130/5, 2130/14, 2130/16, 2130/23, 2136/7, 2145/16, 2146/24, 2151/19, 2151/20, 2152/8
counted 2161/17
County 2143/3
cover 2134/5, 2149/22
covered 2150/3
covering 2151/4
covers 2138/6
Cross 2097/6, 2138/15
cross-connect 2145/25
cross-connected 2147/18
cross-examination 2135/14
CSR 2096/22
customer 2155/1

D

Dade 2143/5, 2143/6
DAONNE 2097/4, 2098/13, 2098/21
data 2129/18, 2129/19, 2129/20, 2135/3, 2132/4, 2132/8, 2132/19, 2133/3, 2133/5, 2133/6, 2134/24, 2137/5, 2137/9, 2137/17, 2148/4, 2149/7, 2149/14, 2149/18, 2149/19, 2149/21, 2149/22, 2149/24, 2145/4, 2145/5, 2145/6, 2157/19, 2157/20, 2157/23, 2160/17
DATE 2096/16
dates 2144/4, 2144/13
days 2129/5
DDC-1 2097/11, 2099/21, 2099/24, 2100/9
DEASON 2096/13, 2148/11, 2159/25, 2160/10, 2160/22, 2161/11
decision 2143/14
decreased 2133/12, 2133/14
decreases 2133/19
default 2132/10, 2137/10, 2139/5, 2139/16, 2139/20, 2139/25, 2140/10, 2140/15, 2140/16, 2140/21, 2140/24, 2145/3, 2146/14, 2150/14, 2150/24, 2151/3, 2151/20
defaults 2132/10, 2132/15, 2132/16, 2132/18, 2138/13, 2138/17, 2139/19, 2151/25
definable 2139/10, 2140/13
define 2153/23
degree 2137/21
demand 2152/23
demonstrate 2157/17
density 2142/25, 2146/5
deploy 2138/16
deploying 2153/5
deploys 2153/17
deposition 2144/4
derive 2162/5
derived 2160/13
design 2129/15, 2130/6
detail 2136/1, 2137/9, 2140/11
Determination 2096/5
determine 2132/3
determined 2132/6, 2139/5
determining 2136/2, 2137/22, 2143/23, 2154/13
develop 2150/4
developed 2140/10
developing 2143/12
development 2139/25
difference 2139/23, 2156/23
differences 2129/21
digital 2130/12, 2150/14
Direct 2097/5, 2098/17, 2098/5, 2099/12, 2099/16, 2099/19, 2100/10
direction 2100/3
director 2099/2
discarded 2140/5
discounts 2131/1, 2131/2
discuss 2139/11, 2139/13
distort 2151/17
distributed 2142/22
distribution 2130/2, 2153/24, 2154/12, 2154/23, 2156/25, 2158/4, 2158/7, 2158/10, 2158/11, 2156/3, 2156/25, 2157/4, 2157/6, 2157/17, 2161/22, 2162/2, 2162/5, 2162/15
divided 2141/5, 2154/2
DLC 2150/14, 2150/18, 2150/20, 2151/20
DLCs 2151/13
DOCKET 2096/4, 2100/15
dockets 2157/6
doesn't 2134/20, 2136/16, 2153/13
dollar 2141/15, 2142/10, 2142/2
Doris 2098/21
dot 2132/2
double-checking 2158/24
drive 2158/4
driver 2154/11
drivers 2128/22, 2132/9, 2132/12, 2130/9
dust 2148/17
During 2132/11, 2141/1, 2150/16

E

easier 2152/14, 2152/16
Easley 2096/19
ECS 2161/16
effective 2142/5
efficient 2131/4, 2131/7, 2126/8, 2136/12, 2136/19, 2136/23, 2131/2, 2140/8, 2149/18, 2150/7, 2152/17, 2152/18
efficiently 2136/25
eighty-eight 2146/9
electronic 2150/15
embedded 2132/3, 2134/1
employed 2098/24, 2099/1
employees 2132/13
engineering 2127/21, 2128/4, 2147/2
engineers 2128/16, 2128/19, 2128/22, 2130/13, 2128/17
entitled 2146/15, 2148/16, 2152/7, 2159/8
entrants' 2148/1
environment 2128/12
equal 2154/22
Esplanade 2096/20
establish 2126/23, 2130/3
established 2148/11
Examination 2097/5, 2097/6, 2098/17, 2126/15
exceed 2126/16
exemptions 2141/16
exists 2151/16
exchange 2148/8, 2160/9, 2160/19
excuse 2147/20, 2147/21, 2155/3, 2157/19
exercise 2127/21
exhibit 2099/15, 2099/21, 2100/2, 2100/6, 2100/11, 2100/13, 2148/16, 2150/13, 2156/7
EXHIBITS 2097/8, 2126/2
existing 2144/16
expand 2130/3
expense 2[illegible], 2129/11, 2159/19
expenses 2132/16, 2156/18
experience 2126/10, 2126/16, 2127/5, 2126/2
explanation 2146/13
explanations 2146/13, 2148/21
expressed 2150/15
extreme 2141/18

F

fact 2132/13, 2148/8, 2152/2, 2127/2, 2161/2
factor 2152/21, 2152/24, 2152/25, 2154/2, 2154/5, 2154/6, 2154/7, 2154/11, 2154/14, 2154/17, 2154/19, 2154/22, 2154/23, 2158/2, 2158/3, 2158/6, 2158/25, 2127/17, 2127/18, 2161/21, 2162/10, 2162/11, 2162/13
fair 2126/23, 2127/20, 2142/21, 2156/14, 2127/15
feeder 2162/2, 2162/7, 2162/9
feeds 2148/24
fields 2126/2
file 2099/23
filed 2100/1, 2100/15, 2134/24, 2127/20, 2127/25
fill 2152/21, 2152/24, 2152/25, 2154/2, 2154/5, 2154/6, 2154/10, 2154/14, 2154/22, 2154/23, 2158/2, 2158/4, 2158/25, 2127/17, 2161/21, 2162/5, 2162/10, 2162/11
finance 2099/1
fine 2126/21
finished 2154/21
fire 2147/14
firmly 2126/13
FLORIDA 2096/1, 2096/7, 2096/20, 2126/25, 2133/15, 2133/19, 2134/4, 2127/5, 2127/23, 2141/6, 2158/17, 2158/22, 2161/23, 2162/13
Florida-specific 2133/2, 2133/5, 2133/8, 2127/8, 2148/4
Focusing 2146/12
follow 2141/21, 2161/3
follow-up 2161/15
follows 2098/3, 2098/16
foot 2148/17
forces 2133/24
format 2127/9, 2127/16, 2127/19, 2127/22, 2128/14, 2128/18, 2148/8
forward-looking 2133/2, 2133/7, 2134/2, 2126/23, 2126/7, 2127/18
found 2148/21
four 2133/11
frame 2147/7
free 2128/3
function 2127/13
fund 2126/22, 2127/14, 2129/9, 2129/20
funding 2126/21
future 2128/23, 2126/17

G

GARCIA 2096/14
geographic 2141/6, 2142/16, 2142/18, 2142/23, 2142/24
geographical 2128/11, 2134/6
geography 2142/2
Georgia 2098/22, 2133/20
ground 2152/9
growth 2126/8, 2156/18
GTE 2120/17, 2146/15, 2148/7, 2148/11, 2159/10
GTE's 2148/24
guess 2128/14

H

HAI 2129/10
half 2146/14, 2148/7, 2148/23, 2126/25
hand 2129/3, 2126/24, 2126/25
handful 2133/17
Hatfield 2162/1, 2162/2, 2162/5, 2162/16
heavily 2131/17
helps 2131/14
high 2126/6, 2126/23, 2159/7
higher 2126/23, 2150/2, 2151/1, 2151/9, 2151/24
hiring 2133/16, 2133/20
historical 2134/1, 2127/18
house 2127/7
household 2129/19
hypothetical 2128/5

I

ID 2097/9
idea 2131/23, 2143/5, 2143/6, 2148/10
identification 2160/13
identify 2133/7
implicit 2143/13
inappropriate 2151/1, 2151/11
incorporation 2099/3
increase 2133/20
incumbent 2129/23
incur 2130/5, 2128/23, 2147/6, 2148/13, 2148/10
incurred 2126/7
indian 2144/5
indicate 2150/10

indicated 2160/1, 2136/23, 2145/1
indicates 2146/1
indication 2136/21
indicative 2130/23
indoor 2146/17, 2146/20
information 2131/14, 2133/18, 2134/25, 2138/14, 2139/21, 2140/5, 2147/2
input 2143/23, 2150/9, 2150/11, 2153/3, 2154/15, 2162/13
inputs 2129/13, 2129/16, 2129/18, 2129/24, 2130/4, 2130/12, 2130/20, 2131/8, 2131/10, 2131/14, 2131/15, 2131/24, 2132/2, 2132/21, 2132/25, 2136/3, 2136/7, 2136/9, 2136/16, 2136/3, 2136/11, 2137/4, 2137/22, 2138/3, 2138/5, 2138/18, 2139/11, 2140/14, 2143/12, 2145/1, 2145/2, 2145/16, 2148/16, 2150/15, 2152/8, 2152/21, 2155/13, 2156/2, 2158/3
inquiry 2139/7
inserted 2097/5, 2097/6, 2099/16, 2099/17, 2101/1, 2101/3
installation 2130/1, 2134/13
installed 2146/4
installing 2143/22, 2148/9
interconnection 2145/22
interface 2145/21, 2146/2, 2146/5
inventory 2152/15
inventorying 2152/19
investment 2158/4
item 2134/14, 2147/1
items 2149/22

J

JACOBS 2096/15
job 2134/17, 2141/16, 2141/17
jobs 2141/9, 2141/11, 2142/1, 2142/2, 2142/3, 2142/7, 2142/15, 2144/22, 2144/23
JOE 2096/14
JOHNSON 2096/13, 2098/5, 2098/10, 2099/17, 2100/12, 2101/3
joined 2142/7
judgment 2136/23, 2137/21, 2137/25, 2138/2, 2138/4
JULIA 2096/13
jumper 2147/17
jumpers 2147/21

K

Keys 2131/11, 2134/22
knowledge 2130/6, 2130/16, 2149/8

L

labeled 2099/21, 2100/16, 2148/17
labor 2147/3, 2148/3
large 2130/24, 2131/3, 2136/15, 2136/18, 2141/11, 2142/2, 2142/6, 2142/14
larger 2150/20, 2152/5
largest 2142/2, 2142/9
Laughter 2156/13
leads 2142/11
learned 2152/3
leaves 2156/17
LECs 2130/17, 2139/22
LEON 2096/15
level 2132/20, 2137/9, 2148/7, 2157/4
lifetime 2152/4
limit 2141/15, 2141/21
line 2156/22, 2150/11, 2150/16, 2150/23, 2150/
lines 2130/25, 2151/16, 2154/19, 2155/1, 2155/17, 2159/7
listed 2157/21
little 2130/25, 2144/3, 2151/24, 2152/3
local 2096/5, 2130/24, 2150/21, 2160/4, 2160/5, 2160/9, 2160/13, 2160/19, 2161/3, 2161/17
loop 2130/12, 2148/16, 2150/14, 2152/8
lost 2151/8
lower 2134/21, 2150/1, 2150/9

M

Madam 2160/8
maintain 2152/15
maintenance 2133/8
major 2132/9, 2141/19, 2141/20
makeup 2130/21
Manhole 2148/16, 2148/17
marked 2100/12, 2100/13
master 2134/3, 2134/23, 2141/3, 2141/8, 2142/7, 2144/1, 2144/20, 2149/4, 2149/23
material 2129/25, 2130/1, 2131/1, 2130/11, 2130/20, 2146/9, 2146/21, 2147/1, 2148/17, 2148/14
math 2155/23, 2155/24, 2156/9
Matter 2096/4
matters 2098/9, 2099/3
MCI 2130/18
Mebon 2130/17
mentioned 2141/1, 2141/15
methodology 2143/20
Miami 2131/12
million 2155/16, 2156/24, 2156/3, 2156/4, 2156/5, 2156/10, 2156/11, 2156/15, 2156/16, 2156/17, 2158/22, 2159/7, 2159/10
millions 2156/13
minimum 2147/21
minor 2129/22, 2132/18
minute 2141/24, 2150/25
mix 2142/14, 2146/2
model 2131/16, 2136/9, 2136/2, 2136/3, 2137/10, 2137/11, 2137/17, 2137/19, 2137/23, 2139/20, 2143/15, 2152/21, 2152/24, 2152/25, 2154/15, 2154/21, 2155/21, 2156/1, 2162/13, 2162/16
models 2130/9, 2129/11, 2129/13, 2129/14, 2129/17, 2129/20, 2130/7, 2151/15, 2152/21, 2152/20
modified 2129/17
moment 2156/6
Monday 2096/16
month 2150/4, 2159/10
monthly 2150/11
morning 2129/8, 2126/17, 2126/19, 2129/1
mounted 2147/7
moved 2150/13
moves 2141/20
MR. COX 2096/8
Mr. Mebon 2097/6, 2130/16, 2148/12, 2148/13, 2148/15, 2152/7, 2152/19, 2129/23, 2161/15, 2161/16
Ms. Caldwell 2098/19, 2100/14, 2101/1, 2129/1, 2130/13, 2129/17, 2130/22, 2159/24, 2161/20
Ms. Caldwell's 2100/10
Ms. Wh'e 2097/5, 2098/18, 2099/15, 2099/18, 2170/5, 2100/14, 2100/25, 2129/1, 2130/13
multiple 2140/22

N

N.E 2098/13
NAME 2097/5, 2098/20, 2098/21
naming 2143/9
nationwide 2129/21, 2140/4
need 2130/18, 2129/23, 2132/24, 2136/3, 2136/9, 2136/12, 2138/6, 2151/7
neighborhood 2150/9, 2157/8
network 2130/5, 2130/9, 2131/18, 2132/11, 2132/13, 2132/15, 2136/20, 2134/24, 2137/13, 2137/16, 2138/4, 2142/16, 2152/17, 2152/22, 2154/23, 2156/1, 2157/11, 2157/12, 2157/13, 2157/23
nine 2100/16
normal 2148/16
normally 2132/13, 2150/17
north 2142/6
NUMBER 2097/9, 2131/23, 2132/13, 2134/1, 2140/5, 2140/6, 2140/9, 2140/10, 2140/13, 2150/5, 2151/15, 2154/1, 2154/19, 2154/25, 2155/9, 2158/12, 2160/4, 2162/6, 2162/8, 2162/14
numbering 2140/11
numbers 2130/22, 2132/4, 2140/16, 2142/13, 2146/20, 2147/5, 2147/25, 2148/11, 2149/2, 2149/23, 2150/6, 2150/16, 2150/11, 2151/2, 2151/21, 2155/6

O

occurring 2151/23
October 2096/16, 2099/23
Official 2096/23
old 2144/1
operating 2160/18, 2160/20
opposed 2157/18
organization 2099/3
outlier 2140/5
output 2154/23, 2158/13
oversimplifies 2141/10

P

package 2136/4
Page 2096/10, 2099/6, 2099/25, 2160/16, 2158/5
pair 2152/9, 2150/3, 2150/5, 2156/25
pairs 2154/1, 2154/3
panel 2147/6, 2147/16, 2147/17
paper 2130/19
part 2130/19
participate 2130/24
Parties 2156/13, 2150/25
pay 2140/11, 2140/17, 2140/19, 2160/24
pays 2134/8
Peachtree 2096/22
per-line 2159/13, 2159/16
percentage 2144/22, 2160/11, 2160/14, 2160/21
percentages 2156/8
perfo. m 2130/6
performance 2136/21
performing 2154/21
period 2153/3
personal 2138/5, 2138/9
personally 2130/24
personnel 2131/10, 2133/11, 2133/14, 2133/19, 2133/12, 2134/20, 2137/13, 2137/16, 2143/15, 2157/24
phones 2160/24
physical 2138/21
pick 2156/23
picked 2146/21, 2146/24
place 2147/13
places 2147/19
PLACE 2096/19, 2143/10, 2150/15, 2150/17, 2150/20, 2150/25, 2152/22, 2153/15, 2157/8
placed 2143/19
placement 2143/21, 2148/3, 2149/7, 2149/24, 2152/20, 2152/25
placements 2141/10
placing 2134/9, 2134/21, 2152/8, 2157/10
plant 2142/22, 2148/3, 2152/24, 2154/13, 2155/10, 2157/4, 2157/7, 2158/4, 2161/22, 2162/13
plowing 2134/8
point 2133/6, 2133/14, 2134/3, 2134/6, 2138/1, 2148/22, 2148/25, 2147/15, 2149/5, 2149/7
points 2132/24, 2135/7, 2147/20
pole 2134/13, 2141/10, 2143/21, 2149/23
poles 2134/9, 2143/15, 2143/22
portion 2142/1, 2142/3
posed 2100/22
possibility 2142/11
possible 2155/13
POTAMI 2096/22
preceding 2158/2
Prefiled 2097/5, 2097/6, 2099/5, 2099/12, 2100/22
preliminary 2098/6, 2098/9
premises 2155/1
prepare 2099/18
prepared 2098/11, 2099/4, 2100/2, 2128/4
presented 2157/16, 2157/20
pretty 2129/20, 2136/6
price 2142/13, 2143/21, 2143/23, 2146/2[illegible] 2147/1, 2148/6, 2148/7, 2151/1, 2151/9, 2152/13, 2152/20, 2156/23
prices 2129/25, 2134/8, 2138/11, 2138/20, 2143/13, 2144/20
problem 2150/4
proceeding 2128/23, 2146/15, 2157/16
PROCEEDINGS 2096/11
process 2133/21, 2144/13
processed 2160/8
produce 2155/4, 2162/6
produced 2131/20
produces 2150/6
productivity 2133/9
proposing 2130/19
protection 2147/23
protections 2146/23
provide 2136/11, 2146/13
provider 2131/7, 2136/22, 2137/2, 2138/7
PUBLIC 2096/1
purchases 2131/1
purchasing 2132/12
purpose 2129/11, 2126/23
purposes 2143/11, 2152/20
put 2129/13, 2143/8, 2149/1

Q

qualified 2131/19
quality 2131/20, 2136/21
quarter 2146/16
question 2144/3, 2148/5, 2151/7, 2160/1
questions 2099/11, 2099/13, 2100/21, 2130/23, 2130/24, 2130/25, 2140/11
quick 2159/25

R

range 2151/4
reach 2144/13
reaches 2147/13
reason 2130/21, 2148/6, 2150/23, 2151/18, 2153/10, 2157/11
reasonable 2132/15, 2137/23, 2140/22, 2151/23, 2152/10, 2156/8, 2160/22
reasonableness 2130/7

rebalancing 2133/23
Rebuttal 2097/6, 2100/15, 2100/19, 2100/22, 2101/1, 2129/2
receive 2139/8, 2159/9
recollection 2158/11
recommend 2098/2
record 2096/6, 2098/20, 2099/16, 2101/2, 2158/1
records 2133/5, 2148/13
reduction 2159/18
reflect 2143/15, 2159/18
reflects 2142/13, 2142/14
region 2149/5
regional 2149/9
regulated 2131/5
regulations 2131/6
rejected 2139/17
relates 2153/24
relationship 2154/1, 2160/8, 2160/18
relied 2131/17, 2145/3
rely 2140/15, 2140/21
relying 2138/3
remember 2161/8
renewed 2144/16, 2144/18
REPORTED 2096/22
Reporter
represent 2140/3
representing 2136/18
represents 2148/8
request 2157/21
requests 2134/24
required 2137/10, 2137/23
requires 2138/14
residence 2155/2
residential 2154/20
result 2131/3, 2131/21, 2140/3, 2140/24, 2154/20, 2159/10
results 2156/20
retardant 2147/14
revenue 2156/23, 2159/19, 2160/13, 2161/6, 2161/12, 2161/13
revenues 2158/17, 2158/21, 2160/5, 2160/6, 2160/9, 2160/17, 2160/18, 2160/19, 2160/20, 2161/3, 2161/8, 2161/9, 2161/10, 2161/16, 2161/17, 2161/18
review 2137/14, 2137/15
reviewed 2130/13, 2139/16
Revised 2097/11, 2099/24, 2100/9, 2157/20
revisions 2100/1
Rick 2138/17
right-hand 2158/19
river 2144/8
road 2141/20
Room 2096/19
round 2155/24
rounded 2158/13
RPR 2096/22
rule 2136/9
rules 2131/6
RUTHE 2096/22

S

SAI 2145/18
SAI 2145/19, 2145/20, 2148/8, 2148/9
sanity 2140/23
scale 2141/10
scenario 2151/14
Section 2096/6, 2145/17
select 2158/12
separate 2134/19
sequence 2098/3
series 2141/2
serve 2136/24, 2152/23
served 2159/6
serves 2131/13
SERVICE 2096/1, 2096/6, 2131/20, 2133/17, 2135/24, 2136/21, 2156/21, 2157/14, 2158/21, 2159/9, 2159/20, 2160/4, 2160/13, 2160/25, 2161/6, 2161/18
services 2160/2, 2161/12, 2161/17
serving 2148/21, 2146/2, 2146/5
set 2143/8
sheet 2145/15, 2148/15
shown 2157/22, 2160/7
side 2158/8
simple 2143/12, 2143/24
situation 2152/12, 2152/16
six 2146/8
size 2142/19, 2142/24, 2151/13, 2152/11, 2157/7
sloud 2157/4
slow 2138/15, 2151/5, 2151/20, 2151/22, 2152/6
sluing 2156/17, 2156/19, 2158/3, 2162/13
small 2138/17, 2141/9, 2141/10, 2142/1, 2142/14
smaller 2138/17, 2156/18, 2156/25, 2151/1, 2151/13, 2151/19, 2152/6, 2152/11
smallest 2151/11, 2152/16
sort 2138/6
sounds 2158/18, 2156/7
south 2143/6
sparse 2156/5, 2156/17
spell 2142/6
Sprint 2138/17, 2146/17, 2158/10
Sprint's 2148/23
Staff 2096/8
stamp 2146/13
stands 2146/21
start 2133/4, 2134/1, 2158/4
starting 2133/6
state 2098/19, 2138/25, 2131/11, 2131/19, 2133/15, 2133/19, 2134/4, 2162/13
states 2131/7
statewide 2143/19, 2145/7
Statutes 2096/7
stay 2138/17
stayed 2139/19, 2151/25
straight 2156/12
Street 2098/22
study 2134/2, 2157/16
Subject 2156
subtentive 2[illegible]8, 2100/5
sufficient 2152/23
summary 2139/4, 2136/10, 2136/14, 2138/1, 2141/1, 2158/16
supervision 2100/3
supplied 2137/11
surrogate 2151/13
survey 2138/21, 2140/4, 2140/8
SUSAN 2096/14
switches 2131/2
sworn 2098/15
system 2138/19, 2145/11, 2158/10, 2151/12
systems 2138/15, 2159/20, 2151/2

T

talk 2133/12, 2144/25, 2158/5
talked 2133/14, 2157/5
talking 2131/24, 2134/20, 2158/3
Tallahassee 2096/20
technicians 2133/16, 2133/22
telecommunications 2096/5, 2096/15, 2099/1, 2131/20
telephone 2148/10, 2152/3
TELRIC 2152/20
term 2154/7
terminated 2160/25
terminology 2152/3
terms 2145/2, 2143/2, 2146/15, 2149/10, 2156/8
terrain 2138/19, 2133/19, 2132/21
territory 2130/11, 2130/13, 2130/14, 2138/15, 2138/16, 2136/21, 2131/7, 2135/11, 2136/11, 2136/24, 2137/1, 2141/10, 2143/16, 2143/19
TERRY 2096/13
tested 2151/21
testified 2098/16
Testimony 2097/5, 2097/6, 2098/5, 2098/9, 2098/12, 2098/15, 2098/16, 2098/19, 2100/10, 2100/15, 2100/19, 2100/22, 2101/1, 2138/2, 2138/5, 2154/8
Thank 2138/13, 2138/23
theirs 2148/13
theoretical 2138/5
they've 2148/1, 2161/23
thirteen 2146/8
thousands 2138/18
three 2138/11, 2146/14, 2148/5, 2148/13
threw 2151/9
TIME 2096/17, 2098/9, 2100/6, 2100/19, 2141/25, 2144/8, 2148/7
times 2132/1, 2146/14, 2146/16, 2148/7, 2148/22, 2148/24
timing 2141/22
toll 2161/9
top 2152/8
Transcript 2098/3
translates 2158/3
translating 2134/8
Trouble 2156/13
true 2148/9, 2152/23, 2156/14
TELRIC 2152/20
turn 2145/9, 2148/14, 2158/13, 2172/2, 2158/6, 2158/3
two 2138/9, 2132/24, 2146/16, 2155/2, 2156/6, 2156/25, 2157/22
type 2138/20, 2136/3, 2136/22, 2131/2, 2131/8, 2132/2, 2132/21, 2134/9, 2148/2, 2160/2

U

uncollectible 2158/17, 2158/20
uncollectibles 2158/11, 2158/14, 2159/18, 2160/1, 2160/2, 2160/8, 2160/11, 2160/12, 2160/21, 2161/2
underground 2136/2, 2152/9
UNE 2157/6
UNEs 2152/20
unit 2154/20
units 2151/19
universal 2156/21, 2157/14, 2158/8, 2159/20
unregulated 2161/13
user 2139/12, 2139/24, 2136/8, 2136/20, 2131/8, 2131/9, 2131/24, 2136/2, 2136/7, 2137/4, 2139/10, 2140/13
USF 2152/4
utilization 2154/7, 2154/11, 2158/6

V

value 2140/15, 2146/14, 2146/15
values 2137/11, 2139/5, 2139/16, 2139/20, 2139/25, 2140/3, 2140/10, 2140/17, 2145/3, 2158/17, 2158/24, 2151/3
vary 2144/20
vendor 2134/9
vendors 2134/11
vertical 2161/17
vintage 2143/25, 2144/2, 2144/6
violation 2134/16
VOLUME 2096/9, 2098/4, 2143/3

W

wall 2147/6
weight 2143/23
well-announced 2133/13
West 2098/22
wetlands 2134/22
wire 2148/7
wires 2147/8
witness 2098/7, 2098/14, 2152/18, 2160/3, 2160/16, 2161/1, 2161/7, 2161/14, 2161/24, 2162/2, 2162/11
WITNESSES 2097/3
words 2134/13, 2154/4
work 2130/11, 2142/15, 2125/4, 2156/7
working 2146/24, 2154/2, 2154/5, 2156/3, 2156/22
works 2143/17, 2160/6
world 2130/7
worth 2157/21
written 2134/14

X

X 2097/1

Y

year 2152/22, 2159/10
years 2131/8, 2131/18, 2131/21, 2132/11
years' 2157/21

Z

zeros 2156/13
zones 2148/6