## 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 12

Pages 1285 through 1411

PROCEEDINGS:

HEAPING

BEFORE:

CHAIRMAN JULIA A. JOHNSON COMMISSIONER J. TERRY DEASON COMMISSIONER SUSAN F. CLARK COMMISSIONER JOE GARCIA COMMISSIONER E. LEON JACOBS

DATE:

Tuesday, October 13, 1998

TIME:

Concluded at 7:20 p.m.

LOCATION:

Betty Easley Conference Center

Box 148

4075 Esplanade Way Tallahassee, Florida

REPORTED BY:

JANE FAUROT, RPR

(APPEARANCES: As heretofore noted.)

BUREAU OF REPORTING

PECEIVED 10-14-98

DOCUMENT NUMBER-DATE

11499 OCT 148

TEST RECORDS YREPORTING

#### INDEX

#### WITNESSES

NAME	PAGE NO.
DR. ROBERT M. BOWMAN	
Continued Cross Examination by Mr. Ruscus	1288
Redirect Examination by Ms. Keyer	1297
MEADE C. SEAMAN	
Direct Examination by Mr. Powell	1298
Prefile 1 Direct Testimony Inserted	1306
Prefiled Rebuttal Testimony Inserted	1330
Cross Examination by Mr. Hatch	1352
Cross Examination by Mr. Henry	1393
Cross Examination by Mr. McGlothlin	1402
Cross Examination by Mr. Cox	1406

### EXHIBITS - VOLUME 12

Number		I.D.	ADMTD.
52 and 53			1297
54	Witness Seaman MCS-1 and 2	1305	1409
55	MCS S-2 (Rebuttal)	1305	1409

2	PROCEEDINGS
3	(Transcript follows in sequences from Volume 11.)
4	DR. ROBERT M. BOWMAN
5	continues his testimony under oath from Volume 11:
6	CONTINUED CROSS EXAMINATION
7	BY MR. RUSCUS:
8	Q Let's turn to the prior page, Page 22. I think
9	this will provide a useful comparison. 22 identifies the
10	chart on 22 identifies A-side loops that are nonexistent
11	that are only 3,000 feet long, that are 3,000 feet long,
12	6,000 feet long, 9,000 feet, and 12,000 feet long. Do you
13	see those?
14	A I see that table, yes.
15	Q Those modems, all of the modems identified as
16	having two conversions function at between 19.2 kilobits and
17	24 kilobits, correct?
18	A Well, on the A-side
19	Q All the ones that have two conversions in the
20	left-hand column between 3 and 12,000 feet function between
21	19.2 and 24, correct?
22	A Yes, in this test.
23	Q That is lower than the connect rate that your own
24	data says it has experienced for long modems on the other
25	table, correct?

- 1 A I know, but this is a different test. He is now
- 2 testing the number of -- the impact of the number of analog
- 3 to digital conversions that would occur in the process.
- 4 0 That is correct.
- 5 A So he is testing another assumption here.
- 6 Q That's correct. And those are the same types of
- 7 conversions that are involved in any network that uses
- 8 universal digital loop carrier, correct?
- 9 A Yes, but not necessarily two conversions.
- 10 Q Wel, isn't it true that if you complete a call
- on universal digital loop carrier, the signal comes from the
- 12 phone as analog, is turned into digital at the DLC, which is
- one conversion, and turned back into analog at the COT at
- 14 the central office?
- 15 A I was taking a moment to read what was here. I
- 16 have forgotten the -- okay, and your question, again. I
- 17 mean, the purpose of this was to determine the impact of
- 18 increased analog to digital conversions on the quality of
- 19 modem connection.
- 20 Q And isn't it true that two conversions is the
- 21 same number experienced if you are using universal digital
- 22 loop carrier, one at the DLC unit and one at the central
- 23 office terminal?
- 24 A I stand corrected. I do believe under his
- 25 definition that would be the case.

- 1 Q And isn't it true that BellSouth predominantly at
- 2 this point still deploys universal digital loop carrier and
- 3 not integrated digital loop carrier when it uses digital
- 4 loop carrier solutions?
- 5 A BellSouth may, but that is immaterial to what is
- 6 deployed in this model.
- 7 Q But wouldn't that indicate --
- 8 A Integrated digital loop carrier is the technology
- 9 of choice and the technology that is modeled in the BCPM
- 10 model. It's my understanding that is what is modeled in
- 11 Hatfield, also. So whether or not BellSouth does this in
- 12 their network today -- certainly BellSouth deploys
- 13 integrated digital loop carrier today. I don't want to make
- 14 an assertion that they don't do that. Every telephone
- 15 company still has some of this digital -- the universal
- 16 digital loop carrier deployed today.
- 17 Q And do you know what percentage of BellSouth's is
- 18 universal?
- 19 A No, I don't, and I think it's immaterial to the
- 20 purpose of deciding which cost proxy model should be used,
- 21 because the BCPM uses integrated digital loop carrier in
- 22 their model, and I believe HAI does the same thing.
- 23 Q As a point of reference, though, isn't it true
- 24 that using the data on Page 22 and the data on Page 23, you
- 25 could conclude that the rates, even on the half a percent of

- 1 longest loops in the Hatfield model using integrated digital
- 2 loop, as you say, are going to perform better than what
- 3 current BellSouth customers have where even on the shortest
- 4 loops where universal digital loop carrier is used?
- 5 A Well, I haven't made that detailed comparison,
- 6 but certainly building a network by integrating digital loop
- 7 carrier is going to give all people better performance. But
- 8 all other things being equal, if it is all integrated those
- 9 with longer loops compared to those with shorter loops may
- 10 see impaired service.
- 11 Q But you didn't answer my question regarding the
- 12 current state of the network in BellSouth and the Hatfield
- 13 model longest loops. Even for the shortest loops --
- 14 A Okay. Are you starting a question? I'm sorry, I
- 15 must have misunderstood your question.
- 16 Q I asked you not what would happen between loops
- 17 that were both served by integrated, but I asked you to
- 18 confirm or deny my statement that even the shortest loops in
- 19 the BellSouth network, if they are served by universal
- 20 digital loop carrier, will perform less well than the
- 21 longest loops which constitutes half of a percent of all
- 22 loops in the Hatfield model served by integrated, based on
- 23 the data on Pages 22 and 23?
- 24 A I'm sorry, I thought I did answer that question.
- 25 I said I have not analyzed that specifically to see that

- 1 that is the case. And I will let the rest of my answer
- 2 stand, that I think that is immaterial for the purposes of
- 3 determining models here.
- 4 Q I have one more question about this document.
- 5 Isn't it true that these tests, which are the source of your
- 6 support for your contention, at least what is provided here,
- 7 were not run using the extended range cards that both the
- 8 BCPM model and the Hatfield model used?
- 9 A I believe that is correct.
- 10 Q Let's talk about digital services for just a
- 11 moment. Isn't it true with the extended range cards which
- 12 both we claim and you claim you use, it's possible to
- 13 provide ISDN service which is the digital advanced service,
- 14 out to 18,000 feet?
- 15 A I would say no. You would not use these digital
- 16 line -- you do not use these line cards for the provision of
- 17 ISDN service. You would need an entirely different
- 18 equipment connectivity to the copper loop to provide ISDN
- 19 service. So, no, I would disagree with that. You couldn't
- 20 even provide ISDN with this equipment.
- 21 Q Which one, which equipment?
- 22 A Any of these line cards that were talked about in
- 23 the digital loop carrier systems here.
- 24 Q So your claim is that you could provide ISDN
- 25 service in neither the BCPM nor the Hatfield model as

- 1 presently configured, is that correct?
- A Not using these line cards. ISDN requires the
- 3 addition of additional equipment at the digital loop carrier
- 4 site and at the customer site to make it work as an ISDN
- 5 line.
- 6 Q Okay. So neither model does it now, but if you
- 7 had the proper cards, because they are not equipped with the
- 8 right cards, but if they had the right cards, isn't it true
- 9 you could provide ISDN out to 18,000 feet?
- 10 A I would say not universally, no. You could
- 11 provide ISDN, the issue is would every line to 18,000 feet
- 12 work? And the answer is probably not. Again, it's the same
- 13 issue. ISDN and any of these other advanced services, the
- 14 longer the loop, the more difficulty it has in operating.
- 15 There are tons of other technical issues associated with the
- 16 longer loops associated with this equipment.
- 17 Q You testified in the South Carolina proceeding
- 18 earlier this year, is that correct?
- 19 A Yes.
- 20 Q I would like to read a Q and A from your
- 21 testimony there and ask if you recall this testimony.
- 22 "Question: When you say on Line 25 the extended
- 23 range line card and larger cable size are necessary to
- 24 ensure comparable access to advanced services, that's not a
- 25 statement you agree with today, is that correct?

- 1 "Answer: No, I still agree with that as the
- 2 answer. There are other services other than just modems,
- 3 and this sentence in my testimony was designed to capture
- 4 sort of advanced services in general. You have other
- 5 things, another one that is very much on many peoples' mind
- 6 is ISDN. In most cases, for whatever technical reasons, you
- 7 can make ISDN lines work out to 18, 00 feet using extended
- 8 range line cards."
- 9 Do you recall that answer?
- 10 A Yes, I do. But I'm a lot smarter now than I was
- 11 then.
- 12 Q Are you aware of a company called Adtran
- 13 (phonetic)?
- 14 A I've heard the name, yes.
- 15 Q Are you aware that Adtran is currently
- 16 advertising ISDN cards which permit those advanced services
- 17 up to 30,000 feet?
- 18 A No, I'm not.
- 19 Q Have you consulted the Adtran web page recently?
- 20 A No, I have not. I have consulted some ISDN user
- 21 group web pages, and a lot of the discussion on those pages
- 22 involves loop length and it's impact on service. And what I
- 23 got out of looking at that user group information is there
- 24 are many claims about the ability of ISDN to work on loops,
- 25 but in the real world when you go out and try and deploy

- 1 this equipment, it doesn't always work on the longer loops.
- 2 And many customers have reported because of loops
- 3 even much shorter than 18,000 feet they can't make it work
- 4 sometimes because of -- there are many criteria. The plant
- 5 is older aged. There are bridge taps on the plant. A
- 6 change in the cable gauge from 24 to 26-gauge, which is one
- 7 of the items that the HAI model anticipates in its network
- 8 and BCPM does not. The change in gauge affects this because
- 9 you get reflections on the line. Other issues are other
- 10 services that may be in the same binder group or 25 pair
- 11 cable in the network, and any other services such as modems
- 12 working over these lines, or other ISDN lines working over
- 13 lines that are near them.
- 14 All of these things are issues in the provision
- 15 of services such as ISDN on longer loops. And it's a
- 16 problem. You know, you can't give everybody a separate pair
- 17 of wires that will guarantee them service. So the issue is
- 18 can you build a network that gives most people the best
- 19 opportunity to use these services, and that's what we are
- 20 trying to do with BCPM.
- 21 Q Are you familiar with the Bellcore three-volume
- 22 telecommunications transmission engineering treatise?
- 23 A Is that what it's called? I may be. I am
- 24 familiar with some Bellcore transmission engineering
- 25 documents.

- 1 Q Volume 3 is called network and services; the
- 2 three volumes is called telecommunications transmission
- 3 engineering. The first volume is principles, the second
- 4 volume is facilities, and the third volume is network and
- 5 services. Are you familiar with that document?
- 6 A I can't say for sure that I am. I believe I am,
- 7 but I'm not sure.
- 8 Q So is it safe to say you don't know what the
- 9 range over which that document states ISDN services can be
- 10 provided?
- 11 A Can be provided in all cases? No, I guess I
- 12 don't. Not without referring to it in some fashion to read
- 13 it.
- 14 Q And, again --
- 15 A If something says it can be provided to some
- 16 distance, even such as this press release from BellSouth
- 17 that says ADSL can work up to 18,000 feet, you know, that
- 18 should not be construed to say that it will work on every
- 19 13,000 foot loop, because it will not.
- 20 Q But you have agreed that only half of a percent
- 21 of all loops in the Hatfield model are even over 12,000
- 22 feet, correct?
- 23 A Yes, and that is significantly more than the
- 24 number of loops in the BCPM model over 12,000.
- 25 MR. RUSCUS: I have no further questions.

1		CHAIRMAN JOHNSON: Mr. Melson.
2		MR. MELSON: No questions.
3		MR. COX: The Staff has no questions for Dr.
4	Bowman.	
5		CHAIRMAN JOHNSON: Commissioners? Redirect.
6		MS. KEYER: Actually, I just have one clarifying
7	question.	
8		REDIRECT EXAMINATION
9	BY MS. KEY	ER:
10	Q	Earlier today there was a discussion about the
11	size of th	e microgrid versus the macrogrid, and I just want
12	to clarify	that the microgrid is the 58 acres that we talked
13	about this	morning, and the macrogrid is the 12,000 by
14	14,000 fee	t, is that correct?
15	A	That's correct.
16		MS. KEYER: Thank you. No further questions.
17		CHAIRMAN JOHNSON: Exhibits.
18		MS. KEYER: Yes. I would like to move Exhibit 53
19	52 and	53.
20		CHAIRMAN JOHNSON: Show those both admitted
21	without ob	jection.
22		(Exhibit 52 and 53 received into evidence).
23		CHAIRMAN JOHNSON: Thank you, sir.
24		WITNESS BOWMAN: Thank you.
25		MR. POWELL: Madam Chair, I believe Meade Seaman

- 1 for GTE is the next witness.
- 2 CHAIRMAN JOHNSON: Okay.
- 3 Thereupon,
- 4 MEADE C. SEAMAN
- 5 was called as a witness on behalf of GTEFL and, having been
- 6 duly sworn, testified as follows:
- 7 DIRECT EXAMINATION
- 8 BY MR. POWELL:
- 9 Q Mr. Seaman, please state your full name and
- 10 business address?
- 11 A My name is Meade, M-E-A-D-E, C. Seaman,
- 12 S-E-A-M-A-N, and my business address is 600 Hidden Ridge,
- 13 Irving, Texas.
- 14 O Mr. Seaman, by whom are you employed, and in what
- 15 capacity?
- 16 A GTE, and I'm the Assistant Vice President of
- 17 Marketing Services.
- 18 Q Have you caused to be filed in this docket direct
- 19 testimony on August the 3rd, with two exhibits, MCS-1 and
- 20 MCS-2, as well as rebuttal testimony on September the 2nd,
- 21 with a single exhibit, MCS-3?
- 22 A Yes, I have.
- 23 Q Did you also cause to be filed on or about
- 24 October 9th, under cover letter from your counsel, corrected
- 25 Pages 21 to 23 of your August 3 direct testimony, as well as

- 1 a corrected Exhibit MCS-2?
- 2 A Yes, I have.
- 3 Q Was your testimony and these exhibits, were they
- 4 prepared by you or under your direction?
- 5 A Yes, they were.
- 6 MR. POWELL: Madam Chair, at this time I would
- 7 ask that Mr. Seaman's direct and rebuttal testimony be
- 8 inserted into the record as though read here.
- 9 MR. RECK: Madam Chairman, I have an objection.
- 10 Madam Chairman, I have an objection to a portion of Mr.
- 11 Seaman's testimony.
- 12 CHAIRMAN JOHNSON: Okay.
- MR. BECK: Page 14, Lines 4 through 12. My
- 14 objection is that his testimony is not relevant to any issue
- 15 in this proceeding. Mr. Seaman provides what they claim is
- 16 GTE's intrastate regulated earnings, a minus there,
- 17 directory advertising revenues, and provides that return on
- 18 equity.
- 19 The issues in this case concern the cost of basic
- 20 local telecommunications service. Whether GTE's return on
- 21 equity is 7 percent, or 40 percent, or negative 15 percent
- 22 has no bearing on the issues in this case. In fact, GTE is
- 23 the only company that is attempting to provide such
- 24 testimony. BellSouth, Sprint, the smaller companies, none
- of them are providing information about their return on

- 1 equity. And the reason is it is simply not relevant, so I
- 2 move to strike that portion of his testimony.
- 3 CHAIRMAN JOHNSON: And those were -- the lines
- 4 were 8 through --
- 5 MR. BECK: Four through 12.
- 6 CHAIRMAN JOHNSON: Response?
- 7 MR. POWELL: Thank you, Madam Chair. This part
- 8 of Mr. Seaman's testimony, as with other parts, goes to the
- 9 fundamental point that GTE believes is important for the
- 10 Commission and for the legislature that the actual costs of
- 11 the company are very pertinent with respect to the whole
- 12 issue of universal service.
- 13 It is a fact that the Commission is called on by
- 14 the legislature to recommend one of the two models that have
- 15 been presented to the Commission, but it is very much a part
- of GTE's evidence and position in this matter, and we think
- 17 it is consistent with the whole purpose of the legislative
- 18 inquiry that overall company results and actual costs be not
- 19 only a part of the record, but considered by the Commission
- 20 and considered by the legislature.
- 21 MR. BECK: Madam Chairman, counsel for GTE has
- 22 not provided, first of all, any issue that it is related to,
- 23 because it's not, and certainly their cost of local
- 24 telecommunications service is relevant, but that's not what
- 25 this is.

- 1 CHAIRMAN JOHNSON: Any final response?
- MR. POWELL: May I have a moment, Your Honor?
- 3 CHAIRMAN JOHNSON: Quickly. Mr. Beck, does Mr.
- 4 Olson's testimony discuss the return on equity?
- 5 MR. BECK: Yes, Mr. Olson is scheduled next. Mr.
- 6 Olson is the -- and I intend to object to his testimony in
- 7 its entirety.
- 6 CHAIRMAN JOHNSON: Okay.
- 9 MR. POWELL: Your Honor, the only other thing I
- 10 would add to this is that I think there is an evident degree
- 11 of seamlessness to Mr. Seaman's testimony. He has financial
- 12 results for the company in the State of Florida for 1997.
- 13 Those results are important to GTE's effort to lay before
- 14 the committee, before the Commission and also before the
- 15 legislature, the extent of the subsidies that exist today
- 16 that are implicit in the disoriented rates that exist today.
- 17 It strikes me as surprising, I guess, that
- 18 counsel would object to a portion of these numbers which
- 19 they all interrelate, there is nothing very unusual or
- 20 startling about the numbers. They are what they are. They
- 21 reflect GTE's actual cost of doing business in Florida and
- 22 providing universal service today, and we believe they are a
- 23 very fair reality check on what it's going to cost tomorrow
- 24 and the day after tomorrow to continue to provide universal
- 25 service. We believe the objection is ill-founded.

1	CHAIRMAN JOHNSON: And as to the return on
	CIMINAL COMMON. And as co one recent on
2	equity, what issue does that relate to?
3	MR. POWELL: Well, again, it goes to the
4	seamlessness of all the numbers. I mean, the return on
5	equity is a number that is derived from the numbers in Mr.
6	Olson's exhibit, which is a part of the data on which Mr.
7	Seaman relies in his testimony.
8	CHAIRMAN JOHNSON: Staff, any recommendation?
9	MR. COX: I'm not sure we see any relevance to
10	the Commission's determination on cost here to this
11	information on return on equity and earnings and whatnot
12	that is contained both here and in $Mc$ . Olson's testimony,
13	for that matter. It was raised, we understand, in Mr.
14	Olson's testimony in particular.
15	There was a discovery dispute in this case
16	between the Office of the Public Counsel and GTE over some
17	information related to that. The prehearing officer granted

Office of the Public Counsel the opportunity to look at that

CHAIRMAN JOHNSON: One of the things I was trying

information, but as far as relevance, I think Staff would

contend that it is probably not relevant to the

to -- I'm inclined to grant the motion to strike, but

candidly I'm not following your argument or your points as

to relevancy. And I guess there are two issues here that

determination in this proceeding.

18

19

20

21

22

23

24

- 1 are being debated; the cost information that I know that
- 2 this witness just kind of references Mr. Olson's testimony
- 3 as to some of the actual cost information that is raised in
- 4 Mr. Olson's testimony, and also the return on equity.
- 5 And I understand you to suggest that the return
- 6 on equity analysis is relevant to the overall reason that we
- 7 are here, but, see, when you start going down that slippery
- 8 slope then it looks as if perhaps you are suggesting that
- 9 this should be some type of a rate of return proceeding and
- 10 analysis. That's what I was hearing you say.
- 11 COMMISSIONER CLARK: I heard that, too.
- 12 CHAIRMAN JOHNSON: And I was surprised. I will
- 13 grant the motion to strike.
- 14 MR. BECK: Thank you.
- 15 CHAIRMAN JOHNSON: And that is Lines 4 through 12
- 16 on Page 14.
- 17 COMMISSIONER CLARK: Mr. Beck, did I hear you
- 18 were going to object to Mr. Olson, the testimony in the
- 19 entirety?
- 20 MR. BECK: Yes, for exactly the same reasons.
- 21 The reas n I raise it now is because Mr. Seaman quotes and
- 22 describes Mr. Olson's testimony, so simply to preserve the
- 23 objection.
- 24 COMMISSIONER CLARK: I wonder if it makes sense
- 25 to take it up, and if we are not going to hear him he

- 1 doesn't need to stay around.
- 2 CHAIRMAN JOHNSON: And he will be next.
- 3 COMMISSIONER CLARK: And I imagine he will be
- 4 tomorrow.
- 5 CHAIRMAN JOHNSON: He will be tomorrow morning.
- 6 He probably can't catch a plane out tonight anyway. We will
- 7 just proceed with this one.
- 8 MR. POWELL: I'm sorry, Your Honor.
- 9 CHAIRMAN JOHNSON: No, we will go forward. I
- 10 just granted the motion to strike Lines 14 through 12 on
- 11 Page 14 -- or 4 through 12 on Page 14.
- 12 MS. CASWELL: I'm sorry, did I hear Mr. Beck say
- 13 he would object to Mr. Olson's testimony in its entirety?
- 14 Is that what you said, Charlie?
- 15 MR. BECK: Yes.
- 16 CHAIRMAN JOHNSON: And I'm going to wait until
- 17 tomorrow to rule on that, and that will give me an
- 18 opportunity to review it. I already understand the basis of
- 19 the argument, and give you all some opportunity to prepare.
- 20 MS. CASWELL: Thank you.
- 21 CHAIRMAN JOHNSON: With that objection being --
- 22 or that motion to strike being granted, there was a motion
- 23 to insert this into the record as though read?
- MR. POWELL: Yes, ma'am. And I would also ask
- 25 that you mark for identification the three Seaman exhibits.

```
CHAIRMAN JOHNSON: We will insert this into the
1
    record as though read with those couple of provisions
2
    stricken, and MCS-1 and 2 will be Exhibit 34 (sic), MCS-3,
 3
     rebuttal, will be Exhibit 55.
 4
              (Exhibit 54 and Rebuttal Exhibit 55 marked for
 5
     identification.)
 6
 7
 8
 9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
```

1		GTE FLORIDA INCORPORATED
2		DIRECT TESTIMONY OF MEADE C. SEAMAN
3		DOCKET 980696
4		
5	Q.	PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND
6		POSITION.
7	A.	My name is Meade C. Seaman. My business address is 600 Hidden
8		Ridge, Irving, Texas. I am employed as Assistant Vice President -
9		Marketing Services. I am testifying in this proceeding on behalf of GTE
10		Florida Incorporated ("GTE").
11		
12	Q.	PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND
13		EXPERIENCE IN THE TELECOMMUNICATIONS INDUSTRY.
14	A.	I graduated from the University of South Florida in 1976 with a
15		Bachelor's degree in Accounting. In 1988, I graduated from Indiana
16		Wesleyan University with an M.B.A. I have over 20 years of experience
17		in the telecommunications industry. In 1976, I joined General
18		Telephone of Florida as a Business Relations Assistant. In 1983, I
19		became a Staff Manager - Interchanged Service Compensation at GTE
20		Service Corporation. In 1985, I was employed by GTE North
21		Incorporated as Manager - Economic Analysis (Pricing and Costing),
22		and in 1989, I was named Director - Regulatory and Industry Affairs.
23		In October 1994, I became Director - Demand Analysis and Forecasting
24		for Telops, where I was responsible for forecasting all line-related and
25		usage-related services. In 1996, I became the Director - Local

1		Competition/Interconnection Program Management Office for Telops,
2		and was responsible for interconnection negotiations with new local
3		market entrants. In 1997, I was named Vice President - Central
4		Regulatory & Governmental Affairs for Telops. Earlier this year, I was
5		appointed to my current position.
6		
7	Q.	HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY
8		BODIES?
9	A	Yes. I have testified in nine states in arbitration proceedings arising
10		under the Tolecommunications Act of 1996 ("the Act"): in Hawaii, Idaho,
11		Illinois, Indiana, Ohio, Pennsylvania, South Carolina, New Mexico, and
12		Wisconsin. I also have testified on matters related to policy, rate
13		design, unbundled network elements ("UNEs") and cost of service
14		studies before many of these same state commissions.
15		
16	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
17	A.	First, I will provide an overview of GTE's direct testimony in this
18		proceeding by identifying each GTE witness and the issues they will
19		address. Second, I will describe the general principles that run
20		throughout (and should govern) all the issues to be addressed in this
21		docket. Third, I will set forth GTE's specific positions on issues 1, 2, 3,
22		and 5(a) identified for resolution in this proceeding, and will explain
23		how these issues relate to, and are affected by, Section 254 of the Act.
24		
25		

**830**8 <sup>2</sup>

### I. OVERVIEW OF GTE'S PRESENTATION

2		
3	Q.	PLEASE LIST THE OTHER WITNESSES GTE IS PRESENTING IN
4		THIS DOCKET, AND PLEASE IDENTIFY THE ISSUES ADDRESSED
5		BY EACH WITNESS.
6	A.	In addition to my testimony, GTE is presenting the direct testimony of
7		five witnesses:
8		
9		Mr. Steven A. Olson identifies GTE's current, actual costs of providing
10		telecommunications services in GTE's territory. As I discuss in my
11		testimony, this information is relevant to the calculation of today's
12		implicit universal service support, and therefore provides a guide to the
13		Commission in selecting an appropriate cost model and associated
14		inputs used to help calculate explicit support.
15		
16		Mr. David G. Tucek presents numerous GTE-specific inputs to the
17		Benchmark Cost Proxy Model ("BCPM") and the output results from
18		ВСРМ.
19		
20		Mr. Michael R. Norris presents GTE-specific inputs for use in the
21		BCPM which deal specifically with various expense items and general
22		support asset categories.
23		
24		Dr. James H. Vander Welde presents the forward-looking cost of
25		capital to be used as an input to the BCPM.

1		Mr. Allen E. Sovereign presents the economic depreciation lives to be
2		input into the BCPM.
3		
4		II. GENERAL PRINCIPLES APPLICABLE TO ALL ISSUES
5	Q.	WHAT GENERAL PRINCIPLES APPLY TO ALL THE ISSUES
6		PRESENTED IN THIS DOCKET?
7	A.	In this docket, the Commission must evaluate and select a cost model
8		that calculates the total forward-looking cost of providing basic local
9		telecommunications service. To the extent such a model will be used
10		to help establish a permanent universal service fund for the State of
11		Florida, the results of the model must be sufficient to preserve,
12		maintain, and advance universal service as required by Section 254 of
13		the Act and by Section 364.025 of the Florida Statutes. These
14		fundamental principles-ensuring a "sufficient" universal service fund
15		and "preserving and maintaining" today's levels of universal service
16		apply to all the issues presented in this docket.
17		
18		Given the above objective, the critical question presented in this docket
19		is easily stated: "How can we determine whether a particular forward-
20		looking cost model is appropriate for establishing a permanent universal
21		service mechanism that is sufficient to preserve and maintain universal
22		service? To answer this question, we should evaluate a cost model by
23		comparing its results to today's levels of implicit universal service
24		eumand. In this way we are access whether a cost model's results are

sufficient to preserve and maintain universal service.

Let me explain this last point. Promoting universal service has been a longstanding goal of this Commission. To date, the goal of universal service has been achieved through a system of *implicit* supports embedded in GTE Florida's rates. Under the Act, today's implicit supports must be replaced with a sufficient, *explicit* fund. Since the purpose of a universal service cost model is to heip establish an explicit fund, the appropriateness of the model can be judged by comparing its results to today's implicit supports.

A.

# Q. HOW CAN WE CALCULATE TODAY'S LEVELS OF IMPLICIT UNIVERSAL SERVICE SUPPORT?

We can reasonably estimate today's levels of universal service support by comparing (1) the current revenues generated by services that are now priced above their economic cost, with (2) the revenues that would be generated by such services if their prices were equal to their economic costs.

For example, interstate and intrastate access services are currently priced above their cost, and thus provide significant amounts of implicit universal service support. We can calculate the amount of implicit support provided by these services by comparing current access revenues with the revenues that would result if access services were priced at economic cost.

### Q. HAVE YOU PERFORMED SUCH A CALCULATION?

1	A.	Yes. Using the methodology described above, I have calculated the
2		current implicit supports generated by five classes of services: (1) local
3		business service; (2) vertical services; (3) toll service; (4) intrastate
4		access service; and (5) interstate access service. As shown below, the
5		amount of implicit support provided by these five categories of services
6		was more than \$487 million per year in 1997, as depicted in the
7		following "Support Analysis:"

8		1997	"Economic"	Implicit
9		Revenue	Costs	Supports
10	Service	(\$'000)	(\$'000)	(\$'000)
11		(a)	(b)	(c) = (a - b)
12	Local Business	\$305,704	\$217,011	\$88,693
13	Vertical Services	\$78,822	\$10,267	\$68,555
14	Toll	\$36,367	\$7,009	\$29,358
15	Intrastate Access	\$159,382	\$14,240	\$145,142
16	Interstate Access	\$191,268	\$35,924	\$155,344
17	Total	\$771,543	\$284,451	\$487,092

### Q. HOW WAS THIS SUPPORT ANALYSIS DEVELOPED?

A. The five service categories shown reflect the major sources of network-related revenues and are the typically identified sources of implicit support for basic local rates.

Column (a) reflects the annual revenues for the listed services for 1997. Column (b) reflects the revenues that would be generated by

these services assuming the price of each service was reduced to reflect its economic cost as determined by the Commission's own findings regarding the costs of unbundled network elements and the avoided retailing expenses set forth in its 1997 Order in GTE's consolidated arbitrations with AT&T and MCI. (Petitions of AT&T Comm. of the Southern States, Inc., MCI Telecomms, Corp. and MCI Metro Access Transmission Sycs., Inc. for Arbitration of Certain Terms and Conditions of a Proposed Agreement with GTE Florida Inc. Concerning Interconnection and Resale Under the Telecomms, Act of 1996, Order No. PSC-97-0064-FOF-TP, Jan. 17, 1997.)

Finally, column (c), which is simply the difference between columns (a) and (b), reflects today's implicit support inferred by the Commission's own findings of fact. My Exhibit MCS-1, attached, presents a summary description of the process used to develop retail "economic costs" based on the Commission's ordered UNE rates for GTE.

# Q. COULD YOU EXPLAIN IN MORE DETAIL HOW YOU DETERMINED THE ECONOMIC COST OF EACH SERVICE?

A. Yes. The economic costs of local business service and toll service were calculated by adding up the costs of the UNEs used in the provision of each service. These UNE costs, however, reflect only wholesale costs, and must be marked up to reflect the retailing expenses that would be incurred in providing business and toll services. For these services, I marked up the total UNE costs to

1 account for retailing expenses based on the Commission's avoided cost 2 discount rate of 13.04%, which was established by the Commission in 3 GTE's arbitration with MCI and AT&T. 4 5 Interstate and intrastate access are wholesale offerings, and therefore 6 the associated UNEs were not marked up by the avoided cost discount. 7 Also, the interstate access figures exclude end-user common line 8 ("EUCL") charges, which were included in the local revenues. 9 10 Finally, we assumed the economic cost of vertical services to be equal to just the costs associated with retailing the services (i.e., the avoided 11 12 retailing expenses). This procedure was used because the 13 Commission required GTE to include all vertical features in the price of 14 local switching, presumably because the Commission believed the 15 direct costs of unbundled vertical features are negligible. Although 16 GTE does not agree with the Commission's decision on this point, GTE 17 acknowledges that vertical services are today priced well above their 18 cost, and therefore provide significant implicit supports. Again, 19 however, under the Commission's own analysis, the economic cost of 20 unbundled vertical services is either: (a) zero or (b) included in the 21 unbundled port costs. 22 23 Q. YOUR SUPPORT ANALYSIS LOOKS AT THOSE SERVICES THAT CURRENTLY PROVIDE IMPLICIT SUPPORT. CAN YOU PERFORM 24 THE SAME ANALYSIS FOR SERVICES THAT RECEIVE IMPLICIT 25

1		SUPPORT, SUCH AS BASIC RESIDENTIAL SERVICE?
2	A	Yes. Not surprisingly, this analysis likely would yield a support amount
3		that is less than the support amount of \$487 million calculated above.
4		The difference between these two calculations can only be due to
5		erroneous UNE rates.
6		
7	Q.	PLEASE EXPLAIN WHY THE ECONOMIC COSTS OF UNBUNDLED
8		ELEMENTS ARE RELEVANT IN DETERMINING THE ECONOMIC
9		COSTS OF SERVICES.
10	A.	Although GTE does not agree with the Commission's findings on the
11		economic custs of UNEs, GTE believes that the costs of unbundled
12		elements should be consistent with the costs of services provided
13		through use of those same elements. In simpler terms, the economic
14		cost of a network should be consistent with the economic cost of
15		services provided over that network. This relationship between the
16		costs of UNEs and the costs of services is recognized in Section
17		364.051(6)(c) of the Florida Statutes:
18		"The price charged to a consumer for a nonbasic service
19		shall cover the direct costs of providing the service and
20		shall, to the extent a cost is not included in the direct
21		cost, include as an imputed cost the price charged by the
22		company to competitors for any monopoly component
23		[i.e., certain UNEs] used by a competitor in the provision
24		of its same or functionally equivalent service.*

1		This imputation rule is equally applicable to the prices charged for
2		basic services and associated UNEs. Accordingly, it is appropriate to
3		use the costs of UNEs to calculate the costs of services.
4		
5		The relationship between UNEs and services was succinctly described
6		by Dr. Glenn Blackmon, Assistant Director-Telecommunications of the
7		Washington Utilities and Transportation Commission:
8		*[T]he objective should be to estab! sh rough parity
9		between wholesale or unbundled ne*, ork element
10		rates and corresponding resale rates for finished
11		services. Finished services and wholesale
12		elements are generally close substitutes for each
13		other, since the latter are piece parts of the
14		former. Pricing one below the other sends the
15		market incorrect signals that distort the choices of
16		both consumers and competitors and it could
17		constitute undue discrimination."
18		(Testimony of Glenn Blackmon, Ph.D., WUTC Dockets Nos. UT-
19		960369, UT-960370, UT-960371, March 28, 1997, Order at 9)
20		
21	Q.	YOUR SUPPORT ANALYSIS SHOWN ABOVE ASSUMES THAT
22		GTE'S CURRENT REVENUES REFLECT THE EFFICIENT COSTS
23		OF PROVIDING SERVICE TODAY. DO YOU HAVE ANY SUPPORT
24		FOR THIS ASSUMPTION?
25	A.	Yes. An ILEC's current revenues properly reflect the total, actual costs

1 an efficient provider in a competitive market would incur today in 2 providing ubiquitous service. The history and purpose of regulation 3 confirm this point. 4 5 For much of this century, the Commission regulated GTE under rate-of-6 return regulation to ensure that GTE's rates are "fair, just, reasonable 7 and sufficient" and that GTE's services and equipment are "modern, 8 adequate, sufficient and efficient." (Fla. Stat., Section 364.03(1).) In 9 1995, the Legislature enacted a statute that provided for price 10 regulation, which is intended to promote even greater efficiencies and 11 to encourage ILECs to make the same economic decisions that would 12 be made in a fully competitive market. Indeed, the Florida Legislature 13 recognized this very point in Section 364.01(4)(i): 14 "(4) The Commission shall exercise its exclusive 15 jurisdiction to: 16 (i) Continue its historical role as a surrogate for 17 competition for monopoly services provided by local exchange companies." [emphasis added]. 18 19 In a nutshell, the principal purpose of regulation is to be "a surrogate 20 21 for competition" to ensure that the firm earns no more than a 22 reasonable profit (i.e., return) on its investment. If the Commission has 23 fulfilled its statutory duties--and GTE believes it has--then GTE's current revenues should reflect the total, actual costs an efficient 24

provider would incur in providing ubiquitous service today, including a

	The state of the s
1	reasonable profit. Therefore, GTE's current revenues can be used to
2	help calculate today's cost of supporting universal service.
3	
4	Finally, I will note that the FCC agrees with my analysis and with the
5	Florida Legislature's finding that regulation is a "surrogate for
ε	competition." In its Second Report and Order in the LEC Price Cap
7	proceedings (the "LEC Price Cap Order"), the FCC explained its
8	position on both rate-of-return regulation and price-cap regulation. The
9	FCC opined that rate-of-return regulation may have "a tendency to
10	produce inefficiency," but ultimately concluded that "rate of return
11	oversight is a responsible, functional method of correcting for these
12	tendencies." (LEC Price Cap Order at para. 29.) Indeed, the FCC
13	noted that it had disallowed over \$2.7 billion in LEC access charges
14	between 1985 and 1990 using rate-of-return regulation. (Id. at n.31.)
15	
16	Because of alleged (although unsubstantiated) concern over gold-
17	plating, the FCC implemented a price-cap regime. Like the Florida
18	Legislature, the FCC expressly acknowledged that the purpose of such
19	a regime is to replicate the benefits of a fully competitive market:
20	*By our action today, [rate-of-return] regulation will
21	be replaced for the largest of the LECs on January
22	1, 1991, with an incentive-based system of
23	regulation similar to the system we now use to
24	regulate AT&T. Incentive regulation will reward

companies that become more productive and

1	efficient, while ensuring that productivity and
2	efficiency gains are shared with ratepayers.
3	
4	In designing an incentive-based system of
5	regulation for the largest LECs, our objective, as
6	with our price caps system for AT&T, is to harness
7	the profit-making incentives common to all
8	businesses to produce a set of outcomes that
9	advance the public interest goals of just,
10	reasonable, and nondiscriminatory rates, as well
11	as a communication system that offers innovative,
12	high quality services.
13	•••
14	We rely also on the ability of price cap regulation
15	to supplement and in effect replicate many of the
16	effects of competition, to encourage price cap
17	LECs to make economic decisions such as they
18	would make in a fully competitive market."
19	Id. at paras. 1-2, 355 (emphasis added).
20	
21	Given that the purpose of regulation is to replicate the effects of
22 .	competition, it is reasonable to assume that a regulated firm's current
23	revenues reflect the efficient, actual costs of providing ubiquitous
24	service today, including the cost of attracting capital (i.e., a reasonable
25	profit)

1	Q.	HAS GTE PRESENTED ANY OTHER EVIDENCE TO SUPPORT ITS
2		CLAIM THAT CURRENT REVENUES REFLECT THE CURRENT
3		ACTUAL COSTS OF PROVIDING SERVICES?
4	A.	Yes. GTE has presented the testimony of Steven A. Olson, Manager-
5		Regulatory Accounting and Comptiance. Mr. Olson's testimony sets
6		forth a financial analysis of GTE's adjusted operating results for the
7		twelve-month period ending December 31, 1997, and is based upon
8		GTE's actual costs. Mr. Olson's analysis shows that GTE's regulated
9		revenues for 1997 recovered no more than the actual costs incurred by
10		GTE, and provided a return on equity of only 7.56% for GTE's intrastate
11		operations. Clearly, GTE has not earned any "monopoly profits," and
12		its current revenues actually understate the costs of providing service.
13		
14		In sum, GTE's current revenues reflect the total, actual cost of
15		providing service today, and these costs are the costs an efficient
16		provider would incur in providing ubiquitous telephone service
17		throughout GTE's service territory. Accordingly, we can identify today's
18		costs of supporting universal service by calculating the implicit supports
19		generated by selected services. GTE's Support Analysis discussed
20		above shows this calculation, and conservatively identifies implicit
21		supports of over \$487 million per year for GTE. This \$487 million is, in
22		essence, today's implicit universal service fund. As I discussed earlier,
23		the purpose of a cost model is to help establish an explicit fund that is
24		sufficient to preserve and maintain universal service. If a cost model
25		fails to produce a fund size commensurate with today's implicit fund, we

1		must ask why, and, if necessary, we must adjust the results of the cost
2		model to accurately reflect today's universal service requirements.
3		
4	Q.	ARE THERE ANY OTHER SOURCES OF IMPLICIT SUPPORT IN
5		ADDITION TO THOSE LISTED ON YOUR SUPPORT ANALYSIS?
6	A.	Yes. For example, yellow pages advertising has been used by the
7		Commission to provide significant support for basic service customers.
8		Although GTE currently operates under a price-cap form of regulation,
9		the foundation for the initial set of price-cap rates was based on a
10		revenue stream that included "imputed" yellow page advertising
11		contributions as a source of support. That level of "imputed" implicit
12		support necessarily continues on in a price-cap environment.
13		
14		This example of another source of universal service support
15		underscores my point that the \$487 million that I previously computed
16		is a conservative estimate of today's implicit universal service fund.
17		
18	Q.	THE PURPOSE OF THIS PROCEEDING IS TO EXAMINE THE
19		TOTAL COST OF PROVIDING BASIC LOCAL SERVICE USING A
20		COST PROXY MODEL. WHY ARE ACTUAL COSTS AND CURRENT
21		IMPLICIT UNIVERSAL SERVICE SUPPORT REQUIREMENTS
22		RELEVANT TO THIS PROCEEDING?
23	A.	The Legislature directed the Commission to investigate and report on
24		the total forward-looking cost of providing basic local
25		telecommunications service in order "to assist the Legislature in

establishing a permanent universal service mechanism." (Section 364.025(4)(b).) GTE believes that the Legislature intended the Commission to examine the costs an efficient provider would incur today in providing service. This must be so, given that the Legislature commissioned this study to assist it in establishing a permanent universal service mechanism in 1999. Moreover, Florida law and the federal Act demand that today's level of universal service be preserved and maintained, and therefore universal service support must be calculated with reference to the efficiently incurred costs of the incumbent carrier. Given this analysis, the Commission can test the adequacy of a forward-looking cost model by comparing its results to today's costs of supporting universal service, which are reflected in current rates.

Q. HAVE ANY OTHER ENTITIES AGREED WITH WITH YOUR
ASSESSMENT THAT UNIVERSAL SERVICE FUNDING SIZING
MUST ACKNOWLEDGE THE ILEC'S ACTUAL COST
CHARACTERISTICS?

Yes, AT&T has made statements in another proceeding that appear to acknowledge the use of actual costs in determining a universal service fund size. In September 1997, the Pennsylvania Public Utility Commission held a hearing on access charge reform. At that hearing, AT&T's Director of Law and Governmental Affairs testified that if an ILEC's access charges are reduced, then the ILEC should be able to recoup its lost revenues through either a universal service fund or rate

150	-		100	
PO	no.	lan	Laborate S	20
res	υa	ies:		RLI

"(L)et's assume we're not in a situation where we've got any over-earnings. We're in a company that's within the regulated base, then I am supportive of revenue neutral changes for the company which would mean one of a couple of things. Either when you lower access, you at the same time receive funds from the universal service which was the example we just talked about or you could also lower access while doing some rate rebalancing in terms of raising residential rates or some other rates within the company. In other words, we (AT&T) agree that access is an implicit subsidy going to support residential local service. And, no, you shouldn't have that taken away and reduce access independently . . .\*

Testimony of G. Blaine Darrah III, Director-Regulatory, AT&T Law and Government Affairs Division, Tr. 612-13, In re Generic Investigation of Intrastate Access Charge Reform, Docket No. I-00960066 (Pa. Pub. Util. Comm'n) (transcript of Sept. 11, 1997) [emphasis added].

22

23

24

25

5

8

9

10

11

12

13

14

15

16

17

18

19

20

21

AT&T's analysis necessarily acknowledges that an ILEC's regulated revenues equal its efficiently incurred costs, and therefore when implicit subsides are removed they must be recovered from a universal service

1		mechanism in order to preserve and maintain universal service.
2		Although AT&T's admissions in Pennsylvania involved rate-of-return
3		regulation, the principle remains the same: Regulation is a surrogate
4		for competition, and an ILEC's revenues equal the costs of an efficient
5		provider, regardless of whether the ILEC is subject to rate-of-return
6		regulation or any form of price regulation.
7		
8	Q.	WHAT WOULD HAPPEN IF THE COMMISSION OR THE
9		LEGISLATURE IGNORES TODAY'S COST OF PRESERVING AND
10		MAINTAINING UNIVERSAL SERVICE?
11	A.	If the Commission or the Legislature establishes a universal service
12		fund or mechanism based solely on the results of a long-run, forward-
13		looking cost model, and if this cost model fails to produce a fund size
14		necessary to replace today's levels of implicit support, then universal
15		service will be jeopardized. Moreover, as I discussed earlier, the use
16		of such a model would violate both federal and state law, because it
17		would not produce a fund size sufficient to preserve and maintain
18		universal service. Finally, insufficient universal service funding will
19		result in significant stranded costs for ILECs, and such costs must be
20		recovered from consumers.
21		
22		III. GTE'S POSITION ON SPECIFIC ISSUES
23	Q.	ISSUE #1: WHAT IS THE DEFINITION OF THE BASIC LOCAL
24		TELECOMMUNICATIONS SERVICE REFERRED TO IN SECTION
25		364.025(4)(b), FLORIDA STATUTES?

1	A.	Under	Section	364.02(2)	of	the	Florida	Statutes,	*basic	local	
2		telecon	nmunicati	ons service	* co	mpri	ses:				
3			voice-gra	de, flat-rat	e r	eside	ntial, ar	nd flat-rate			

"voice-grade, flat-rate residential, and flat-rate single-line business local exchange services which provide dial tone, local usage necessary to place unlimited calls within a local exchange area. dual tone multi frequency dialing, and access to the following: emergency services such as "911", all locally available interexchange companies. directory assistance operator services, relay services, and an alphabetical directory listing. For a local exchange telecommunications company, such term shall include any extended area service routes, and extended calling service in existence or ordered by the commission on or before July 1, 1995."

17

18

19

20

21

22

23

24

25

A

4

5

6

7

8

9

10

11

12

13

14

15

16

Q. ISSUE 2: FOR PURPOSES OF DETERMINING THE COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE APPROPRIATE FOR ESTABLISHING PERMANENT UNIVERSAL MECHANISM, WHAT IS THE APPROPRIATE COST PROXY MODEL TO DETERMINE THE TOTAL FORWARD-LOOKING COST OF PROVIDING BASIC LOCAL TELECOMMUNICATIONS SERVICE PURSUANT TO SECTION 364.025(4)(b), FLORIDA STATUTES? First and foremost, GTE does not believe that a permanent universal

service mechanism can be determined solely through the use of a long-run, forward-looking cost model, and GTE does not believe the Legislature intended such a result. For example, the Legislature directed the Commission to report on "the relationships among the costs and charges associated with providing basic local service, intrastate access, and other services provided by local exchange telecommunications companies," and this report is independent of any report addressing the results of a cost proxy model for basic local service. This report would be irrelevant if the Legislature intended to establish a permanent universal service fund based solely on forward-looking cost models.

Second, as I discussed in Part II of my testimony, GTE believes that

Second, as I discussed in Part II of my testimony, GTE believes that any explicit universal service fund or mechanism must be sufficient to replace all of today's implicit subsidies, and the results of any cost model should be adjusted to accommodate this goal. Otherwise, universal service will be jeopardized and the use of the cost model will violate federal and state law.

Third, GTE does not agree that a cost proxy model should be used to determine the cost of providing services. GTE believes that company-specific models and company-specific costs should be used, because they more accurately reflect the costs of providing service in Florida.

With these limitations in mind, GTE believes that the BCPM is the more

1		reasonable proxy model, but that the BCPM should be populated with
2		company-specific inputs. These issues are addressed in the direct
3		testimony of GTE witnesses David Tucek, James Vander Weide,
4		Michael Norris and Allen Sovereign.
5		
6	Q.	WHAT IS THE TOTAL COST OF PROVIDING BASIC LOCAL
7		SERVICE IN GTE'S TERRITORY AS CALCULATED BY THE BCPM?
8	A.	Using GTE-specific inputs, the total cost of providing basic local service
9		in GTE's territory on an annual basis equals \$771 million. This total
10		cost was calculated using a three-step process:
11		
12		First, the BCPM produced the costs of providing basic local service
13		(i.e., supported services) at a wire center level on a per-line basis for
14		each wire center within GTE's service territory. (Obviously, these costs
15		vary by wire center.) Second, the total cost of providing basic local
16		service for all customers within a specific wire center was calculated by
17		multiplying (i) the BCPM's cost per line by (ii) the number of lines in that
18		wire center. Third, the total cost of providing basic local service for all
19		of GTE's service territory was calculated by adding together the total
20		costs of each wire center.
21		
22	Q.	BASED ON THESE RESULTS, WHAT UNIVERSAL SERVICE FUND
23		WOULD THE BCPM CREATE ASSUMING THAT TODAY'S RATES
24		FOR BASIC LOCAL SERVICE REMAINED THE SAME?
25	Α	Under this assumption the RCPM would produce a total support

requirement for GTE's service territory of about \$366 million per year. 1 The intrastate portion of this support would be \$347 million. 2 3 HOW DID YOU CALCULATE THIS FUND? 4 Q. As noted above, BCPM produces the cost of providing basic local 5 A. service on a per-line basis for each wire center within GTE's service 6 territory. The per-line cost for each wire center was compared to a 7 revenue estimate (or benchmark) based on GTE's currently tariffed 8 rates for basic local service. In those wire centers where costs 9 exceeded the revenue benchmark, the difference was multiplied by the 10 number of lines in that wire center to arrive at the total support required 11 for that wire center. The sum of the supports for each wire center 12 equals the total support amount (\$366 million). My Exhibit MCS-2, 13 attached, is the output of a BCPM-derived spreadsheet that contains 14 the supporting calculations behind the development of the \$366 million 15 universal service funding sizing estimate 16 17 WHAT CONCLUSIONS CAN WE DRAW FROM THESE RESULTS? Q. 18 As I stated earlier, GTE does not believe that a permanent universal 19 A. service mechanism can be determined solely through the use of a long-20 run, forward-looking cost model. Rather, the fund size as calculated by 21 BCPM (or by any cost model) must be adjusted to reflect today's 22 universal service support requirements. 23 24 The BCPM results prove my point. As noted in my Support Analysis, 25

1	Q.	ISSUE 5(a): FOR PURPOSES OF DETERMINING THE COST OF							
2		BASIC LOCAL TELECOMMUNICATIONS SERVICE APPROPRIATE							
3		FOR ESTABLISHING A PERMANENT UNIVERSAL SERVICE							
4		MECHANISM, FOR WHICH FLORIDA LOCAL EXCHANGE							
5		COMPANIES MUST THE COST OF BASIC LOCAL							
6		TELECOMMUNICATIONS SERVICE BE DETERMINED USING THE							
7		COST PROXY MODEL IDENTIFIED IN ISSUE 2?							
8	A	The cost of providing basic local telecommunications service should be							
9		determined for each non-rural incumbent LEC in the State of Florida.							
10		ILECs are currently the only carriers obligated to provide basic							
11		universal service on a carrier of last resort basis in a defined							
12		geographic area. Moreover, ILECs have the networks in place today							
13		to provide service to all customers within their service territory, and it							
14		is likely that the ILECs' network will continue to be used to provide							
15		service. Thus, until ubiquitous facilities-based competition develops,							
16		universal service support should be determined based on the existing							
17		ILEC's current, actual cost of providing service.							
18									
19	Q.	DOES THIS COMPLETE YOUR DIRECT TESTIMONY?							
20	A	Yes. GTE has not addressed issues 6(a)-(c) in its direct testimony,							
21		because these issues concern LECs serving fewer than 100,000							
22		access lines. GTE, however, reserves its right to take a position on							
23		these issues later in the proceeding.							
24									
25									

1		GTE FLORIDA INCORPORATED
2		REBUTTAL TESTIMONY OF MEADE C. SEAMAN
3		DOCKET NO. 980896-TP
4		
5	Q.	PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND
6		POSITION.
7	A.	My name is Meade C. Seaman. My business address is 600 Hidden
8		Ridge, Irving, Texas. I am employed as Assistant Vice President -
9		Marketing Services. I am testifying in this proceeding on behalf of
10		GTE Florida Incorporated ("GTE").
11		
12	Q.	DID YOU PRESENT DIRECT TESTIMONY IN THIS PROCEEDING?
13	A.	Yes.
14		
15	Q.	WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?
16	A.	My rebuttal testimony addresses several positions advocated by
17		parties in the direct testimony filed on August 3, 1998. Specifically, I
18		address policy issues raised by AT&T witness Richard Guepe and the
19		Florida Competitive Carriers Association (*FCCA*) witness Joseph
20		Gillan. I will leave to GTE witness Danner the rebuttal of Messrs.
21		Gillan and Guepe on the economic issue of the treatment of loop
22		costs. Generally, I explain why the proposals of AT&T and FCCA are
23		contrary to the public interest, fail to promote local competition, and
24		fail to comply with the Federal Telecommunications Act of 1996 (Act).
25		

Please note that throughout my testimony, I use the terms "support" 1 and "subsidies" interchangeably. A service is supported or subsidized 2 when its regulated price is below the price that a firm could obtain in 3 a competitive marketplace absent regulation. 4 5 DO YOU AGREE WITH AT&T WITNESS GUEPE THAT THE 6 Q. TELECOMMUNICATIONS ACT REQUIRES THAT UNIVERSAL 7 SERVICE SUBSIDIES BE MADE EXPLICIT AND THAT THEY 8 SHOULD COVER ONLY THE FORWARD LOOKING ECONOMIC 9 COST OF THE SUPPORTED SERVICES? 10 I certainly agree that the Act requires that all implicit support in today's 11 A. rates must be made explicit. However, where government wants 12 telephone companies to offer service for less than it really costs to 13 provide, government needs to make up the difference--which is 14 precisely what universal service support is meant for. That's not only 15 fair, it's necessary if Florida is to see competition reach all customers 16 and services. Thus, as I stated in my direct testimony. I do not believe 17 that a permanent universal service mechanism can be determined 18 solely through the use of a hypothetical long-run forward-looking cost 19 model. 20 21 22 For a variety of reasons (including universal service concerns), current retail and wholesale rates are out of whack, i.e., the relationship 23 between costs and prices is distorted by government in order to keep 24

25

certain rates below cost. Congress recognized this mix-up of rates

and directed, via the Act, that gaps between the price and cost of supported services be identified and paid for-which is one part of what is meant by saying that implicit support in rates be made explicit. The other part of making support explicit is taking the burden off the prices that are now marked-up to pay for the subsidies, so those prices can fall. Florida needs to untangle this web of subsidies (and thereby let prices reflect what services actually cost, or have the gap paid for by a universal support mechanism) both for retail and wholesale plices in order to meet the intent of Congress and to preserve universal service in a competitive environment. Thus, not only should the relationship of cost to rates for supported services (those priced low) be determined, but the cost/price relationship of those services providing support (those priced high) must also be analyzed and reduced if fair and ubiquitous competition is to develop in the local exchange.

Notwithstanding all the work that has gone into them, forward-looking economic cost models are just that—models. They're not the same as the real-world costs of telephone service today, which are what responsible decisions must be based on.

Q. DO YOU AGREE WITH AT&T WITNESS GUEPE'S STATEMENT
THAT "THE SUPPORT FOR UNIVERSAL SERVICE SHOULD NOT
INCLUDE SUPPORT FOR ANY BUSINESS LINE SERVICE AND
SHOULD BE LIMITED ONLY TO THE FIRST RESIDENTIAL LINE"?

1	A.	No. To the extent the Commission or the Florida Legislature desires
2		business lines to be priced below their full cost, then this service
3		should be supportedit's that simple.
4		
5		Indeed, both Florida law and the Act reflect this obvious point
6		Section 364.02(2) of the Florida Statutes defines "basic local
7		telecommunications service" to include "voice-grade, flat-rate
8		residential, and flat-rate single-line business local exchange services."
9		Section 364.025(4)(b) of the Florida Statues instructs the Commission
10		to report to the Legislature, in order to assist the Legislature in
11		establishing a permanent universal service mechanism, the cost of
12		providing "basic local telecommunication service." Thus, it is clear
13		that the Legislature intends for business single line service to be
14		included in the universal service support calculation.
15		
16		Furthermore, Section 254(b)(3) of the federal Act provides that
17		consumers in rural, insular, and high-cost areas should have access
18		to telecommunications and information services-including
19		interexchange and advanced servicesat prices that are reasonably
20		comparable to those in urban areas. Congress, therefore, did not
21		exclude single-line business service from universal service support.
22		
23	Q.	SHOULD UNIVERSAL SERVICE SUPPORT BE LIMITED ONLY TO
24		FIRST OR "PRIMARY" RESIDENTIAL LINES, AS MR. GUEPE
		BBBBBBBB

No. Here again, to the extent that public policy requires non-primary 1 A. residential lines to be priced below their full cost, then these lines also 2 must be supported. 3 4 Historically, all residential lines have been supported, whether primary 5 or secondary. Today, for example, all residential lines within a given 6 rate group are priced the same. Presumably, this practice reflects the 7 historical public policy objective of supporting all residential lines. 8 Accordingly, if this objective is to be maintained, non-primary 9 residential lines must continue to receive support. If this support does 10 not continue, it is likely that market disruptions would occur. 11 12 Also, it is very difficult to identify any particular line as primary within 13 a given location. Indeed, one must assume that all other lines to a 14 residence or location simply "don't count" for universal service 15 purposes in terms of giving someone basic access to the telephone 16 network. But one does not know how many consumers live in a given 17 residence or location, or what their relationships may be. 18 19 In sum, the Commission should reject Mr. Guepe's proposal to 20 remove universal service support from certain residential lines. 21 Attempting to do so may disrupt the market; could deprive some 22 consumers of access to telecommunications services at affordable 23 rates; and could incent consumers to game the system by obtaining 24

25

another "primary" line from a second provider. Also, attempting to

identify the primary line within a given residence would be an administrative nightmare. Instead, the Commission and the Legislature should focus on maintaining an affordable price for basic service; make universal service support available to all single-party residential lines and single-line business lines; and let consumers in Florida decide how many lines and which telecommunications providers best suit their needs.

Q. BOTH AT&T WITNESS GUEPE AND FCCA WITNESS GILLAN SUGGEST THAT THE COST MODEL USED FOR UNIVERSAL SERVICE SUPPORT DETERMINATION SHOULD BE CONSISTENT WITH THAT USED FOR THE PRICING OF UNBUNDLED NETWORK ELEMENTS (UNES). DO YOU AGREE WITH THEIR CONCLUSIONS?

Α.

and among the costs and prices for services and the costs and prices for UNEs. And as I discussed in my direct testimony, these costs should reflect today's actual costs of providing services and UNEs. If this is the principle espoused by AT&T and FCCA, then I agree with them. However, GTE does not agree that USF costs and UNE costs should be based on any cost proxy model. Finally, if a cost proxy model is used for USF purposes, that model should not supplant company-specific UNE cost models.

I will note that the Commission has already established what it believes to be the forward-looking costs of UNEs for GTE. GTE does not agree with the Commission's findings because they do not reflect GTE's actual costs; nevertheless, these findings should provide a "floor" for the USF support determinations derived by any proxy model in this proceeding.

Q. MR. GUEPE AND MR. GILLAN ALSO APPEAR TO SUGGEST
THAT UNIVERSAL SERVICE SUPPORT SHOULD BE
DETERMINEL AT A STATEWIDE LEVEL. DO YOU AGREE WITH
THIS POSITION?

A. No. They appear to believe that universal service support should be calculated by using a statewide average rate for basic local telecommunications service (assuming UNEs are set on a statewide average). This "averaging" proposal, however, will not produce the correct universal service fund size.

What they're saying is that if there's no problem, on average, then there is no need for a solution. It's a little like the old statistics joke about a person with his head in the oven and feet in the frozen lake who is on average comfortable. But of course, the cost of telephone service varies quite a bit across Florida, and competitors can choose the profitable locations and customers and ignore the rest – as they are now doing. "Fixing" the problem on average won't do very much to relieve the pressure from competition to raise rural rates to their full

1 cost due to threats to the profitable services or customers that are 2 now providing the implicit support. Such a policy could even make the 3 problem worse. 4 5 The FCC and the Florida Legislature have also recognized this point. 6 The FCC stated that "[T]he cost study or model must deaverage 7 support calculations to the wire center serving areas level at least, 8 and, if feasible to even smaller areas ...". [CC Docket no. 96-45, Par. 9 250(10)]. The Florida statute requires the Commission to report costs 10 "on a basis no greater than a wire center." It is clear that a geographic 11 area no larger than a wire center is necessary to meet the 12 requirements of the FCC and the intent of the Florida Legislature. 13 14 Perhaps recognizing the problem with his argument, Mr. Guepe 15 appears to attempt to draw a distinction between the determination of 16 "costs" and "support" by maintaining that if costs are determined at a 17 wire center or smaller level, then the results can be summed in order 18 to determine support at a statewide level. To support his position, he 19 references certain statements from the FCC's Order, but these statements, in fact, contradict Mr. Guepe's claim: the FCC requires 20 21 that "any USF cost study or model...must deaverage support 22 calculations at least to the wire center level." (Emphasis added) 23 24 Notwithstanding the clear requirements and intent of the FCC and the 25 Florida Legislature, if the Commission were to determine universal

1		service support at a statewide level, the opportunities for new
2		entrants, who utilize their own facilities to provide service, to *cream
3		skim" would be significantly increased. For example, CLECs would be
4		able to receive universal service support based on a statewide
5		average determination, while targeting only high density, low cost
6		areas to serve. This would clearly not enhance incentives for local
7		exchange competition in rural, less densely populated areas of the
8		state.
9		
10		Clearly, a universal service implementation issue is how USF amounts
11		will be shared among the ILEC and the CLEC when the CLEC
12		employs UNEs to provision a supported service. But this is an
13		implementation issue that should not affect the correct development
14		of the USF sizing procedures.
15		
16	Q.	MR. GUEPE DISCUSSES THE USE OF A "REVENUE
17		BENCHMARK" TO CALCULATE A PERMANENT UNIVERSAL
18		SERVICE MECHANISM. DO YOU AGREE WITH THIS
19		BENCHMARK APPROACH?
20	Λ.	No. The revenue benchmark approach—as used by Mr. Guepe and
21		others-would artificially understate the universal service fund by
22		allowing implicit subsides to remain in current rates.
23		
24		We can illustrate this point with a simple hypothetical example. Listed
25		below are (a) the services whose current revenues are used in

calculating the banchmark, (b) the current monthly revenues resulting from these services, (c) the monthly costs for each service, and (d) the revenues that will be obtained in a competitive environment:

(a)	(b)	(c)	(d)
Service	Current	Costs	Future
	Average		Revenues
	Revenues		
Supported services	\$10.00	\$28.00	\$10.00
Access	\$10.00	\$1.00	\$1.00
Toll	\$5.00	\$1.00	\$1.00
Vertical services	\$5.00	\$1.00	\$1.00
Total	\$30.00	\$31.00	\$13.00

Under Mr. Guepe's revenue benchmark approach, we subtract the current revenues of \$30 (column (b)) from the total costs of \$31 (column (c)) to arrive at a universal service requirement of \$1. This approach assumes, however, that today's above cost services — toll, access, and vertical services — will continue to generate the same revenues. In other words, Mr. Guepe assumes that implicit supports will remain.

Returning to the example above, the correct universal service requirement can be determined in two ways: <u>First</u>, simply subtract the cost of supported services (\$28.00) from the future revenues

generated by these services (\$10.00). This calculation produces universal service requirement of \$18.00. (This calculation assumes that the just, reasonable and affordable price of supported services remains the same, i.e., is \$10.00). Second, one may subtract the costs of all services (\$31.00) from the revenues that will be generated from the services in a competitive environment (\$13.00). This calculation yields, as it should, the same universal service requirement of \$18.00. This calculation is premised on the fact that implicit subsidies are not sustainable in a competitive environment, and that prices for non-supported services (e.g., toll, access, and vertical services) will be driven to their economic costs.

Our above example is, of course, a hypothetical one and does not reflect all implicit subsidies — it merely serves to illustrate the inherent flaw in Mr. Guepe's revenue benchmark approach, which is simply a means to keep implicit subsidies in ILEC rates and thus sustain the cream-skimming opportunities described by the FCC in its Universal Service Order. See, e.g., Universal Service Order at para. 17 (\*In a competitive market, a carrier that attempts to charge rates significantly above cost to a class of customers will lose many of those customers to a competitor. . . . New competitors can target service to more profitable customers without having to build into their rates the types of cross-subsidies that have been required of existing carriers who serve all customers.\*).

1	Q.	DO THE WITNESSES FOR AT&T PROPOSE REMOVING IMPLICIT
2		SUPPORT FROM SWITCHED ACCESS SERVICES AND
3		REPLACING IT WITH EXPLICIT SUPPORT FROM A UNIVERSAL
4		SERVICE FUND?
ő	A.	Yes. A common theme in AT&T's testimony is the removal of implicit
6		support in switched access charges concurrent with the
7		implementation of an explicit universal service fund. In February
8		1998, the North Carolina Utilities Commission held a hearing on
9		selecting a forward-looking cost methodology. At that hearing, Mr.
10		Gillan testified on behalf of AT&T that
11		the Commission should act immediately to prescriptively
12		reduce these rates [switched access] to cost-based levels
13		concurrent with the introduction of an external, explicit
14		universal service mechanism.
15		(Transcript Vol 1, p. 60, Lines 10-12, Docket P-100, Sub 133b (North
16		Carolina Utilities Commission) "Establishment of Universal Service
17		support Mechanism Pursuant to Section 254 of the 1996
18		Telecommunications Act*, transcript of February 3, 1998).
19		
20		Furthermore, in my direct testimony, I reference a quote from Mr. G.
21		Blaine Darrah III, AT&T's Director of Law and Governmental Affairs,
22		in a Pennsylvania Public Utility Commission hearing in which Mr.
23		Darrah states that "access is an implicit subsidy going to support
24		residential local service. And no, you shouldn't have that taken away
25		and reduce access independently." (Tr.612-13, In Generic

Investigation of Intrastate Access Charge Reform, Docket No. I-00960066 (Pennsylvania Public Utilities Commission), transcript of Sept.11, 1997).

Notice how AT&T is attempting to game the system. AT&T argues that implicit support must be removed from switched access charges, thereby lowering AT&T's cost of doing business. Indeed, in Mr. Guepe's calculation of his proposed revenue benchmark, he makes an adjustment to reduce intrastate access revenues in recognition of the fact that these rates "should be recomputed to reflect the implementation of cost based access charges." But Mr. Guepe ignores the implicit support contained in rates of business customers, toll, vertical services and yellow pages. The question, of course, is "why"? The answer is obvious – AT&T removes implicit subsidies where doing so reduces its costs, but retains implicit subsides in other services to preserve its cream-skimming opportunities.

In sum, AT&T and FCCA would have this Commission remove implicit support in rates for services they purchase (e.g., switched access), but maintain implicit support in the rates for services for which they intend to compete (e.g., business local, toll, etc.). This position fails to pass any common sense tests, especially when switched access is imputed as a minimum cost basis for determining toll rates. If switched access rates are reduced, then the Commission must also mandate that the implicit support contained in toll rates must also be

1		eliminated on an ed	quivalent basis.	AT&T's position	n is contradictory
2		and must be reject	ed.		
3					
4	Q.	YOU HAVE EX	PLAINED GEN	NERALLY TH	E PROBLEMS
5		ASSOCIATED WIT	TH THE REVEN	UE BENCHMA	RK APPROACH.
6		ARE THESE PRO	BLEMS COMPO	UNDED WHEN	YOU DEVELOP
7		BENCHMARKS U	SING AVERAGE	REVENUES?	
8	A.	Yes. Mr. Guepe, f	or example, use:	s <u>average</u> reve	nues to calculate
9		universal service s	support requirem	ents in Tables	1-3 of his direct
10		testimony. The us	se of average re-	venues exacert	oates the cream-
11		skimming problems	s I just discusse	d, and produce	s an insufficient
12		universal service for	and.		
13					
14		Let's return to our e	arlier example, bu	t this time let's	show the current
15		average revenues	as being generat	ed by two custo	omers:
16		Service	Customer #1	Customer #2	Average
17					Revenues
18		Supported services	\$10.00	\$10.00	\$10.00
19		Toll, Verticals, etc.	\$0.00	\$40.00	\$20.00
20		Total	\$10.00	\$50.00	\$30.00
21					
22		Notice what happen	s using the avera	ige revenue ap	proach: The cost
23		of \$31.00 (shown or	page 14) less th	e <u>average</u> reve	nue of \$30 again
24		yields the same	incorrect univer	sal service su	pport of \$1.00.
25		Assuming the cost	of providing sup	ported service	s is \$28.00 (see

page 10) and that the revenues for non-supported services can only cover their costs, then the total universal service support flows are depicted as:

Service	Customer #1	Customer #2	Average
	Current Rates	Current Rates	
Supported Services Revenues	\$10.00	\$10.00	\$10.00
Toll, Verticals, etc. Revenues	\$0.00	\$40.00	\$20.00
Total	\$10.00	350.00	\$30.00
Costs	\$28.00	\$34.00	\$31.00
Implied Support \$	\$18.00	(\$16.00)	\$1.00

Customer #1 would be receiving \$18.00 of support of which \$16.00 would be derived from implicit support contained in the rates paid by customer #2. But the future competitive market will not allow intercustomer support flows to continue. Rational competitive markets will result in the rates shown below.

17	Service	Customer #1	Customer #2	Average	
18		Market Rates	Market Rates		
19	Supported Services Revenues	\$10.00	\$10.00	\$10.00	
20	Toll, Verticals, etc. Revenues	\$0.00	\$6.00	\$3.00	
21	Total	\$10.00	\$16.00	\$13.00	
22	Costs	\$28.00	\$34.00	\$31.00	
23	Implied Support \$	\$18.00	\$18.00	\$18.00	
24	From this we can die	corn the obviou	e fact that if the	no cost of s	

From this we can discern the obvious fact that if the cost of a supported service is \$28 and the revenues generated by that service is \$10, the universal service requirement will be \$18 per supported service.

This example illustrates that not only is the revenue benchmark method flawed, the use of an <u>average</u> revenue benchmark exacerbates the problem.

Q.

A.

THAT BOTH REVENUE SURPLUSES AND REVENUE SHORTFALLS SHOULD BE SUMMED ACROSS WIRE CENTERS TO DETERMINE THE APPROPRIATE AMOUNT OF SUPPORT?

No, this procedure is just another version of the "averaging" scam. Once again, the problem with Mr. Guepe's methodology is that implicit subsidies would remain in rates in ways that would benefit AT&T, but not the public. In this case, the assumption is that implicit support contained in rates in low cost, high density areas, for example, can be maintained and will not be subject to competitive pressures. If implicit subsidies remain in rates, the requirements of the Act will not be met, competition will eventually drive these rates to cost and the result will be an undersized universal service fund — with correspondingly artificially inflated competitive opportunities for AT&T along the way to target high-revenue customers. Once again, the right policy fits the law — a properly sized, sufficient and explicit universal service fund can only be realized if all implicit subsidies are made explicit. At the end of the day, the explicit universal service fund should be no bigger

1		or smaller than the implicit supports already contained in the ILECs'
2		retail rates.
3		
4	Q.	DO YOU AGREE WITH AT&T WITNESS GUEPE'S CLAIM THAT A
5		FLORIDA UNIVERSAL SERVICE FUND IS NOT REQUIRED?
8	A.	Absolutely not. A simple example based on AT&T's own methodology
7		proves that the universal service fund in Florida cannot be zero.
8		
9		The analysis in Exhibit No. MCS-3 lists (1) GTE's 1997 rates and
10		revenues in Florida for switched access services and (2) AT&T's
11		proposed rates (and resulting revenues) for these same services
12		using the output of the HAI Model 5.0a submitted to this Commission.
13		
14		Even with the statutory reduction of 15% in intrastate access rates as
15		of October 1, 1998, the conclusion stated in the Exhibit does not
16		change. This comparison illustrates that if AT&T's proposed access
17		rates were adopted, GTE's annual access revenues would be reduced
18		by \$324 million (i.e., \$351 - \$27). This figure represents AT&T's own
19		estimate of the annual implicit support that exist today in GTE's
20		access charges. Following the logic established by Gillan in North
21		Carolina and Darrah in Pennsylvania, if intrastate switched access
22		rates are reduced to the levels proposed by AT&T, \$152 million in
23		implicit support is eliminated through rate reductions (see Exhibit
24		MCS-3), then it must be recovered explicitly through a universal
25		service fund, assuming GTE's retail rates remain constant. Therefore,

Mr. Guepe's conclusion that a Florida universal service fund is not required is erroneous.

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

B.

2

1

## Q. CAN THE UNIVERSAL SERVICE FUND BE PROPERLY SIZED BY ANALYZING A SELECT NUMBER OF SERVICES?

No. A properly sized, sufficient, and explicit universal service fund can only be realized if the full scope of implicit subsidies are made explicit. Naturally, the testimony of AT&T narrowly focuses on the removal of implicit subsidies in switched access services. However, implicit support exists in other services. My direct testimony established that, in addition to switched access, intraLATA toll, business services and vertical features also provide universal service support. GTE intends to reduce rates for switched access, intraLATA toll, business services and vertical services as it receives explicit support from the universal service fund, so that the benefits will flow through directly to customers. The failure to recognize and make explicit all implicit support results in an undersized universal service fund and the retention of implicit support in precisely those services which are likely to be part of the bundle of services provided by CLECs - business services, intraLATA toll and vertical features. As such, dollar for dollar offsets solely from switched access to an explicit universal service fund will not satisfy the Act's requirements for a sufficient and predictable fund.

24

25

1	Q.	DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?
2	A.	Yes.
3		A STATE OF THE STA
4		C
5		U ,
5		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

- 1 BY MR. POWELL:
- 2 Q Mr. Seaman, have you prepared a summary of your
- 3 testimony?
- 4 A Yes, I have.
- 5 Q Please proceed.
- A As you know, the Commission has been directed to
- 7 issue a report to the legislature in February of 1999. The
- 8 ultimate purpose of that report is to deal with the
- 5 preservation, maintenance, and enhancement of universal
- 10 service. This proceeding deals with the cost of basic local
- 11 telecommunications service, but I believe the Commission
- 12 should recognize a series of fundamental principles that are
- 13 necessary in evaluating costs and making a rational judgment
- 14 about the validity of those costs, and I would like to speak
- 15 to those briefly.
- 16 GTE witnesses will follow me to talk and deal
- 17 with the cost specific issues, and I would like to deal with
- 18 the fundamental questions that have to be answered. And I
- 19 would suggest that there are four common sense questions
- 20 that you might ask as you listen to my testimony today and
- 21 as you reflect on the testimony that you have heard earlier
- 22 and the testimony to follow.
- 23 And the first question is why is the FCC, the
- 24 Joint Board, and state commissions all across the country
- 25 dealing with universal service issues today? As of the fall

- 1 report on penetration, there is some 94 percent of
- 2 households, the 170 million households across the United
- 3 States that have telephone service, so one might think that
- 4 universal service really isn't much of an issue. And I
- 5 would suggest to you that in the federal act of 1996, that
- 6 Congress recognized that retail rates and access charges are
- 7 disoriented, and that in a pro-competitive environment that
- 8 we began embarking on in 1996, it would be necessary to make
- 9 implicit supports for universal service explicit. I think
- 10 that is a very clear issue, and there is a very long history
- 11 of how those supports became implicit in the rates that we
- 12 have in the industry today.
- 13 The second common sense question I would ask is
- 14 why has Congress dictated that the states and the FCC make
- 15 explicit the supports that when you look at a family of
- 16 service concept one might think that they are unwarranted?
- 17 And the answer to that question in my mind is that there are
- 18 implicit supports that a family of service concept will only
- 19 work if you restate revenue streams on a going-forward basis
- 20 as you have incremental cost. I have done that in my
- 21 testimony, and I'm sure we will get to go over that.
- 22 The third common sense question I would ask is
- 23 has this Commission already determined the cost of basic
- 24 local telecommunications service on a wholesale basis, and
- 25 can those costs be used to size the universal service fund?

- 1 And I would suggest to you that the answer, again, is yes.
- 2 In GTE's UNE proceeding, the Commission reviewed cost
- 3 studies and defined the cost of an unbundled network element
- 4 for loops, ports, and switching, local switching. The very
- 5 elements that go into building a basic local
- 6 telecommunications network and the services that underlie
- 7 them. So it's simply a mathematical matter of pricing those
- 8 costs out in relationship to GTE's service territory.
- 9 I have done that calculation, it's in my table in
- 10 my testimony. And what that identifies is a very huge
- 11 implicit support for universal service. Some \$487 million.
- 12 And I would like to point out that that is not a new source
- 13 of revenue to GTE. Those are rates that are in existence
- 14 today. There is nothing new in that number. It simply is
- 15 an implicit support contained in GTE's rates that in my view
- 16 must be made a licit by virtue of a congressional edict. It
- 17 is a rather shocking number, but nonetheless it is a real
- 18 number.
- The fourth question that I would ask you to apply
- 20 is will maintaining the status quo in rates or arbitrarily
- 21 undersizing the universal fund requirement mandated by the
- 22 act be beneficial for consumers? And I would suggest to you
- 23 that the answer to that question is also no. The implicit
- 24 supports for GTE are very large. They will and are today
- 25 targeted by new entrants when they enter the market. When

- 1 they enter the market, they siphon off through cherry
- 2 picking those very supports that make universal service
- 3 possible. By ignoring that and underestimating the size of
- 4 universal service support, the support that is already in
- 5 the rates today, simply make matters worse for the local
- 6 customers of tomorrow. That concludes my summary.
- 7 MR. POWELL: Madam Chair, Mr. Seaman is available
- b for cross examination.
- 9 CROSS EXAMINATION
- 10 BY MR. HATCH:
- 11 Q Good evening, Mr. Seaman. My name is Tracy
- 12 Hatch. I will be asking you a few questions on behalf of
- 13 AT&T.
- 14 Do I understand your testimony correctly that you
- 15 would define the test for support as where your current
- 16 revenue exceeds the economic cost for any given service,
- 17 would that be a fair statement?
- 18 A No.
- 19 Q All right. How would you describe your test for
- 20 implicit support, then?
- 21 A On Page 6 of my testimony, I have a table. That
- 22 table identifies three things, the revenue that GTE receives
- 23 today for what I believe to be the five primary contributors
- 24 of support for universal service, local business, vertical
- 25 services, toll, intrastate access, and interstate access.

- The second column identifies what is labeled
- 2 economic costs and what that represents is the Florida
- 3 Public Service Commission ordered unbundled network element
- 4 rates priced out for loops, ports, and local usage. The
- 5 very elements that are part of basic service. By making a
- 6 comparison of those two numbers, I believe you end up with a
- 7 complete comparison of the ebbs and flows of the universal
- service support, which is the third column, and it's simply
- 9 a matter of substraction. And that is the \$487 million
- 10 dollars of support that I believe is necessary for Florida
- 11 for GTE territory.
- 12 Q So you test for whether a local business
- 13 provides support would be whether local business revenue
- 14 exceeds your economic cost, is that correct?
- 15 A That's correct. In essence, what we are saying
- 16 is that the economic cost as defined by this Commission by
- 17 definition becomes the forward-looking price in a
- 18 competitive marketplace, and so you must reprice revenue
- 19 streams to be commensurate with that.
- 20 O So if I look at the sottom of Column C, and that
- 21 total of \$487,092,000, that is the number that you argue is
- 22 the total amount of support by your terms, is that correct?
- 23 A That's correct.
- 24 Q So if I look at -- and the bottom of Column A,
- 25 that is the 771 million, that is the total revenues from the

- services listed, is that correct?
- 2 A Based on today's rate, that's correct.
- 3 Q So if I just do a little bit of arithmetic and
- 4 divide 487 million into 771 million, would you accept
- 5 subject to check that that is approximately 63 percent?
- 6 A I'm sure you did the math right.
- 7 O So am I to understand that 63 percent of the
- 8 revenues from the services listed in Column A are
- 9 essentially a subsidy to something, is that correct?
- 10 A As defined by the unbundled network element
- 11 prices established in our UNE proceeding. Which by the way,
- 12 GTE disagrees with, but nonetheless those are the costs and
- 13 prices for unbundled network elements that this Commission
- 14 has determined.
- 15 Q One of the things that is confusing me, maybe you
- 16 can clear it up for me, is that through the course of your
- 17 testimony you refer to your actual cost of providing service
- 18 and you equate that to the revenues you currently generate
- 19 from that service. Do I understand that correctly?
- 20 A That's correct.
- 21 Q So you are equating your cost of providing
- 22 service is the same thing as your revenues from providing
- 23 service?
- 24 A That's correct.
- 25 Q Turn to Page 10 of your direct testimony,

- 1 starting at Line 25 and then carrying over to the top of
- 2 Page 11. And you state there an ILEC's current revenue
- 3 properly reflect the total actual costs an efficient
- 4 provider in a competitive market would incur today in
- 5 providing ubiquitous service. Do you see that statement?
- 6 A Yes, I do.
- 7 Q Am I to understand from that statement that you
- 8 consider GTE an efficient provider in a competitive market
- 9 today?
- 10 A Yes, 7 do. And let me explain why. There are
- 11 three elements to my rationale for that. One -- I'm going
- 12 to make a note so I don't forget. There are three elements
- 13 to that rationale. One is purely from the standpoint of
- 14 historical regulation. It is a common belief that rate of
- 15 return regulation has been in place for decades to take a
- 16 monopoly provided service and make it act as if it were --
- 17 would act in a competitive environment.
- 18 That has been around for a very long time, and
- 19 everyone recognizes that there are probably some
- 20 imperfections in that, so price caps evolved. And what
- 21 price caps attempted to do is to provide an incentive for
- 22 the incumbent LEC not to overbuild the plant. For most of
- 23 the 1980s, a big part of the Bell companies have been under
- 24 some form of price cap. In the 1990s, several of GTE firms
- 25 moved under the price cap scenario. The three biggest

- 1 companies that GTE operates are the Florida company, the
- 2 Texas company, and the California company. That represents
- 3 roughly half of GTE's revenue stream.
- And as I segue into the second issue, which is
- 5 personal experience, I have served on a number of executive
- 6 committees designed to look at removing costs from the
- 7 business and taking and improving revenue streams. Since
- 8 half of our revenue stream is under a price cap scenario, it
- 9 is inconceivable to me that GTE would not move aggressively
- 10 to remove cost, and over the last few years I think it has
- 11 done so.
- But we have run into a little bit of a dilemma.
- 13 The last three years or so it has become increasingly more
- 14 difficult to take costs out of the business. In fact, I
- 15 don't think anybody can provide local switching or outside
- 16 plant facilities for the mass market any cheaper than GTE
- 17 can do.
- Now, let's think about that issue for a second.
- 19 There are really two components, major components of
- 20 investment. The first is switching. A big piece of that is
- 21 the result of computer processing, and we all know that
- 22 computer prices have dropped substantially over the last few
- 23 years. But that is not all of switching. There are
- 24 buildings to house the switches, there are frames to hold
- 25 the wires that go into the switches, and there is labor

- 1 related to those costs. All of those things have been
- 2 increasing rather than decreasing.
- 3 On the outside plant side, the predominant
- 4 portion of that cost is copper, which has been increasing in
- 5 cost over time, and labor, also an increasing cost
- 6 component. So from personal experience, I believe we are
- 7 pretty darned efficient. And the last issue has to deal
- 8 with my belief, and strictly my belief of congressional
- 9 intent. It is inconceivable to me that Congress would have
- 10 put in place a mechanism under the act that would require us
- 11 to reprice services and in essence perform a ratemaking
- 12 adjustment to our revenue stream without due process. They
- 13 asked -- the Congress directed that the unbundled network
- 14 element and interconnection negotiations occur, that it do
- 15 so without regard to a ratemaking proceeding, and it's my
- 16 belief that what they intended was to look at revenue
- 17 streams and use that as a proxy under the notion that
- 18 regulation has worked pretty darn well overall for costs for
- 19 the companies and that has been our basis for our position
- 20 across the unbundled network element proceedings and that is
- 21 the basis for our position here today.
- 22 Q So, is it your position that all of your current
- 23 costs are the most efficient costs that any carrier would
- 24 have if they entered the market today?
- 25 A Well, it's a matter of degree. I will answer

- 1 that question in two ways. The answer is no, and I will
- 2 explain why. All firms can improve their efficiency levels.
- 3 I think it's pretty much a given that the FCC has been
- 4 looking at productivity gains across the industry for pretty
- 5 much 15 years, and they have plenty of empirical evidence
- 6 that suggests what that number should be. That number is a
- 7 possible efficiency gain for most firms, and it will go
- 8 forward into the future that there will be efficiency gains.
- 9 Number two is that for isolated customers it is
- 10 conceivable to me that a carrier could be very efficient in
- 11 going after an isolated customer, but what my position is is
- 12 that it says a ubiquitous network. And I don't believe
- 13 anybody can attack the market and build the network for the
- 14 two million plus customers that we have in the State of
- 15 Florida any more efficient in the aggregate than GTE does.
- 16 Q So you are saying on a total aggregate
- 17 company-wide basis to serve the total territory that GTE
- 18 currently serves your costs are as efficient as any other
- 19 providers going into that market to employ the same service?
- 20 A Yes, I believe that.
- 21 Q Does GTE use GTD-5 switches in its network?
- 22 A Yes, it does.
- 23 Q Do you happen to know a percentage of its
- 24 switches that are GTD-5s?
- 25 A As it relates -- well, I don't know, and I

- 1 wouldn't know what that percentage would be on a Florida
- 2 basis or a national basis, but I do know that there have
- 3 been studies conducted that suggest that for rural markets
- 4 and for the services that typically customers buy, that
- 5 GTD-5s are very efficient. In fact, in many cases much more
- 6 efficient than any other -- much more efficient than other
- 7 switches that are out there for the service territories that
- 8 we provide service in.
- 9 Q Would you consider Tampa to be a rural area?
- 10 A No, but my understanding is that Tampa is not
- 11 served by a GTD-5.
- 12 Q Would you consider St. Petersburg a rural area?
- 13 A No.
- 14 Q How much rural area is there in GTE's Florida
- 15 territory?
- 16 A I don't know.
- 17 Q Has GTE deployed any GTD-5s in the last five
- 18 years?
- 19 A In Florida?
- 20 Q In Florida.
- 21 A I don't know.
- 22 Q Would you consider a GTD-5 to be forward-looking
- 23 technology?
- 24 A If it is the least cost available switch, the
- 25 answer is yes.

- 1 more of a reason why I would believe GTE Florida is an
- 2 efficient company.
- 3 Q How much of -- let me start over. How many
- 4 competitors did GTE actually have in its serving territory
- 5 in Florida?
- 6 A I'm not sure I would have any way to know the
- 7 answer to that question. I can answer it in terms of how
- 8 many companies have been certificated as a competitive local
- exchange company. I know there is in excess of 170 in
- 10 Florida. I know you could look at it in terms of how many
- 11 resale lines have been sold. I also believe that there is a
- 12 lot of facility overbuild in Tampa and St. Petersburg, and
- 13 it would be impossible for me to predict or show what those
- 14 competitors are doing in that area. I have no way to know,
- 15 I just know they are there.
- 16 Q What percent of GTE's access lines are actually
- 17 being resold now?
- 18 A It's a small percentage. I don't know the
- 19 percent.
- 20 Q Less than 1 percent?
- 21 A I don't know the percentage.
- 22 Q Less than 95?
- 23 A The same answer.
- 24 Q When you talk about facilities overbuild, what do
- 25 you mean?

- 1 A Companies putting in fiber rings, loops to large
- 2 businesses, installing switches in the Tampa/St. Petersburg
- 3 area, things like that.
- 4 Q Do you have any way -- do you have any knowledge
- 5 of how many customers GTE has lost in its serving territory
- 6 in Florida?
- 7 A Well, it's difficult to answer that question,
- 8 because competitors don't routinely share that information
- 9 with you. I am responsible for the forecasting department.
- 10 The forecasting department in GTE keeps track of things like
- 11 total minutes of use for the market, it keeps track of GTE's
- 12 share of those total minutes.
- 13 In Florida, GTE has lost 63 percent of intraLATA
- 14 toll minutes of use since intraLATA presubscription. It's
- 15 difficult to map those minutes to individual customers. It
- 16 is very difficult to determine is there dial-around between
- 17 Tampa and St. Petersburg. I guess it's possible that
- 18 carriers are going in there and offering dial-around
- 19 programs between those two locations.
- 20 It becomes very, very difficult for GTE to
- 21 demonstrate competitive loss. All we can do is look at the
- 22 revenue stream, and if you will look at Page 6 of my
- 23 testimony, you can look at toll there on Line 14 and see
- 24 that there is only about \$36 million in toll revenue for GTE
- 25 Florida. That number would be unheard of ten years ago.

- 1 That's competition. I would be real surprised if it wasn't.
- 2 Saying which customers in the State of Florida are leaving
- 3 GTE becomes problematic. The same thing occurs on the local
- 4 side. If you were asked how many local customers have left
- 5 the network, it would be very difficult to answer. All I
- 6 know is when they have a local loop they have access to all
- 7 of these other things that competitors are providing and,
- 8 therefore, we lose toll.
- 9 Q Mr. Seaman, isn't it true that ten years ago the
- 10 vast majority of GTE's intraLATA toll routes were converted
- 11 to ECS routes?
- 12 A I don't know the time frame, but the point is
- 13 that there is a significant amount of loss in these numbers
- 14 without regard to who the line is presubscribed to.
- 15 0 Well, if the toll route is converted to a GTE ECS
- 16 route, then GTE isn't losing toll, it's just converting
- 17 revenue to local, isn't that correct?
- 18 A If that were the only phenomenon that was
- 19 happening, that would be correct. I don't believe that's
- 20 correct. What is happening is competitors are -- excuse me.
- 21 Competitors are targeting where the subsidy is. If you look
- 22 at GTE's average rates across the State of Florida, you are
- 23 going to see PBX rates in ridiculously high levels. I can't
- 24 remember the number. It's somewhere near \$100. We are now
- 25 selling unbundled network element loops. We are making that

- 1 available to competitors at the \$20 range. There is a
- 2 significant amount of potential compression there.
- 3 We haven't sold any unbundled network element
- 4 loops. There is a reason for that, I believe. And I
- 5 believe it's because competitors are going to enter first by
- 6 overbuilding and targeting very large, very concentrated,
- 7 very high volume business customers. Once they establish a
- 8 bulkhead, then it's just going to be a matter of time before
- 9 they go further downstream. Today it's unlikely that AT&T
- 10 or MCI's support systems are ready to take large quantities
- 11 of service orders for resale or unbundled network elements.
- 12 It's probably unlikely that GTE's system is ready to do
- 13 that. But it's going to happen and it's going to happen in
- 14 a big way once competitors launch.
- 15 Q Mr. Seaman, you said earlier that you were head
- 16 of forecasting for GTE, is that correct?
- 17 A I was the director of forecasting, and now I'm
- 18 the AVP, and that director reports to me.
- 19 Q Did you or any of your forecasting personnel
- 20 forecast any expense reductions or efficiency gains in
- 21 putting forth your inputs to the BCPM to make them
- 22 forward-looking?
- 23 A You are going to have to ask Dave Tucek that
- 24 question, I'm not certain. Dave does work for me, but I
- 25 don't know the details at that level.

- 1 Q Would you turn over to Page 21. I want to make
- 2 sure that -- I have a question there, I just want to make
- 3 sure that -- if you look at Line 9. Do you see on Line 9,
- 4 it's starting on Line 8, actually. It says that using
- 5 GTE-specific inputs, the total cost of providing basic local
- 6 service in GTE's territory on an annual basis equals 771
- 7 million, do you see that?
- 8 A Yes, I do.
- 9 Q Is that a correct number? It's not a trick
- 10 guestion, because we need to talk about this a little bit.
- 11 A I believe it is a correct number. If you will
- 12 refer to Page 1 of 13 in -- I guess I will call it MCS-2R,
- 13 which is --
- 14 Q I'm sorry, could I get that reference again?
- 15 A MCS-2R, which I believe in Exhibit 34? Is that
- 16 what we called it?
- 17 Q Okay, I've got it. Now, where was I supposed to
- 18 go in that exhibit?
- 19 A Page 1. These are the Hatfield inputs on
- 20 average. And if you will look over in about the third line
- 21 down, I will call it the center of the page, it says
- 22 adjusted total monthly cost, \$33.01. And down about middle
- 23 of the page on the left-hand side of the column, there is an
- 24 eligible lines number, 1,800,000-plus. That 746 million is
- 25 simply multiplying the one point -- I will round it -- 9

- 1 million eligible lines times \$33.01, times twelve.
- 2 Q So that \$771 million number on Page 21, Line 9,
- 3 is not the same \$771 million number that is on Page 6, Line
- 4 177
- 5 A The \$771 million number on Page 6 is not the \$746
- 6 million number on Page 21, is that right?
- 7 Q Okay. There is a --
- 3 A That's correct.
- 10 Line 9 as \$771 million.
- 11 A I believe you are looking at the original
- 12 testimony and that has been revised. In the original
- 13 testimony the two numbers were the same and it was a
- 14 coincidence.
- 15 Q Okay. I believe in your rebuttal testimony you
- 16 have stated that you use the terms support and subsidy
- 17 interchangeably, is that correct?
- 18 A That's correct.
- 19 Q Do you have a copy of GTE's responses to AT&T's
- 20 fifth set of interrogatories, Number 74?
- 21 A I will check.
- 22 Q I've got some extra copies of the page. I was
- 23 trying to avoid a new exhibit, but --
- 24 A I think I have found it.
- 25 Q Okay. Now, I just want to make sure, because I

- 1 had inquired of counsel, but I want to confirm that this is
- 2 not a confidential piece of information from your response,
- 3 is that correct?
- A Are you referring to a specific page of the Bates
- 5 stamped document?
- 6 Q Yes. The page number would be Bates stamped
- 7 Number 0002919?
- 8 A I have it, and it's not marked confidential. And
- 9 I would be okay with talking about it.
- 10 Q Okay. That will make all of our lives
- 11 unmeasurably easier. Now, could you also refer to -- I'm
- 12 going to talk about two different things simultaneously.
- 13 One is the Page 2919, the other is on Page 6 of your direct
- 14 testimony and the chart that you have there.
- 15 A Okay.
- 16 Q Now, from the chart that is in your testimony on
- 17 Page 6, the one major class of revenues that is missing
- 18 would be the residential revenues, would that be correct?
- 19 Everything else would cover virtually the entire company?
- 20 A That's correct, I didn't show it. There are many
- 21 other categories of revenue that you can look on ARMIS and
- 22 find, if you would like, but I did not show local revenue,
- 23 that's correct.
- 24 Q And if you look on 2919, that interrogatory
- 25 response, it does list at the very top in Table 1 your local

- 1 revenue, is that correct, for 1997, Column A?
- 2 A That's correct.
- 3 Q And that would be your 236,372,000 plus
- 4 65,204,000 in end user common line charges, and that would
- 5 constitute your total residence local revenue, would that be
- 6 correct?
- 7 A That's correct.
- e Q And according to that same chart in Column B,
- your direct cost for local residence is \$527,429,000, would
- 10 that be fair?
- 11 A That's fair, but I guess I would like to point
- 12 out Page 2919 of the Bates data request is not the
- 13 information on which I relied to illustrate the implicit
- 14 supports contained on Page 6 of my direct testimony. These
- 15 cost studies were based on the ICM 3.0 version of the cost
- 16 model that was filed in the fair and reasonableness docket.
- 17 And we did not use those numbers in my direct testimony
- 18 because the Florida Legislature directed us to use proxy
- 19 models and we don't consider ICM to be a proxy model. So 1
- 20 will be happy to answer any questions I can about the
- 21 schedule, but if you are trying to get to the basis for Page
- 22 6, you need to go back a couple of pages and look at 2922.
- 23 Q Do you have 2922 handy?
- 24 A Yes, I do.
- 25 Q It doesn't appear that there is -- okay. There

- 1 doesn't appear to be much difference between 2919 and 2922
- 2 in terms of just the numbers in Columns A and B. Let me ask
- 3 it this way. With respect to your chart on Page 6, in your
- 4 column labeled economic costs, in each instance your
- 5 economic costs as stated there are higher than what you have
- 6 calculated as your direct costs on 2919, is that correct?
- 7 A I'm looking at the two schedules. Could you
- 8 repeat the question, please?
- 9 Q I probably don't even need to go there. Let's do
- 10 it another way. I'm sorry to confuse everybody. We can
- 11 stick to 2922, it's probably just as easy. Your economic
- 12 cost of residential local service is 526,683,000, is that
- 13 correct?
- 14 A Yes.
- 15 Q So if I were to do the math, and subtract your
- 16 local service revenues from your local service costs, I
- 17 would come up with a shortfall of \$225,107,000. Does that
- 18 seem fairly correct to you?
- 19 A It's on the table, yes. That is the right
- 20 number.
- 21 Q Now, earlier you said that your total support or
- 22 your total subsidies implicit in your revenues for those
- 23 services on Page 6 is \$487 million, is that correct?
- 24 A That's correct.
- 25 Q Now, the amount of revenue you need to break even

- on your local residence service is only 225 million
- 2 approximately, is that correct?
- 3 A I would have to say no, because I'm not sure I
- 4 understand what break even means. If I were to look at
- 5 Table 2A on Page 2922, what I walk away from that is that
- 6 revenue in comparison to what the Commission has defined as
- 7 my economic cost in the unbundled network element proceeding
- 8 is substantially different, and what you have to do is put
- 9 the signs together here on this chart.
- 10 In other words, you will notice that the local
- 11 revenue is negative and the other items are positive, and so
- 12 to look at the total subsidy flow in all of these services
- 13 you would have to add -- in other words, you would have to
- 14 add the 225 million with the 261 million, and that produces
- 15 the 487 million. Said another way, if the Commission
- 16 ordered UNE prices are correct, then that establishes the
- 17 economic forward-looking floor for the prices that will
- 18 prevail in the marketplace in the future. So you have to
- 19 recast the revenue stream consistent with those defined
- 20 costs. And when you do that you identify a subsidy support
- 21 of nearly half a billion dollars.
- 22 Q Okay. Let me ask you this question. Based on
- 23 your test as you described it to me earlier, where if the
- 24 revenue from the service is equal to or exceeds -- well, if
- 25 the revenue from your service exceeds its economic cost,

- 1 then there is an implicit subsidy, is that correct?
- 2 A I think I answered no to that question the last
- 3 time. What I said you had to do is look at the ebbs and
- 4 flows of where the support comes from and where it is going
- 5 to.
- 6 Q Go to Page 5 of your direct testimony, please.
- 7 And your test for universal service support is that current
- 8 revenues generated by services are now priced above their
- 9 economic cost, and you compare that with the revenues that
- 10 would be generated if the prices were equal to their
- 11 economic cost. Do you see that test?
- 12 A Right.
- 13 Q So if the revenue from a service exceeds its
- 14 economic cost, as you have defined it, then that service is
- 15 providing an implicit subsidy somewhere to something, is
- 16 that correct?
- 17 A Repeat the question.
- 18 Q If the revenue from a service exceeds its
- 19 economic cost, as you have defined it, and based on your
- 20 test, it is providing an implicit subsidy to something?
- 21 A That's correct, but that's only part of the
- 22 equation. There are other services that are priced below
- 23 their economic cost, and that also is part of the ebb and
- 24 flow of the subsidy. So you have to add the two together
- 25 when one sign is negative and the other positive.

- 1 Q What service other than residential as you have
- 2 put it on your chart on Page 6, is below its economic cost?
- 3 A I guess I don't understand the question. The
- 4 elements that we have looked at here on Page 6 exclude local
- 5 residence. That item is picked up on 2922 of the chart and
- 6 the sign is different, so you have to add them. The total
- 7 subsidy requirement in my view is \$487 million. You can't
- 8 net them because the signs are different.
- 9 Q Okay. Let's do it this way. Your local business
- 10 revenue exceeds its economic cost, is that correct? Still
- 11 referring to the chart on Page 6.
- 12 A That's correct, by \$88 million.
- 13 Q And that \$88 million is labeled under Column C an
- 14 implicit support, a subsidy in your terms, is that correct?
- 15 A That's correct.
- 16 Q So take vertical services, it produces an
- 17 implicit subsidy of \$68 million, is that correct?
- 18 A Yes, that's correct.
- 19 Q Now, for residential service, it does not
- 20 generate any ' licit support, does it, based on your
- 21 numbers?
- 22 A That's correct.
- 23 Q And it is short from generating any positive
- 24 implicit support by \$225 million, is that correct?
- 25 A That's correct.

- 1 Q Assume for the moment that you had \$225 million,
- 2 there is a USF fund created of \$225 million. That amount
- 3 would bring your local revenues up to its economic cost, is
- 4 that correct?
- 5 A Yes.
- 6 Q Now, at that point you have a total subsidy,
- 7 implicit subsidy of \$487 million?
- 8 A That's correct.
- 9 Q And if you take \$487 million and you subtract
- 10 \$225 million, you get --
- 11 A 261.985.
- 12 Q \$262 million approximately in implicit support,
- 13 subsidies still flowing from your existing rates and
- 14 revenues, is that correct?
- 15 A An additional implicit support besides the 225
- 16 that you said we already took care of.
- 17 Q What else is being supported if all of your
- 18 services are now covering their economic cost?
- 19 A The firm's total cost.
- 20 Q So the firm's total costs are being subsidized by
- 21 the firm's total services, is that sort of the idea?
- 22 A No, that is not the right idea. What we are
- 23 really saying is that total economic cost is going to fall
- 24 short of actual cost. It always will. The firm has an
- 25 actual cost and it has to reach -- it has to have rates that

- 1 will allow it to recover its actual cost.
- 2 All firms do this, not just GTE. All competitor
- 3 firms do this. Economic cost -- and that's part of the
- 4 problem, by the way, and that's why the testimony says you
- 5 can't rely strictly on economic cost when you look at these
- 6 issues. What you have to do is look at economic cost for
- 7 what it is. It's an estimate of forward-looking cost, and
- 8 you can't price services all there because you won't recover
- 9 the firm's total actual cost. You never will. No firm
- 10 will.
- All firms mark up above that level based on
- 12 market conditions. It's a fact of life. The TELRIC studies
- 13 produce a utopia level of cost that no firm will ever
- 14 achieve in the aggregate. You build a network based on a
- 15 perfect knowledge of demand, you build it all at once. You
- 16 know today, for example, all the roads that are being torn
- 17 up on Capital Avenue, you know in advance. So you don't
- 18 have to come in and supplement loops, you don't have to come
- 19 in and add new switches downstream.
- 20 You know the total volume of the switches that
- 21 you have to put in place today so you can get huge discounts
- 22 from the vendor, but that is not reality. Incremental cost
- 23 studies and economic cost studies are used for directional
- 24 purposes only. When you go beyond that and set prices
- 25 there, then you've got a problem. That problem is the

- 1 firm's total cost will not be recovered.
- Now, just as another example of a common sense
- 3 test that I would ask you to think about, and I will use
- 4 Florida. In 1971, I visited Disney World. At that point
- 5 there was one theme park, the Magic Kingdom. There was only
- 6 one completed hotel, the Contemporary. 27 years later there
- 7 are almost a dozen theme parks in Disney World.
- 8 They now call it Disney Village. You've got
- 9 Epcot, Pleasure Island, Animal Kingdom, Universal Studios,
- 10 River Country, Typhoon Lagoon, with a whole maze of major
- 11 roads and major hotels all sitting on that facility all
- 12 owned by Disney World.
- Now, we are going to come in in 1998 and we are
- 14 going to do a forward-looking cost study of building that.
- 15 Well, it's not reality. It's directional, it's an
- 16 indicator, but you can't use it as an absolute basis to set
- 17 prices. So if we were to assume that we were going to
- 18 rebuild Disney World today with all of those theme parks
- 19 known and measurable today with a perfect knowledge of
- 20 demand about all the millions of customers that are going to
- 21 come in and visit that theme park, then what would happen?
- 22 You would build infrastructure in terms of roads, and you
- 23 would get huge discounts on concrete, and you would get huge
- 24 discounts on rebar to go in the concrete, and you would get
- 25 huge discounts on the earth moving equipment that comes in

- 1 and tears the ground up and puts the roads in. You would
- 2 get enormous discounts on concrete and aggregate, all of the
- 3 components that go into building the Disney World theme
- 4 park.
- 5 But the fact is it's a utopia level, and you
- 6 need to understand what place it serves in the grand scheme
- 7 of things. You can't lose sight of the forest for the
- 8 trees. The fact is the company has actual costs, they are
- 9 large, they are continuing to grow. We have put a billion
- 10 dollars of plant in the ground in the last two years, and
- 11 Hatfield simply will not produce revenues to cover those
- 12 costs. It isn't going to happen.
- 13 So, when you come back to pricing services, we
- 14 have made a decision here in Florida about unbundled network
- 15 element prices based on economic costs. When that decision
- 16 is made, you now have identified the size of the universal
- 17 service support that is implicit in the rates today. It's
- 18 really that simple in my mind.
- 19 And so does the number look ridiculous? I
- 20 suggest that it does. Part of the reason why it looks
- 21 ridiculous is because of the way we have chosen to price
- 22 services, i.e., the unbundled network element loops. So you
- 23 have to take things in their place and evaluate them with
- 24 some kind of common sense test. It doesn't make common
- 25 sense to me that Hatfield would come in and suggest we could

- 1 rebuild the entire network for 50 cents on the dollar, or
- 2 pick any other number that you could put in here. It just
- 3 doesn't make common sense to me. So you have to ground all
- 4 of that in some reality. GTE's reality is the revenue
- 5 stream that it produced. We attempted to offer evidence
- 6 that that was a reasonable approach. It was stricken a few
- 7 minutes ago. That's my answer.
- Q Let me make sure I understand this. If we give
- 9 you -- if the industry, the telecommunications industry
- 10 gives GTE \$225 million, and that would essentially cover the
- 11 economic cost of providing residential service, is that
- 12 correct?
- 13 A Yes, and then there is a bunch of uneconomic
- 14 support that flows through these other services; business,
- 15 vertical, toll, switched access for both state and
- 16 interstate. For example, we have nearly a 7 cent access per
- 17 minute of use charge in the State of Florida. The economic
- 18 interconnection cost is somewhere in the neighborhood of
- 19 half a penny.
- 20 AT&T would suggest just simply ignore that real
- 21 cost and take access prices way down. What they are really
- 22 saying is give me, AT&T, \$300 million, you can add the
- 23 numbers here, 145 and 155, give me \$300 million, I will take
- 24 it to my stockholder and, oh, by the way, Commission, you
- 25 don't have to worry about universal service in GTE's service

- 1 deposit it. Clearly there would be a shift then in the way
- 2 you have provided those services, and they would be lowered
- 3 to -- you are telling me to cost, which then brings another
- 4 issue which counsel brought up earlier, which then how could
- 5 we expect competition if we give you \$487 million, you are
- 6 saying to me you are going to bring all of these implicit
- 7 supports down, which is, in essence, I guess the mark up,
- 8 right, and then you provide them at cost.
- 9 So then I can really not expect competition in
- 10 Florida forever because you basically have -- AT&T is giving
- 11 you money to stay in business and what are you going to do
- 12 -- or what you are telling me you are going to do, I
- 13 guarantee some of it will end up in at a bank, is you are
- 14 going to basically bring it all to your economic cost, is
- 15 that what you are saying?
- 16 WITNESS SEAMAN: Essentially, yes. And there are
- 17 a couple of things I would like to address as the
- 18 underpinning of your question. Back in the interconnection
- 19 days, we argued that it is critically important that UNEs be
- 20 cstablished with some regard for where the network is in
- 21 reality.
- 22 In other words, what we said is that there has to
- 23 be -- I guess I tend to think of myself as a math person.
- 24 There has to be a mathematics formula that is applied to the
- 25 whole principle of pricing. You take retail rates, you

- 1 subtract your retailing cost, you get resale rates,
- 2 unbundled network elements should add back up to that. If
- 3 there is a difference, it's because of either implicit
- 4 supports that need to be taken care of explicitly, or the
- 5 potential for stranded cost. I don't want to go to the
- 6 stranded cost issue.
- 7 BY MR. HATCH:
- 8 Q Now, if what you are saying is --
- 9 COMMISSIONER GARCIA: Thank God, because that
- 10 would mean more than 487 million.
- 11 WITNESS SEAMAN: What I almost hear you saying is
- 12 that this \$261 million is the carrot for competitive entry,
- 13 and I would suggest that if your UNE costs are correct under
- 14 the pricing that you have given to GTE, then it's an
- 15 uneconomic carrot. You only want entry if it is economic.
- 16 It doesn't help consumers to have entry because of implicit
- 17 subsidies. I think Congress recognized that.
- 18 COMMISSIONER GARCIA: I agree, but what you are
- 19 saying -- and I tend to think of myself unfortunately for
- 20 all of us, as a politician, so math is not one of the things
- 21 that enter there. So we are going to go back to this, and
- 22 you are going to work this through for me just so that I
- 23 understand, because Mr. Hatch was doing a good job of it, I
- 24 guess, for the record. Now we will even simplify it for a
- 25 nonmath person.

- Your total here in revenue is 771 million, and
- 2 let me tell you something, I'm inspired by the simplicity of
- 3 this chart. It's good for me to look at it this simply and
- 4 not wade through the other stuff. But at least I guess
- 5 that's what makes it easier also for Mr. Hatch to bring it
- 6 out for us. You are telling me your total revenues were 771
- 7 million. You assessed that part of the subsidy that you
- 8 collect in one shape, way, or form is 487 million. So if I
- 9 were to give you this, it puts you somewhere at 1.1 billion
- 10 or 1.2 billion in revenues, if I were to give you this.
- 11 And then you turn around and say to Mr. Hatch,
- 12 and that's wher: -- and perhaps I just missed it and Mr.
- 13 Hatch is using my ignorance to get us there. So economic
- 14 cost is built in, so you take the 487 million and you say
- 15 that if you got that what you would do is just lower all of
- 16 these implicit supports. So basically then I would find
- 17 that you would be providing these services for, what, their
- 18 economic costs?
- 19 WITNESS SEAMAN: These five services, that's
- 20 correct. That isn't all the services that GTE has.
- 21 COMMISSIONER GARCIA: Okay. So then you would be
- 22 providing it at 284 million, basically, which is your cost,
- 23 your cost of providing all of these services?
- 24 WITNESS SEAMAN: My cost as defined by you. It's
- 25 the UNE costs.

- 1 these services at cost, I'm paying you to provide them at
- 2 cost. How does that move the ball forward?
- 3 WITNESS SEAMAN: In a very dynamic way, in my
- 4 opinion.
- 5 COMMISSIONER GARCIA: Okay.
- 6 WITNESS SEAMAN: Let me try -- there is a whole
- 7 lot of questions in your question. I would like to take
- 8 them in pieces.
- COMMISSIONER GARCIA: Any way you want, just get
- 10 me there.
- 11 WITNESS SEAMAN: Do you have the document that
- 12 has the -- I forgot now what it's called. Page 2914 of
- 13 the --
- 14 COMMISSIONER DEASON: Mr. Hatch, has that been
- 15 identified as an exhibit?
- 16 WITNESS SEAMAN: -- of the discovery request.
- 17 MR. HATCH: Commissioner Deason, I believe it was
- 18 in Staff's original package, but I do not know whether it
- 19 has been distributed.
- 20 WITNESS SEAMAN: Well, I will just speak to it.
- 21 COMMISSIONER GARCIA: Ms. Caswell is ahead of
- 22 you. This is forward-looking.
- 23 WITNESS SEAMAN: 2914.
- 24 COMMISSIONER GARCIA: Do we have this, Staff?
- MS. CASWELL: Yes, it's part of Staff's exhibit.

- 1 CHAIRMAN JOHNSON: Which one is it in, Mr. Cox?
- 2 COMMISSIONER JACOBS: We don't have it yet.
- 3 CHAIRMAN JOHNSON: Oh, we don't have it yet?
- 4 COMMISSIONER GARCIA: All right. I'm looking at
- 5 2914.
- 6 MR. HATCH: I believe there is a proprietary
- stamp on it. I would only caution you because there is a
- 8 problem with this.
- 9 COMMISSIONER GARCIA: All right. Well, go ahead
- 10 and work with the numbers.
- 11 MR. POWELL: It's Exhibit 35 according to my
- 12 list, Madam Chair. I believe it's Exhibit 35.
- 13 MR. COX: It is Exhibit 35. I believe it's Page
- 14 161 of Exhibit 35.
- 15 CHAIRMAN JOHNSON: It's one of the stipulations?
- 16 COMMISSION STAFF: Yes.
- 17 CHAIRMAN JOHNSON: Thank you.
- 18 COMMISSIONER GARCIA: I'm sorry for interrupting
- 19 your line, Mr. Hatch. It's just I just want to get an
- 20 understanding of this. And I appreciate the witness'
- 21 directness in this because it makes it a little bit easier
- 22 for me. All right, we are at Page 2914, right?
- 23 WITNESS SEAMAN: Right. If you would refer to
- 24 the very last line, the third column, it says total
- 25 regulated. There is \$1.4 billion of revenue there. What we

- 1 are really saying is --
- 2 COMMISSIONER GARCIA: Hang on. The last line,
- 3 total regulated?
- 4 WITNESS SEAMAN: Right.
- 5 COMMISSIONER GARCIA: And you want me to go to
- 5 the last line?
- 7 WITNESS SEAMAN: The third column, it says 1997
- 8 revenue.
- 9 COMMISSIONER GARCIA: Is 1.4 billion?
- 10 WITNESS SEAMAN: Right. That's the number that
- 11 GTE achieved in 1997, and after you make implicit supports
- 12 explicit to the tune of roughly half a billion dollars that
- 13 would still be the number. And all we are doing is
- 14 redistributing the categories. And by the way, we are not
- 15 really changing local service rate, it depends on how the
- 16 fund is funded. And that is a whole another question.
- 17 COMMISSIONER GARCIA: That is a whole another
- 18 discussion.
- 19 WITNESS SEAMAN: Right. But the revenue stream
- 20 would stay the same. There is no new revenue here. We are
- 21 not asking for an additional half a billion dollars. The
- 22 way that that would --
- 23 COMMISSIONER GARCIA: Aren't you?
- 24 WITNESS SEAMAN: No.
- 25 COMMISSIONER GARCIA: Where --

1	WITNESS SEAMAN: We would take
2	COMMISSIONER GARCIA: We would take it from
3	there, but you said and that's what troubled me. You
4	said these are all the implicit supports, we bring them down
5	to zero. Now, I don't know why we would want to bring some
6	of these down to zero, but nonetheless you say we bring them
7	down to zero, because I don't think we have ever been
8	charged to look at that concept.
9	But let's say that we followed your advice and
10	told the legislature here is the plan, we are going to give
11	GTE half a billion dollars and for that half a billion
12	dollars what we think we are going to get is a rebalancing
13	of rates. And obviously that is going to come from
14	somewhere, so we would rebalance rates. And what we would
15	do is in some shape, way, or form or another we would
16	increase rates so that these implicit subsidies would be
17	absorbed by the ratepayer in some form. And thereby
18	lowering all these areas of implicit support to zero. In
19	essence, you would be providing them at your economic cost.
20	So what we do is we take the half a billion that you have in
21	the third column in your testimony and we put it in the
22	first column, right?
23	WITNESS SEAMAN: I'm sorry, I was thinking about
24	what I was going to say next. The half a billion

COMMISSIONER GARCIA: Would go into the first

- 1 column, it's revenue now.
- 2 WITNESS SEAMAN: No, there would be an offset for
- 3 that. There would be reductions to go along with that.
- 4 COMMISSIONER GARCIA: Right, I'm agreeing with
- 5 you. You're taking the third column and that goes to zero?
- 6 WITNESS SEAMAN: Right. And then there would be
- 7 reductions in business rates, vertical service rates, access
- 6 rates.
- 9 COMMISSIONER GARCIA: Right, which are the issues
- 10 you said you would bring those all to zero?
- 11 WITNESS SEAMAN: Not to a zero rate.
- 12 COMMISSIONER GARCIA: No, no, you would bring the
- 13 implicit support, you would bring them back to their
- 14 economic cost.
- 15 WITNESS SEAMAN: Right.
- 16 COMMISSIONER JACOBS: Wouldn't there be also an
- 17 increase in the local because you are going to bring that to
- 18 cost, too?
- 19 WITNESS SEAMAN: It depends on how the fund was
- 20 supported. If it were, for example, supported on all retail
- 21 revenue of all carriers in the state there would be an
- 22 increase. I expect it wouldn't be necessarily
- 23 dollar-for-dollar. For GTE, for example, if you were to
- 24 broaden the base of who contributes to the fund, then that
- 25 would be a way of lowering the impact on GTE customers. But

- 1 in terms of the competitive benefit, what you would see is a
- 2 dramatic reduction in usage based rates, a dramatic
- 3 reduction. Toll would come way down; incredibly far down.
- 4 And I think you would see other carriers --
- 5 COMMISSIONER GARCIA: You mean it would come down
- 6 to what? It would come down to -- fine, at least in the
- 7 toll issues it would be AT&T's dream. Obviously you are
- 8 going to stick them for the money somewhere else. But it
- 9 would be for intrastate rates -- according to this, just
- 10 looking at these numbers, you would bring intrastate rates
- 11 down to a tenth of what they are now?
- 12 WITNESS SEAMAN: Right.
- 13 COMMISSIONER GARCIA: Which is, again, something
- 14 that I think some cf the carriers here would want and you
- 15 would bring interstate rates down to about a seventh, and
- 16 that's my poor math, but a fifth or a sixth of what it is
- 17 presently?
- 18 WITNESS SEAMAN: Right. But let's focus on the
- 19 competitive benefits. What you would then have is
- 20 competitors entering on economic decisions rather than
- 21 chasing subsidy support. And the universal service support
- 22 follows the competitor. If a new entrant came in and served
- 23 an area that gets the support, they would receive it. That
- 24 would provide them an incentive to go in and chase, for
- 25 example, residential customers which they claim they don't

- 1 have the incentive to chase today.
- 2 So it would open a whole new world of competitive
- 3 entry, in my view, because anybody that would provide the
- 4 service to those customers that get support or provide the
- 5 support it would follow them. So there would be a huge
- 6 incentive for competitors not to just target downtown Tampa,
- 7 for example, they would be targeting everywhere. And over
- 8 time what you would see is rates would move to those levels
- 9 that --
- 10 COMMISSIONER GARCIA: Wouldn't that have an
- 11 incentive, though -- let's say I was Mr. Hatch's company.
- 12 Wouldn't my incentive be, listen, forget about providing
- 13 local service, these guys just did a rate reduction that is
- 14 massive, they are not taking from this pot anymore, so I'm
- 15 just going to go for my long distance customer because, you
- 16 know, now I've got a good margin there that I can work with
- 17 and I'm going to go for the long distance. I'm going to
- 18 stay in my business, which is what I specialize in, not
- 19 local service, but long distance, because in the end the
- 20 basic customer, the rates that you would create by this are
- 21 at about cost, so why go for them when my business, my core
- 22 business is now available at better rates?
- 23 WITNESS SEAMAN: I think what it would do is
- 24 force large local providers to provide a full spectrum of
- 25 services because --

- COMMISSIONER GARCIA: Because of the hit that 1 they are taking to the universal service, it's better to get 2 into the business than stay out? 3 WITNESS SEAMAN: Right. I mean, what they would 4 have to do is in order to survive they would have to provide 5 residential local service, because they are going to get 6 revenue there. And rather than chasing -- in the charts 7 example what they are chasing is the \$300 million that is in 8 access. What they are chasing is the \$150 million which is 9 in business and vertical services. They are not chasing 10 residential customers today. That's why you do t see 11 resale. That's why you won't see it in rural areas, as 12 13 well. And so when you retool these revenue streams and 14 the economic incentives for entry change, then you are going 15 to see competitors, they will be forced to go into all of 16 these service categories and provide service. The 17 alternative is that we stay where we are and they only 18 target the --19 COMMISSIONER GARCIA: So under your scenario, 20 because the cost of not doing business would be greater than 21 the cost of doing business, they would be forced to compete? 22 WITNESS SEAMAN: You wouldn't have a choice but 23
- residential and business customers. It would open 25

24

to have a full spectrum of services to a whole variety of

- 1 competition in enormous ways to the State of Florida. And,
- 2 in fact, if you look at some of the economic literature that
- 3 has been out there, and I believe part of the foundation for
- 4 Congress in deciding to do what they have done under the act
- 5 is to completely retool the way we think about our business
- 6 today. And doing something dramatic like this would have
- 7 profound effect on entry.
- 8 COMMISSIONER GARCIA: I agree that it would have
- 9 a profound impact. But by doing this, and let me understand
- 10 because I think now I'm understanding -- or at least I'm
- 11 following what you are saying, is that what you would do is
- 12 shift that to a universal fee of some sort. This money
- 13 would come from some mechanism, this half a billion dollars,
- 14 paid for by everybody, I guess. The ratepayers as well as
- 15 the competitors. You would take out all of the implicit
- 16 supports, and so by doing that it sort of forces all the
- 17 players to get into the business or they are out completely?
- 18 WITNESS SEAMAN: Right, exactly.
- 19 COMMISSIONER GARCIA: It's too expensive not to
- 20 be in the business.
- 21 WITNESS SEAMAN: You have to do it all. You
- 22 can't just -- there won't be the margin just in toll to
- 23 chase only the toll customer. There won't the margin just
- 24 to --
- 25 COMMISSIONER GARCIA: It's either you compete or

- 1 you go bankrupt, more or less?
- 2 WITNESS SEAMAN: Yes. And that would be true of
- 3 GTE, as well. Because when you create a large fund, that is
- 4 going to put competition squarely at our door, because that
- 5 fund is going to be available to anybody that chooses to use
- 6 it.
- 7 COMMISSIONER JACOBS: Isn't that fund really
- 8 paying the rent for the local loop?
- 9 WITNESS SEAMAN: I'm sorry?
- 10 COMMISSIONER JACOBS: Isn't that fund really
- 11 paying everybody's rent for the local loop?
- 12 WITNESS SEAMAN: Well, I guess I'm not really
- 13 sure how to answer that question other than to suggest that
- 14 the alternative is much worse. The alternative, I think the
- 15 underpinning of what you are thinking about is that you
- 16 leave rates where they are and over a period of the next
- 17 years, this half a billion dollars goes away because
- 18 competitors will take it, and then GTE knocks on your door
- 19 and says, I've got a total cost problem.
- And the only way I can recover that, since I've
- 21 lost all of my access minutes, I've lost all of my toll
- 22 minutes, I've lost all of my vertical service customers, and
- 23 my local business customers now subscribe to competitive
- 24 local exchange carriers, the only thing I have left is
- 25 residence. Well, the local loop cost doesn't change

- 1 dramatically unless we have overbuild to the local
- 2 subscriber. And you are simply not going to get overbuild
- 3 to the local residential customer with rates like this. You
- 4 won't, it will not happen. It will to customers, it will to
- 5 concentrated customers, but you are not going to see
- 6 competitors building to residential customers. It just
- 7 isn't going to happen.
- 8 So the alternative is much, much worse than what
- 9 I'm talking about, which is to take the support that is in
- 10 the rates today for the local loop, yes, the thing that has
- 11 made universal service possible, that's right, and make
- 12 those supports explicit as Congress has required us to do,
- 13 and reprice the services. And when you do that you are
- 14 going to see dramatic changes in the industry. It's just
- 15 going to happen.
- 16 COMMISSIONER GARCIA: I'm sorry, Mr. Hatch.
- 17 MR. HATCH: I didn't intend for it to drag on
- 18 this long. I have no further questions.
- 19 CHAIRMAN JOHNSON: Go ahead.
- 20 CROSS EXAMINATION
- 21 BY MR. HENRY:
- 22 Q To implement the program that you and
- 23 Commissioner Garcia have been talking about, the Commission
- 24 wouldn't need to choose one of these cost models, would
- 25 they?

- 2 was the question?
- 3 O To implement the proposal that you have been
- 4 discussing, we wouldn't need to actually determine what the
- 5 cost of local universal service was?
- 6 A I guess the answer is yes. And let me try to
- 7 explain what that means to me. To be compliant with the
- 8 Florida Legislature, I think the Commission has an
- 9 obligation to select a cost model, and do it using a proxy
- 10 model. But, the door is swinging wide open as to what you
- 11 do with that information. And I guess the proposal that I
- 12 have been talking about goes way beyond selecting a cost
- 13 model and reporting that to the legislature. I mean, it's a
- 14 dramatic restructuring of the communications industry in the
- 15 State of Florida.
- 16 Q I would agree it would be quite dramatic. The
- 17 \$487 million fund that would be created as a result of this
- 18 proposal that was being discussed, if that fund was created,
- 19 the company would be receiving \$284,000,451 roughly from its
- 20 customers, and 487,092,000 from a government check, in
- 21 effect, right? You would be invoicing the rest of the
- 22 industry to recover that amount, correct?
- 23 A The support mechanism hasn't been determined yet.
- 24 Let's assume -- I don't think I can answer that yes. I'm
- 25 not sure whether I can answer that no or not, so let me try

- to explain what I'm thinking. The \$487 million, if it
- to be charged on the basis of retail revenue would be 2
- charged to GTE's retail customers, as well. And so what i 3 4
- really says is that we have defined the level of economic 5
- cost, and I have said before I don't exactly agree with the 6
- number, but we have nonetheless defined it.
- 7 And that support, anything above that level of
- economic cost is a universal service support. In essence --8
- I hate to even use the word -- it's a hidden tax. It's that 9
- simple. And so the broader you can flow those dollars 10
- across, the better off all customers are. And there are a 11
- lot of ways to do that, some more optimal than others. And 12
- I view it as a benefit in the long-run to the customers in 13
- the State of Florida, because what we are saying is that 14
- outside of intervention, it's doubtful that universal 15
- service would have ever existed in the first place. And so 16
- now it exists and customers have to pay for it because they 17 18
- are the direct beneficiaries of that existence. And so, I
- mean, you can run the numbers and the percentages any way 19
- you want, but the customers benefit by the fact that there 20
- exists universal service. 21
- 22 One final question. I believe you also discussed 23
- that you believed the system whereby we create a fund for
- \$487 million and you get to reduce your rates by that same 24 25
- amount so that your revenues from customers are 284.5

- 1 to explain what I'm thinking. The \$487 million, if it were
- 2 to be charged on the basis of retail revenue would be
- 3 charged to GTE's retail customers, as well. And so what it
- 4 really says is that we have defined the level of economic
- 5 cost, and I have said before I don't exactly agree with the
- 6 number, but we have nonetheless defined it.
- 7 And that support, anything above that level of
- 8 economic cost is a universal service support. In essence --
- 9 I hate to even use the word -- it's a hidden tax. It's that
- 10 simple. And so the broader you can flow those dollars
- 11 across, the better off all customers are. And there are a
- 12 lot of ways to do that, some more optimal than others. And
- 13 I view it as a benefit in the long-run to the customers in
- 14 the State of Florida, because what we are saying is that
- 15 outside of intervention, it's doubtful that universal
- 16 service would have ever existed in the first place. And so
- 17 now it exists and customers have to pay for it because they
- 18 are the direct beneficiaries of that existence. And so, I
- 19 mean, you can run the numbers and the percentages any way
- 20 you want, but the customers benefit by the fact that there
- 21 exists universal service.
- 22 O One final question. I believe you also discussed
- 23 that you believed the system whereby we create a fund for
- 24 \$487 million and you get to reduce your rates by that same
- 25 amount so that your revenues from customers are 284.5

- 1 million, that you believe carriers would be incented to come
- 2 in so that we could win a customer so that we could invoice
- 3 the fund, so that we could draw down a government check?
- A Well, the alternative is worse. I would say
- 5 essentially, yes, but the alternative is that you enter in
- 6 Tampa to avoid having to pay these supports. That is
- 7 exactly what competitors do today. They enter into the
- 8 market to avoid paying it. Who is the bad guy? I don't
- 9 think it's me. All I'm saying is there is a cost of
- 10 universal service, let's have customers pay for it. And we
- 11 can do it in a broad base or a small narrow base. Today no
- 12 one is paying for this as competitors enter. This is
- 13 exposed subsidy that will as sure as we are sitting here go
- 14 away. You can count on that. It will simply go away if UNE
- 15 prices are set at the levels they are set. And that is what
- 16 they are set at. That's my answer.
- 17 COMMISSIONER DEASON: Mr. Henry, are you
- 18 finished?
- 19 MR. HENRY: I have nothing further, thank you.
- 20 COMMISSIONER DEASON: I've got just a few
- 21 questions of Mr. Seaman. I believe you indicated earlier,
- 22 if I took notes correctly, that you have the need of \$225
- 23 million annually to subsidize residential service to equate
- 24 it to its economic cost, am I correct?
- 25 WITNESS SEAMAN: Yes, and just let me remind you

- 1 what that is.
- 2 COMMISSIONER DEASON: I think I know what that
- 3 is. Let me ask my next question. You have also indicated
- 4 there is 487 million of implicit support from the services
- 5 that you have listed on Page 6 of your prefiled direct
- 6 testimony. And if you subtract the 225 million from the 487
- 7 million, I believe you indicated that there is \$262 million
- of contribution which is necessary to cover the total cost
- 9 of the corporation above just economic cost, because we all
- 10 know that there are costs above economic costs. Did I
- 11 understand that testimony correctly?
- 12 WITNESS SEAMAN: That's correct.
- 13 COMMISSIONER DEASON: Okay. Now, if there is
- 14 \$262 million in contribution needed to cover the general
- 15 cost of the corporation above strict economic cost, wouldn't
- 16 it be fair to assume that the services listed on Page 6
- 17 should be priced to contribute some of that contribution to
- 18 your needed 262 million?
- 19 WITNESS SEAMAN: Can I ask you to repeat the
- 20 question?
- 21 COMMISSIONER DEASON: Surely. You have indicated
- 22 that there is 262 million in contribution needed for you to
- 23 cover your total cost, okay. And that is derived by
- 24 subtracting the 225 from the 487. And we all realize that
- 25 the company's total costs need to be recovered, assuming

- 1 that those total costs are at an efficient level. My
- 2 question is wouldn't it be fair to assume that the services
- 3 listed on Page 6 should be priced so as to contribute at
- 4 least some of the needed 262 million, i.e., the other
- 5 services should not be priced at their strict economic cost,
- 6 they should be priced to give you some of that 262 million
- 7 contribution?
- 8 WITNESS SEAMAN: That is a fair question, and the
- 9 way that I would try to address it ideally would be to take
- 10 the center column on Page 6 and change my economic cost.
- 11 Because my personal belief is that those numbers are too
- 12 low.
- 13 COMMISSIONER DEASON: Those numbers are too what?
- 14 WITNESS SEAMAN: Too low. If we were to look at
- 15 cost studies, say BCPM, and put BCPM in there, that number
- 16 changes dramatically. But the numbers are what they are.
- 17 Those numbers are in the marketplace today.
- 18 COMMISSIONER DEASON: So if we assume then that
- 19 we are going to price those above those economic costs as
- 20 you have them, then the \$487 million is reduced by some
- 21 amount?
- 22 WITNESS SEAMAN: Yes.
- 23 COMMISSIONER DEASON: Now my next question. If
- 24 we rebalance rates so basic residential rates go up, there
- 25 is also a reduction in the needed subsidy fund, is that

- 1 correct?
- 2 WITNESS SEAMAN: That's correct.
- 3 COMMISSIONER DEASON: So when we are saying the
- 4 government is writing you a check for \$487 million, that is
- 5 probably worst case scenario?
- 6 WITNESS SEAMAN: Yes, that's exactly right. And
- 7 it's using the unbundled network element costs. And just to
- 8 make sure that we are perfectly clear, when I say change
- 9 Column B here, I'm basically saying I think there is a
- 10 better economic cost for those things than what represents,
- 11 than what is represented here in Column B. I'm not saying
- 12 make it arbitrarily different, I believe there is a
- 13 different economic cost that ought to be in that column.
- 14 COMMISSIONER GARCIA: You think it's greater?
- 15 WITNESS SEAMAN: I think it's greater, yes.
- 16 CHAIRMAN JOHNSON: Do you have any other
- 17 questions?
- 18 COMMISSIONER JACOBS: One question. Would your
- 19 cost be basically what you reflected as your retail prices
- 20 on your exhibit? I'm sorry, your estimated TELRIC on your
- 21 exhibit? Your economic -- what you have proposed to be your
- 22 cost in the middle of Page 6?
- 23 WITNESS SEAMAN: Yes.
- 24 COMMISSIONER JACOBS: I'm trying to get an idea
- 25 of what that would be. And I see in your exhibit, or

- 1 actually it's the page just preceding the one we have been
- 2 looking at, 0002915?
- 3 WITNESS SEAMAN: Right.
- 4 COMMISSIONER JACOBS: You have a column that's
- 5 listed as your estimated TELRIC, is that what you would
- 6 propose?
- 7 WITNESS SEAMAN: I'm sorry, I'm having trouble
- 8 hearing you.
- 9 COMMISSIONER JACOBS: I'm sorry. I have been
- 10 told that. In your Exhibit 0002915, it's just the page
- 11 preceding the one we have been looking at.
- 12 WITNESS SEAMAN: Okay, I'm on 2915.
- 13 COMMISSIONER JACOBS: The very last column, is it
- 14 G? Would that be what you would propose for that middle
- 15 column on Page 6? Actually, I'm sorry, no, that wouldn't be
- 16 -- those are the totals. But it would be based on these
- 17 numbers I guess is what I'm asking.
- 18 WITNESS SEAMAN: I guess I'm having a little
- 19 trouble, partly because I'm still having trouble hearing
- 20 you. But this 2915 is a price out of the existing revenue
- 21 stream.
- 22 COMMISSIONER JACOBS: Okay. What I hear you
- 23 saying, let me -- what I hear you saying is that what you
- 24 have listed on Page 6 now is understated, is that correct?
- 25 WITNESS SEAMAN: Yes, I believe it is.

- 1 COMMISSIONER JACOBS: And what I'm searching for
- 2 is what you would propose to make it correct, okay. And I'm
- 3 asking is this a guide? I know it's not the exact number,
- 4 but is this a guide to the correct number?
- 5 WITNESS SEAMAN: I think that is somewhat
- 6 problematic, because --
- 7 COMMISSIONER JACOBS: It could be. I may be
- 8 totally off base. Feel free to tell me that.
- 9 WITNESS SEAMAN: I mean, it's a valid question.
- 10 The problem that we have, that GTE has and the problem that
- 11 I have in answering your question without rubbing my head,
- 12 is there is a fairly lengthy docket that found -- that had a
- 13 finding on unbundled network element prices and costs. And
- 14 so you kind of have to go back to the beginning in my view
- 15 and --
- 16 COMMISSIONER JACOBS: I recall your discussion on
- 17 that earlier.
- 18 WITNESS SEAMAN: Right.
- 19 COMMISSIONER JACOBS: Okay. Thank you.
- 20 COMMISSIONER DEASON: But just because we set a
- 21 price for UNE at a level, if a competitor is going to take
- 22 advantage of that price they still have their general
- 23 overheads that they have to meet as well, isn't that
- 24 correct?
- 25 WITNESS SEAMAN: That's correct.

- 1 COMMISSIONER DEASON: Comparable to your 262
- 2 million which you referenced earlier.
- 3 WITNESS SEAMAN: Well, I don't know if it is
- 4 comparable or not, but --
- 5 COMMISSIONER DEASON: Well, I'm not talking about
- 6 in amount, but comparable in concept. They have total costs
- 7 they have to meet as well above just whatever incremental
- 8 costs they incur?
- 9 WITNESS SEAMAN: Yes. And when we did the
- 10 analysis on -- when we did the analysis, and the support for
- 11 the analysis is on MCS-1, Page 1-of-1, what we did is we
- 12 added in retailing cost to those unbundled network element
- 13 costs, so that we could count the fact that competitors will
- 14 have retailing costs. So we have raised the number already
- 15 for that amount.
- 16 COMMISSIONER DEASON: But your 262 million is
- 17 more than just retailing costs, is it not?
- 18 WITNESS SEAMAN: Exactly. I mean, it's -- I
- 19 think of it as being --
- 20 COMMISSIONER DEASON: It's the prudent cost, as
- 21 you characterize it, of running your corporation above your
- 22 incremental cost of all the services you provide?
- 23 WITNESS SEAMAN: Yes. And if competitive local
- 24 exchange carriers have a prudent cost of significantly
- 25 higher than your resale discount, then this number is

- 1 missing that.
- 2 CHAIRMAN JOHNSON: Mr. McGlothlin, how much will
- 3 you have?
- 4 MR. McGLOTHLIN: Probably five minutes.
- 5 CHAIRMAN JOHNSON: Go ahead.
- 6 MR. McGLOTHLIN: Thank you, Commissioner.
- 7 CROSS EXAMINATION
- 8 BY MR. McGLOTHLIN:
- 9 Q My client has had a focus on the case, so I have
- 10 been crossing other witnesses, and I just have a few
- 11 questions here. And I will try not to plow old ground too
- 12 much.
- 13 Mr. Seaman, I am Joe McGlothlin with the FCCA.
- 14 It appears to me that your testimony and your proposal is
- 15 built upon a couple of propositions or definitions that I
- 16 want to go over with you very quickly.
- 17 A Okay.
- 18 O First of all, your proposal depends on the
- 19 proposition that the cost of providing local service is
- 20 accurately quantified by the company's existing revenue, is
- 21 that correct?
- 22 A That's correct.
- 23 Q And flowing from that, your proposal also depends
- 24 on the proposition that every dollar beyond economic cost
- 25 that is generated by services other than basic local service

- 1 is by definition a necessary contribution or support to the
- 2 cost of local service, is that correct?
- 3 A I don't think so, no.
- 4 Q Why is that not correct?
- 5 A The supports, I guess, the prices in retail rates
- 6 today serve to cover the firm's in access -- serve to cover
- 7 the firm's total cost. So those two things don't equal as
- 8 far as I know. All I'm suggesting is that we have through a
- 9 proceeding in Florida defined the economic cost of the basic
- 10 building blocks of the network, the pasic local network, and
- 11 that we need to recognize those buildings blocks in
- 12 determining how much subsidy exists in the rates today. And
- 13 it's an ebb and flow. There are subsidies and supports all
- 14 over the place.
- 15 Q But to the extent that some services provide
- 16 revenues in excess of economic costs, your contention is
- 17 that those revenues are necessary to support the subsidized
- 18 services, correct?
- 19 A But not necessarily in that category.
- 20 Q In which category?
- 21 A The category that is over cost. It may be too
- 22 far over cost, as is access, so it needs to come down.
- 23 Q I believe you also state that, and let me make
- 24 clear that by trying to characterize your proposal I'm not
- 25 at all agreeing with these things, but you say that if the

- 1 proxy model yields or indicates a subsidy or needed subsidy
- 2 less than the \$487 million, it is your opinion that it
- 3 should be adjusted to provide the full amount of subsidy you
- 4 recommend, is that correct?
- 5 A Yes. Well, I don't know if the cost model needs
- 6 to be adjusted or not. The \$487 million is the number that
- 7 we believe is the implicit supports in the rates today.
- 8 It's that simple. No matter what the costs show, no matter
- 9 what an incremental cost study shows for basic local
- 10 service. So I don't know if you need to adjust it or not is
- 11 I guess the clarification.
- 12 Q Okay.
- 13 A The support needs to reflect the principles that
- 14 I outlined on Page 6.
- 15 Q Isn't the purpose of the universal service fund
- 16 to provide support for what are defined to be the high cost
- 17 areas?
- 18 A Certainly no.
- 19 Q Okay. Is the purpose of the universal fund
- 20 service fund then to assure that GENTEL will not be exposed
- 21 to loss of revenues in a competitive environment?
- 22 A Absolutely not.
- 23 Q Isn't that the end result of your proposal?
- 24 A Absolutely no.
- 25 Q If you receive the \$487 million subsidy that you

- 1 propose, designed to dovetail with the existing level of
- 2 revenues, how would you lose revenues in a competitive
- 3 environment?
- A As competitors entry, as competitors enter, they
- 5 take revenue and they may, in fact, take the support dollars
- 6 away and GTE will incur losses when that happens.
- 7 MR. McGLOTHLIN: Those are all the questions I
- 8 have.
- 9 CHAIRMAN JOHNSON: We are going to recess until
- 10 tomorrow at 9:00.
- (Off the record briefly.)
- 12 CHAIRMAN JOHNSON: We will go ahead and finish up
- 13 your questions then, so he can perhaps leave. You only have
- 14 five minutes worth?
- MR. COX: Less than five minutes, I think.
- 16 CHAIRMAN JOHNSON: What about the -- well, Ms.
- 17 Caswell, what is the redirect going to be like?
- 18 MS. CASWELL: We might have a couple of
- 19 questions.
- 20 MR. POWELL: Madam Chair, unless there is some
- 21 huge surprise from staff, I don't anticipate any redirect.
- 22 CHAIRMAN JOHNSON: Okay. Go ahead.
- 23 CROSS EXAMINATION
- 24 BY MR. COX:
- 25 Q Good evening, Mr. Seaman. Will Cox on behalf of

- 1 the Commission staff. I just have a couple of questions for
- 2 you.
- 3 A Hi.
- 4 Q Is it your understanding that as a result of this
- 5 proceeding the Commission will issue a report to the
- 6 legislature which will estimate the cost, using
- 7 forward-looking costs based on a geographic area no larger
- 8 than a wire center for basic local telecommunications
- 9 service, is that your understanding?
- 10 A Yes.
- 11 Q Okay. For purposes of that report, how would you
- 12 define cost? For example, would it be the total annual or
- 13 monthly costs, or would it be the average per line cost for
- 14 whatever geographic area was selected?
- 15 A For purposes of the report, I think I will call
- 16 it economic cost, which is forward-looking. And you are
- 17 asking me how would I state the costs?
- 18 Q Correct.
- 19 A I guess that's a good question, because there is
- 20 more than one, there are hundreds. At each wire center, I
- 21 guess, the cost would be stated on a per line basis by wire
- 22 center.
- 23 Q Would the per line basis be annual, monthly, how
- 24 should that be reported?
- 25 A It would probably be easiest to report it on a

- 1 monthly basis, because that's what most people are familiar
- 2 with looking at.
- 3 Q My last line of questioning relates to Page 23 of
- 4 your direct testimony, at Line 18, where you stated that
- 5 costs should be calculated on a basis smaller than a wire
- 6 center, but you didn't specifically specify what level those
- 7 costs should be based on. And staff sent out Interrogatory
- 8 40 to CTE, and essentially asked the question what level
- 9 should it be based on if it should be something less than a
- 10 wire center. And you responded, and you talked about a base
- 11 rate area, and I was wondering if you could explain that
- 12 response that you had for this level of --
- 13 A I guess I was thinking of a base rate area as
- 14 being roughly a circle around the wire center of
- 15 approximately 12,000 feet. I think there is a significant
- 16 cost break in providing services to customers inside the
- 17 base rate area versus outside the base rate area. And I
- 18 think that's all I meant by that.
- 19 Q Now, at what level did GTE actually file
- 20 information? Didn't you actually file it at a grid level?
- 21 A I'm not sure. I know we used BCPM, and I'm not
- 22 sure whether it was at the grid level or the wire center
- 23 level. You will have to ask Dave Tucek.
- Q Why did you think we should use something less
- 25 than at a wire center level?

- 1 A Only because there is a significant variation of
- 2 cost as you look at the density patterns within the wire
- 3 center.
- 4 Q Okay. And you base that conclusion on empirical
- 5 data?
- 6 A No, I haven't conducted anything personally on
- 7 that. I just know from a lot of years of experience that
- 8 that is the case. What I don't know is whether or not Mr.
- 9 Tucek can provide any empirical break points on that or not,
- 10 I don't know. I just know that density is a big cost
- 11 component, and the more lines that you have in a tighter
- 12 density, the more significant reductions there are in cost
- 13 versus customers that sit outside of that dense pattern of
- 14 customers. And my recollection is that the 12,000 feet was
- 15 provided from our engineers, and I just simply accepted it.
- 16 MR. COX: Okay. Thank you, Mr. Seaman. That
- 17 concludes Staff's questions.
- 18 CHAIRMAN JOHNSON: And there is no redirect?
- 19 MR. POWELL: No, ma'am.
- 20 MR. REHWINKEL: Madam Chairman, Charles Rehwinkel
- 21 with Sprint. I just wanted to bring up one matter. I've
- 22 checked with the cross examining parties and discussed it
- 23 with staff, Carl Laemmli, who is listed as a model witness
- 24 is really an input witness, and we would ask that be placed
- 25 after Mr. Dickerson in the order. And I don't think anybody

- 1 has a problem with that.
- 2 CHAIRMAN JOHNSON: Okay. Will do.
- 3 MR. REHWINKEL: Thank you.
- 4 MR. POWELL: Madam Chair, is this also a good
- 5 time to move into evidence the exhibits to Mr. Seaman's
- 6 testimony?
- 7 CHAIRMAN JOHNSON: Uh-huh.
- 8 MR. POWELL: I think you may have misspoke when
- 9 you identified them. I think you may identified MCS-1 and 2
- 10 as 34 and --
- 11 CHAIRMAN JOHNSON: I should have said 54.
- 12 MR. POWELL: 54. So with that correction I ald
- 13 move in Exhibits 54 and 55.
- 14 CHAIRMAN JOHNS(N: Show those two admitted
- 15 without objection. Thank you.
- 16 (Exhibit 54 and 55 received into evidence.)
- 17 MR. POWELL: Thank you, ma'am. One more
- 18 housekeeping item with respect to Mr. Olson's testimony
- 19 tomorrow. There is a single page exhibit attached to Mr.
- 20 Olson's testimony. There are some corrections, and I have
- 21 those available for the Commission and Staff and the parties
- 22 right now if anyone would like to have them today.
- 23 CHAIRMAN JOHNSON: Okay.
- 24 MS. CASWELL: They are over here with the other
- 25 items at the table.

```
MR. POWELL: And just for the ease of people
 1
     looking at them, the corrections are the last five entries
 2
 3
     in Column B, as in boy.
               CHAIRMAN JOHNSON: Thank you.
 4
                MR. POWELL: Yes, ma'am.
 5
                CHAIRMAN JOHNSON: And the witness has been
 6
     excused and we will go ahead and adjourn for this evening.
 7
                (Transcript continues in sequence with Volume
 8
 9
     13.)
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
```

Elite Concordia Utility - CONCORD3

THE STEEL STATE	20119		VOI. 105
	14 [8] 1209:13; 1303:16; 1304:10, 11;	3.0 [1] 1388:15	86 [3] 1372:12, 13; 1378:21
96 [1] 1360:18	1402 [1] 1288:14 1408 [1] 1288:15	300 [4] 1377:22, 23; 1378:23; 1390:8 33.01 [2] 1366:22; 1368:1	
	1409 [2] 1207:5, 6	34 [3] 1305:3; 1365:18; 1410:10	
	1411 [1] 1285:11	35 [4] 1384:11, 12, 13, 14	9,000 [1] 1288:12
	145 [1] 1377:23	30 [1] 1362:24	9 [6] 1365:3, 25; 1366:2, 10; 1406:10
	148 [1] 1285:19	364.025 [1] 1285:0	84 [1] 1380:1
[1] 1287:1	15 [2] 1299:21; 1358:5	2rd [1] 1298:19	85 [1] 1361:22
- [83] 1268:9, 18; 1289:2, 16; 1290:7,	150 [1] 1300:9		960696-tp [1] 1265:4
12, 15; 1291:13; 1292:18; 1295:4;	168 [1] 1377:23	-4-	Bth [1] 1298:24
1296:14; 1297:19; 1300:3, 4; 1301:6;	101 [1] 1304:14		·A·
1302:23; 1304:11, 21; 1383:24; 1388:11, 16; 1387:13; 1388:29;	17 [1] 1360;4 170 [2] 1360;2; 1301;9	4 [3] 1299:13; 1303:15; 1304:11	
1359:6; 1301:3, 1302:4; 1303:20;	18,000 [7] 1292:14; 1293:0, 11; 1294:7;		
186:2, 3, 12, 13, 25; 1366:7, 23;	1296.3; 1290:17, 19	4075 [1] 1285:20	a-elde [2] 1288:10, 18
13-7:11; 1368:25; 1370:13, 34;	18 [1] 1408:4	487 [2] 1351:11; 1353:9	ability [1] 1294:24
1373.10, 25; 1374:3; 1377:5; 1379:3,	19.2 [2] 1268:16, 21	487,092,000 [1] 1353:21	sbove [9] 1371:8; 1374:11; 1395:7;
10, 12, 23; 1380:8, 19; 1381:12;	1971 [1] 1275:4	487 [13] 1354:4; 1369:23: 1370:15;	1397:9, 10, 15; 1390:19; 1402:7, 21
1382:5, 6, 8, 14, 17; 1372:8, 12, 13, 16;	1980s [1] 1355:23	1372:7; 1373:7, 9; 1378:14, 19;	absolute [2] 1375:16; 1378:1
1365.1, 22, 25; 1388:1, 3, 24; 1388:4,	1990a [1] 1355:24	1379:5; 1380:10; 1381:8, 14; 1394:17	absolutely [2] 1405:22, 24
6, 9; 1389:9, 11, 26; 1390:7, 18;	1996 [3] 1369:5, 8; 1379:4	487,082,000 [1] 1384:20	absorbed [1] 1396:17
1391:10, 22, 24; 1394:24; 1396:8, 9;	1997 [4] 1301:12; 1366:1; 1365:7, 11	487 [10] 1395:1, 24; 1397:4, 6, 24;	accept [1] 1354:4
1309:21; 1400:16, 23; 1401:6, 12, 15;	1000 [2] 1285:17; 1375:13	1398:20; 1399:4; 1405:2, 6, 25	accepted [1] 1409:15
1402:4, 10, 18, 19; 1404:8; 1406:16;	1999 [1] 1349:7		access [16] 1293:24; 1360:6; 1362:25
1408:12; 1410:10		-8-	1361:16; 1363:6; 1377:15, 16, 21; 1378:3, 23; 1367:7; 1390:9; 1392:21;
[1] 1285:8 [1] 1286:3	-2-		1404-8, 22
[1] 1200.3	THE STATE OF THE S	8 [1] 1371:8	according [4] 1368:8; 1382:9; 1384:1
.0.	2 [4] 1287:5; 1305:3; 1360:19; 1410:9	50 [1] 1377:1	1388:0
	2-1 [1] 1300:19	52 [3] 1267:4; 1297:19, 22	accurately [1] 1403:20
	20 [2] 1265:18; 1364:1	626,683,000 [*] 1369:12	achieve [1] 1374:14
00 [1] 1408:10	21 [4] 1290:25; 1365:1; 1300:2, 6	827,428,000 [1] 1308:9	achieved [1] 1385:11
0002915 [2] 1400:2, 10	22 [6] 1269:8, 9, 10; 1290:24; 1291:23	53 [4] 1267:4; 1297:18, 19, 22	acres [1] 1297:12
0002919 [1] 1367:7	228,107,000 [1] 1363:17	64 [6] 1287:5; 1305:5; 1410:11, 12, 13,	across [6] 1349:24; 1350:2; 1357:20;
	225 [11] 1370:1, 14; 1372:24; 1372:1, 2,		1350.4, 1363:22; 1305:11
·1·	10, 15; 1377:10; 1398:22; 1357:8, 24	55 [6] 1287:0; 1305:4, 5; 1410:13, 16	ace [2] 1360:3
	23 [4] 1290:24; 1291:23; 1298-25;	58 [1] 1297:12	act [9] 1350:5; 1351:22; 1355:16, 17; 1357:10; 1360:22, 23; 1391:4
	1408:3		actual [11] 1300:10, 18; 1301:21;
1 [3] 1361:20; 1365:12, 19 1,600,000-plus [1] 1365:24	236,372,000 [1] 1368:3 24 [3] 1268:17, 21; 1296:0		1303:3; 1354:17; 1366:3; 1373:24, 26;
1 [1] 1367:26	25 [3] 1293:22; 1295:10; 1355:1		1374:1, 0; 1376:8
1-of-1 [1] 1402:11	26-gauge (1) 1298:8	6,000 [1] 1288:12	actually [9] 1297:6; 1361:4, 16; 1365:4
1.1 [1] 1301:9	201 [3] 1370:14; 1379:8; 1380:12	6 (21) 1352:21; 1362:22; 1366:3, 5;	1384:4; 1400:1, 15; 1408:19, 20
1.2 [1] 1361:10	201.995 [1] 1372:11	1367:13, 17; 1368:14, 22; 1369:3, 23;	add [8] 1301:10; 1370:13, 14; 1371:24
1.4 [2] 1384:25; 1385:9	262 [8] 1375:12; 1307:7, 14, 16, 22;	1372:2, 4, 11; 1307:5, 16; 1308:3, 10;	1372:6; 1374:19; 1377:-72; 1380:2
10 [1] 1354:25	1200:4, 6; 1402:1, 16	1389:22; 1400:15, 24; 1405:14	added [1] 1402:12
100 [1] 1363:24	27 [1] 1375:6	600 [1] 1296:12	addition (1) 1293:3
11 [3] 1288:3, 6; 1358:2	284 [1] 1381:22	63 [3] 1354:5, 7; 1362:13	additional [3] 1293:3; 1373:15; 1385:3
12 [2] 1285:10; 1287:1	284,000,461 [1] 1304:19	65,294,000 [1] 1368:4	address [4] 1298:10, 12; 1379:17;
12,000 [5] 1288:12, 20; 1298:21, 24;	284.6 [1] 1295:25	65 [1] 1378:21	1308.9
1297:13	29 [1] 1378:22	68 [1] 1372:17	adjourn [1] 1411:7
12 [5] 1299:13; 1300:8; 1303:18;	2914 [4] 1383:12, 23; 1384:5, 22	•	edjust [1] 1405:10 adjusted [3] 1365:22; 1405:3, 6
1304:10, 11	2915 [2] 1400:12, 20 2919 [5] 1367:13, 24; 1368:12; 1368:1,	-7-	adjustment [1] 1357:12
12,000 [2] 1408:15, 1409:14 1285 [1] 1285:11	2919 [0] 1307/13, 24; 1306/12; 1306/1,		admitted [2] 1297:20; 1410:14
288 [1] 1286:5	2922 [6] 1366:22, 23; 1360:1, 11;	7 (3) 1285:18; 1290:21; 1377:18	admtd (1) 1387:3
1207 [2] 1206.6; 1287:4	1270:5; 1572:6	74 [1] 1368:20	adal [1] 1296:17
298 [1] 1298:9	25 [1] 1370:5	746 [2] 1368:24; 1360:5	adtran [3] 1294:12, 15, 19
13 [3] 1285:17; 1365:12; 1411:9	2nd [1] 1208:20	771 [8] 1362:25; 1364:4; 1366:6;	advance (1) 1374:17
305 [2] 1287:5, 6		1366:2, 3, 6, 10; 1381:1, 6	advanced (5) 1292:13; 1293:13, 24;
1306 [1] 1286-10	-3-		1294:4, 18
1330 [1] 1286:11			advantage [1] 1401:22
1362 [1] 1386:12			advertising [2] 12( 4:16; 1299:17
1303 [1] 1286:13	3,000 [2] 1288:11	F PM 4300-4-4385-4	advice [1] 1386:9
14,000 [1] 1297:14	5 [3] 1288:00; 1206:1; 1208:25	8 [2] 1300:4; 1385:4	affects [1] 1295:8

after [4] 1301:24; 1368:11; 1385:11; again [7] 1289:16; 1293:12; 1296:14; 1302:3; 1361:1; 1366:14; 1388:13 aged [1] 1295:5 aggregate [4] 1358:15, 16; 1374:14; appressively [1] 1356:9 ago [3] 1362:25; 1363:9; 1377:7 agree (6) 1293:25; 1294:1; 1380:18; 1391:8; 1394:10; 1395:5 agreed [1] 1298:20 agreeing (2) 1387:4; 1404:25 aheed [7] 1383;21; 1384:9; 1393:19; 1403:5; 1401:12, 22; 1411:7 all [75] 1268:16, 19: 1291:7, 8, 21; 1295:14; 1290:11, 21; 1300:22; 1371:19; 1302:4; 1304:19; 1349:24; 1352:10; 1366:21, 23; 1367:1, 22; 1368:2; 1362:21; 1363:5, 6; 1367:10; 13/0:12; 1373:17: 1374:2, 6, 11, 15, 16; 1376:11, 18, 20; 1376:2; 1377:3; 1379:6, 14; 1360:20; 1381:15, 20, 23; 1382:3, 10, 12, 22; 1384:4, 9, 22; 1365:13; 1386:4, 18; 1387:10, 20, 21; 1300:16; 1301:15, 16, 21; 1362:21, 22; 1305:11; 1300:0; 1307:0, 24; 1402:22; 1403:18; 1404:8, 13, 26; 1406:7; allow [1] 1374:1 allowed [1] 1382:4 almost [2] 1378:7; 1360:11 along [1] 1387:3 alroady [5] 1304:18; 1350:23; 1352:4; 1373:16; 1402:14 alternative [6] 1300:18; 1392:14; 1305:8; 1300:4, 5 always [2] 1295:1; 1373:24 emount [11] 1353:22; 1363:13; 1364:2; 1369:25; 1373:2; 1384:22; 1395:25; 1386:21; 1402:6, 15; 1405:3 amounts [1] 1378:7 analog [4] 1269:2, 12, 13, 18 analysis [5] 1303:6, 10; 1402:10, 11 analyzed [1] 1291:25 animal [1] 1375:9 annual [3] 1365:6; 1407:12, 23 annually [1] 1300:23 another [9] 1288:8; 1294:6; 1369:10; 1370:15; 1375:2; 1370:3; 1300:16, 17; answer [26] 1291:11, 24; 1202:1; 1293:12; 1294:1, 2, 0; 1360:17; 1361:1, 23; 1357:26; 1358:1; 1359:25; 1360:21; 1361:7, 23; 1362:7; 1363:6; 1766:20; 1377:7; 1392:13; 1394:6, 24, 25; 1396:16 answered [2] 1349:18; 1371:2 answering [1] 1401:11 anticipate [1] 1406:21 anticipates [1] 1295:7 anybody [8] 1366:16; 1366:13; 1366:3; 1302:5; 1409:25 anymore [3] 1390:1, 14; 1389:14 anyone [1] 1410:22 anything [2] 1395:7; 1409:6

anyway [1] 1504:6 appear [2] 1308:25; 1309:1 appearances [1] 1285:23 appears [1] 1403:14 applied [1] 1379:24 apply [1] 1351:19 appreciate [1] 1354:20 approach [1] 1377:6 approximately [4] 1354:5; 1370:2; 1373:12; 1408:15 arbitrarily [2] 1351:20; 1399:12 area [12] 1300:0, 12, 14; 1301:14; 1362:3; 1368:23; 1407:7, 14; 1408:11, areas [3] 1386:18; 1390:12; 1405:17 aren'i [1] 1380:23 argue [1] 1363:21 argued [1] 1379:10 argument [2] 1302:24; 1304:19 arithmetic [1] 1364:3 armia [1] 1387:21 around [8] 1304:1; 1355:18; 1381:11; 1382:11; 1408:14 mak [18] 1293:21; 1299:7; 1304:24; 1349:20; 1360:13, 22; 1351:19; 1300:2; \*164:23; 1300:2; 1370:22; 1376:3; 1307:3, 18; 1408:23; 1409:24 asked [6] 1291:16, 17; 1367:13; 1363:4; 1378:4; 1400:8 asking [5] 1352:12; 1365:21; 1400:17; 1401:3; 1407:17 assertion [1] 1290:14 assessed [1] 1301:7 assistant [1] 1208:16 associated [2] 1203:15, 10 assume [7] 1373:1; 1378:17; 1382:13; 1304:24; 1307:10; 1300:2, 18 assuming [1] 1397:25 assumption [1] 1209:5 assure [1] 1405:20 attached [1] 1410:19 Attack [1] 1355:13 attempted [2] v365:21; 1377:5 attempting [1] 1209:23 august [2] 1290:19, 25 available [6] 1352:7; 1359:24; 1364:1; 1389:22; 1392:8; 1410:21 avenue [1] 1374:17 average [3] 1363:22; 1365:20; 1407:13 avoid [3] 1360:23; 1300:6, 8 avp [1] 1364:18 aware [2] 1294:12, 15 away [8] 1370:0; 1279:7, 8; 1392:17; 1306:14; 1406:6 ...

b [6] 1300:8; 1300:2; 1300:6, 11; 1411:3 back [9] 1280:13; 1300:6; 1368:22; 1376:13; 1370:16; 1360:2, 21; 1367:13; 1400:14 bad [1] 1306:8 bank [2] 1378:25; 1379:13

bankrupt [1] 1392:1 base [10] 1200:13; 1287:24; 1300:11; 1401:8; 1408:10, 13, 17; 1409:4 based [14] 1291:22; 1354:2; 1368:15; 1370:22; 1371:19; 1372:20; 1374:11, 14; 1378:15; 1388:2; 1400:16; 1407.7; 1400:7, 9 basis [15] 1285:5; 1299:19; 1349:10; 1350:23; 1351:6; 1353:5; 1305:5; 1302:24; 1300:20; 1398:24; 1403:25; 1404:9, 10; 1405:9; 1407:8 basically [6] 1379:10, 14, 1381:16, 22; basis [16] 1304:18; 1350:19, 24; 1357:19, 21; 1358:17; 1359:2; 1365:0; 1308:21; 1375:10; 1365:2; 1407:21, 23; 1406:1, 6 bates [3] 1307:4, 6, 1208:12 bepm [11] 1290:9, 21; 1292:8, 25; 1295:8, 20; 1298:24; 1364:21; 1308:15; 1408:21 bearing [1] 1299:22 became [1] 1350:11 because [49] 1290:21; 1293:7; 1295:2, 4, 8; 1296:19; 1300:23; 1303:21; 1362:8; 1364:6; 1365:10; 1366:25; 1368:18; 1370:3; 1372:8; 1374:8; 1376:21; 1378:6; 1379:10; 1380:3, 6, 16, 23; 1302:23; 1384:7, 21; 1386:7; 1387:17; 1389:3, 15, 19, 26; 1390:1, 6, 21; 1301:10; 1302:3, 4, 17; 1305:14, 17; 1307:9; 1390:11; 1400:19; 1401:6, 20; 1407:19; 1408:1; 1409:1 beck [11] 1299:9, 13; 1300:5, 21; 1301:3, 6; 1303:14, 17, 20; 1304:12, 15 become [1] 1358:13 becomes [3] 1353:17; 1362:20; 1363:3 been [26] 1298:5; 1300:15; 1349:5; 1355:15, 18, 23; 1357:1, 4, 10; 1358:3; 1360:3; 1360:10; 1301:0, 11; 1360:12; 1383:14, 19; 1386:7; 1391:3; 1393:23; 1394:3, 12, 23; 1400:1, 9, 11; 1403:10; before [7] 1285;1, 14; 1301:13, 14; 1364:8; 1395:5 began [1] 1350:\$ beginning [1] 1401:14 behalf [3] 1298:5; 1362:12; 1406:25 being [11] 1291:8; 1303:1; 1304:21, 22; 1361:17; 1373:17, 20; 1374:16; 1304:18; 1402:19; 1408:14 belief [5] 1355:14; 1357:8, 16; 1366:11 bolieve [38] 1289:24; 1290:22; 1292:9; 1298:6; 1297:25; 1301:22, 25; 1340:11; 1362:23; 1363:6, 10; 1367:6; 1358:12, 20; 1300:0, 18; 1301:1, 11; 1363:19; 1364:4, 5; 1365:11, 15; 1308:11, 15; 1383:17; 1384:8, 12, 13; 1301:3; 1305:22; 1306:1, 21; 1307:7; 1300:12; 1400:25; 1404:23; 1405:7 believed [1] 1305:23 believes [1] 1300:9 bell [1] 1355:23 belicore [2] 1295:21, 24

believuth [9] 1290:1, 5, 11, 12; 1291:3,

12, 19; 1296:16; 1299:24

beliaouth's [1] 1290:17 below [2] 1371:22; 1372:2 beneficial [1] 1351:22 beneficiaries [1] 1305:18 benefit [3] 1368:1; 1395:13, 20 benefits [1] 1388:19 besides [2] 1373:15; 1382:2 best [1] 1295:18 better [7] 1291:2, 7; 1360:24; 1369:22; 1390:2; 1395:11; 1399:10 betty [1] 1285:19 between [8] 1288:16, 20; 1291:16; 1302:10; 1362:16, 10; 1369:1 beyond [3] 1374:24; 1394:12; 1403:24 big [4] 1356:23; 1358:20; 1364:14; 1409:10 biggest [1] 1355:25 billion [17] 1370:21; 1370:9; 1381:9, 10; 1382:2, 8, 9; 1384:25; 1385:9, 12, 21; 1308:11, 20, 24; 1301:13; 1392:17 binder [1] 1295:10 bit [4] 1354:3; 1356:12; 1365:10; 1384:21 blocks [Z] 1404:10, 11 board (2) 1349:24; 1378:5 both [8] 1291:17; 1292:7, 12; 1297:20; 1302:12: 1377: -3 bottom [2] 1353:20, 24 bowman [4] 1286:4; 1288:4; 1297:4, 24 box [1] 1285:19 boy [1] 1411:3 break [4] 1389:29; 1370:4; 1408:16; bridge [1] 1295:5 briefly [2] 1349:15; 1406:11 bring [16] 1373:3; 1379:6, 14; 1381:5; 1382:2; 1386:4, 5, 6; 1387:10, 12, 13, 17; 1308:10, 15; 1409:21 brings [1] 1379:3 broad [1] 1396:11 broaden [1] 1387:24 broader [1] 1305:10 brought [2] 1379:4; 1382:3 build [5] 1295:18; 1358:13; 1374:14, 15; 1378:22 building [6] 1291:6; 1351:5; 1375:14; 1376:3; 1393:8; 1404:10 buildings [2] 1356.25; 1404:11 built [2] 1381:14; 1403:15 bulkhead [1] 1364:8 bunch [1] t377:13 busines» [20] 1296:10, 12; 1301:21; 1382:24, 1363:12, 13; 1358:7, 14; 1384:7; 1372:9; 1377:14; 1378:20; 1379:11; 1387:7; 1369:18, 21, 22; 1300:3, 10, 21, 22, 26; 1391:5, 17, 20; businesses [1] 1362:2 buy [1] 1389:4

·c.

e [6] 1286.6; 1286.2; 1296.4, 11; 1363:20; 1372:13 cable [3] 1283:23; 1296.6, 11

calculated [2] 1369:8; 1408:8 calculation [1] 1351:9 california [1] 1306:2 cell [8] 1200:10; 1365:12, 21; 1375:8; called [0] 1284:12; 1285:23; 1286:1, 2; 1298:5; 1300:13; 1365:16; 1383:12 came [1] 1380:22 can't [11] 1285:5, 10; 1296:0; 1304:0; 1363:23; 1372:7; 1374:5, 8; 1376:10; 1378:7; 1391:22 candidly [1] 1302:24 cap [3] 1355:24, 25; 1350:6 capacity [1] 1298:15 capital [1] 1374:17 cape [4j 1356:20, 21; 1360:18, 25 capture [1] 1295.3 card [1] 1293:23 cards [10] 1292:7, 11, 16, 22; 1293:2, 7, 0; 1254:6, 16 care [2] 1373:10: 1380:4 carl [1] 1409:33 carolina [1] 1293:17 cerrier [17] 1289:8, 11, 22; 1290:2, 4, 6, 13, 16, 21; 1291:4, 7, 20; 1292:23; 1293:3; 1357:23; 1358:10 carriers [7] 1362:18; 1367:21; 1386:4, 14; 1302:24; 1308:1; 1402:24 carrot [2] 1380:12, 16 carrying [1] 1355:1 case [8] 1289:25; 1292:1; 1299:19, 22; 1302:15; 1300:5; 1403:9; 1409:6 cases [3] 1284:8; 1290;11; 1359:5 caswell [7] 1304:12, 20; 1383:21, 25; 1406:17, 18; 1410:24 catch [1] 1364:6 categories [3] 1367:21; 1365:14; 1390:17 category [3] 1404:19, 20, 21 Cause [1] 1290:23 caused [1] 1290:18 caution [1] 1384:7 cent [1] 1377:16 center [12] 1285:19; 1365:21; 1398:10; 1407:8, 20, 22; 1408:6, 10, 14, 22, 25; central [2] 1289:14, 22 cents [1] 1377:1 certain [1] 1364:24 certainly [4] 1290:12; 1291:6; 1309:23; 1405:18 certificated [1] 1361:8 chair [7] 1297:25; 1299:6; 1300:7; 1352:7; 1384:12; 1408;20; 1410;4 chairman [48] 1285:14; 1297:1, 5, 17, 20, 23; 1298:2; 1299:8, 10, 12; 1300:3, 0, 21; 1301:1, 3, 6; 1302:1, 6, 22; 1303:12, 15; 1304:2, 8, 9, 16, 21; 1305(1; 1384(1, 3, 15, 17; 1393:19; 1309:16; 1403:2, 5; 1408:9, 16, 22; 1409:18, 20; 1410:2, 7, 11, 14, 23; change [6] 1295:6, 8; 1390:15; 1392:26; 1398:10; 1399:8 changes [2] 1393:14; 1386:16 changing [1] 1385:19

characterize [2] 1402:21; 1404:24 charge [1] 1377:17 charged [3] 1306:8; 1395:2, 3 charges [2] 1350:0; 1368:4 chartes [1] 1409:20 charlie [1] 1304:14 chart [10] 1288:10; 1367:14, 16; 1368:8; 1360:3; 1370:9; 1372:2, 5, 11; charts [1] 1390:7 chase [3] 1388:24; 1389:1; 1391:23 chasing [6] 1388:21; 1380:7, 8, 9, 10 cheaper [1] 1356:16 check [6] 1301:23; 1354:5; 1386:21; 1304:20; 1300:3; 1309:4 checked [1] 1409:22 cherry [1] 1352:1 choice [2] 1290:0; 1390:23 choose [1] 1303:24 chooses [1] 1382:5 chosen [1] 1378:21 circle [1] 1408:14 claim (5) 1292:12, 24: 1299:15; claims [1] 1294:24 clarification [1] 1405:11 ciarii, [1] 1297:12 clarifying [1] 1297:6 utark [6] 1285:15; 1303:11, 17, 24; 1304:3 class [1] 1387:17 clear [4] 1350:10; 1354:18; 1309:8; 1404:24 clearly [1] 1379:1 client [1] 1403:9 closer [1] 1382:3 coincidence [1] 1306:14 collect [1] 1201:8 column [26] 1288:20; 1353:1, 8, 20, 24; 1364:8; 1366:23; 1368:1, 8; 1369:4; 1.172:13; 1378:10; 1384:24; 1385:7; 1380:21, 22; 1387;1, 8; 1308:10; 1300:0, 11, 13; 1400:4, 13, 16; 1411:3 columna [1] 1360:2 come [14] 1369:17; 1374:18; 1376:13, 21; 1376:13, 25; 1366:13; 1368:3, 5, 6; 1391:13; 1396:1; 1404:23 comes [3] 1389:11; 1371:4; 1379:28 commensurate [1] 1353:19 commission [22] 1265:1; 1300:10, 13, 15, 10; 1301:14; 1349:6, 11; 1300:23; 1361:2; 1353:3, 18; 1354:17; 1360:20; 1370:0, 15; 1377;24; 1364:16; 1302:23; 1304:8; 1407:1, 0; 1410:21 commission's [2] 1302:10; 1378:11 commissioner [76] 1265:14, 15, 15; 1303:11, 17, 24; 1304:3; 1378:17, 24; 1300:9, 10; 1301:21; 1382:1, 7; 1363:5, 8, 14, 17, 21, 24; 1384;2, 4, 9, 18; 1366:2, 6, 6, 17, 23, 26; 1366:2, 26; 1387:4, 9, 12, 10; 1388:5, 13; 1389:10; 1340:1; 1301:8, 19, 25; 1362:7, 10; 1383:14, 23; 1384:1; 1386:17, 20; 1307:2, 21; 1300:13, 18, 23; 1300:3, 14, 18, 24; 1400:4, 0, 13, 22; 1401:1, 7, 16, 18, 20; 1402:1, 8, 16, 20; 1403:6

commissioners [1] 1297:5 commissions [1] 1349:24 committee [1] 1301:14 committees [1] 1358:6 common [9] 1349:19; 1350:13, 22; 1388:14; 1368:4; 1379:2; 1376:24; 1377:3 communications [1] 1394:14 companies [6] 1299:24; 1355:23; 1356:1; 1367:19; 1361:8; 1362:1 company [18] 1290:15; 1294:12; 1200:23; 1300:11, 18; 1301:12; 1358:1, 2; 1360:14, 17, 22; 1301:2, 9; 1367:19; 1376:6; 1309:11; 1304:19 company's [2] 1307:25; 1403:20 company-wide [1] 1358:17 comparable [4] 1295.24; 1402:1, 4, 6 compare [1] 1371/9 compared [1] 1291:9 compartson [6] 1288:9; 1291:5; 1363:6, ); 1370:6 compete [2] 1390:22; 1391:25 competition [8] 1360:10; 1363:1; 1379:8, 9; 1382:2, 3, 26; 1391:1; 1302:4 competitive [16] 1353:10; 1355:4, 6, 17; 1360:23, 24; 1361:8; 1362:21; 1360:12; 1386:1, 19; 1389:2; 1302:23; 1402:22; 1405:21; 1408:2 competitor [3] 1374:2; 1388:22; 1401:21 competitors [21] 1301:4, 14; 1302:9; 1363:7, 20, 21; 1364:1, 5, 14; 1378:7; 1358:20; 1389:6; 1390:16; 1391:15; 1302:10; 1303:8; 1390:7, 12; 1402:13; 1406:4 complete [2] 1289:10; 1353:7 completed [1] 1375:6 completely [2] 1391:5, 17 compliant [1] 1384:7 component (2) 1357:6, 1409:11 components [3] 1356:19; 1376:3 compression [1] 1384:2 computer [2] 1356:21, 22 conceivable [1] 1350:10 concentrated [2] 1364:6; 1393:5 concept [4] 1360:18, 18; 1386:8; 1402:6 concern [1] 1299:19 concerned [1] 1378:6 conclude [1] 1290:25 concluded [1] 1285:18 concludes [2] 1352:6; 1409:17 conclusion [1] 1409:4 concrete (3) 1378:23, 24; 1376:2 conditions [1] 1374:12 conducted [2] 1359:3; 1409:8 conference [1] 1285:19 confidential [2] 1367:2, 8 configured [1] 1293:1 confirm (2) 1291:18; 1367:1 confuse [1] 1389:10 confusing [1] 1354:15 congress [8] 1350:6, 14; 1357:9, 13; 1378:3; 1380:17; 1391:4; 1393:12

congressional [2] 1351:18; 1357:8

connect [1] 1288:23 connection [1] 1289:19 connectivity [1] 1292:18 consider [6] 1355:8; 1350:9, 12, 22; 1360:10 considered [2] 1300:19, 20 consistent [2] 1300:17; 1370:19 constitute [1] 1368:5 constitutes [1] 1291:21 construed [1] 1298:18 consulted [2] 1294:19, 20 consumers [2] 1351:22; 1360:10 contained [3] 1302:12; 1351:15; 1268:14 contemporary [1] 1375:6 contend [1] 1302:20 contention [2] 1292:6; 1404:16 continue [1] 1301:24 continued [2] 1286:5; 1288:6 continues [2] 1288:5; 1411:8 continuing [1] 1376:9 contribute [2] 1307:17; 1395:3 contributes [1] 1387:24 contribution [6] 1297:0, 14, 17, 22; 1300:7; 1404:1 contributors [1] 1382:23 conversion [1] 1259:13 conversions [7] 1288:18, 19; 1289:3, 7, converted [2] 1363:10, 15 converting [1] 1363:16 copies [1] 1366:22 copper [2] 1292:18; 1357:4 copy [2] 1306:9, 19 core [1] 1389:21 corporation [3] 1397:9, 15; 1402:21 correct [83] 1268:17, 21, 25; 1269:4, 6, 8; 1292:9; 1293:1, 18, 25; 1296:22; 1297:14, 15; 1353:14, 15, 22, 23; 1354:1, 2, 9, 20, 24; 1360:11, 12; 1363:17, 10, 20; 1364:16; 1365:9, 11; 1380:0, 17, 18; 1367:3, 14, 20, 23; 1268:1, 2, 6, 7; 1360:6, 13, 18, 23, 24; 1370:2, 16; 1371:1, 16, 21; 1372:10, 12, 14, 16, 17, 18, 22, 24, 26; 1373:4, 8, 14; 1377:12; 1380:13; 1381:20; 1204:22; 1308:24; 1307:12; 1300:1, 2; 1400:24; 1401:2, 4, 24, 25; 1403:21, 22; 1404:2, 18; 1405:4; 1407:18 corrected [3] 1289:24; 1298:24; 1299:1 correction [1] 1410:12 corrections [2] 1410:20; 1411:2 correctly [4] 1382:14; 1354:19; 1300:22; 1307:11 cost [126] 1285:5; 1290:20; 1299:19; 1300:23: 1301:21, 23: 1302:10: 1303:1, 3; 1349:10, 17; 1380:20, 23; 1351:2, 3; 1362:10; 1363:14, 10; 1364:17, 21; 1358:10; 1387:4, 5; 1359:34; 1365:5, 22; 1366:9, 15; 1369:12; 1370:7, 25; 1371:0, 11, 14, 10, 23; 1372:2, 10; 1373:3, 18, 18, 23, 24, 26; 1374:1, 3, 5, 6, 7, 9, 13, 22, 23; 1376:1, 14; 1377:11, 18, 21; 1378:12; 1379:3, 8, 14; 1580:1. 6, 6; 1381:14, 22, 23, 24; 1382:4, 12; 1383:1, 2; 1386:19; 1387:14, 18;

1389:21; 1390:21, 22; 1392:19, 25; 1383:24; 1384:5, 8, 12; 1386:5, 8; 1306:9, 24; 1307:8, 9, 18, 23; 1306:8, 10, 15; 1309:10, 13, 19, 22; 1402:12, 20, 22, 24; 1403:19, 24; 1404:2, 7, 8, 21, 22; 1405:5, 9, 16; 1407:6, 12, 13, 16, 21; 1408:16; 1409:2, 10, 12 costs [45] 1300:10, 18; 1349:13, 14; 1350:25; 1351:8; 1353:2; 1354:12; 1358:3; 1386:6, 14; 1357:1, 18, 23; 1358:18; 1369:4, 5, 6, 16; 1370:20; 1373:20; 1378:6, 12, 10; 1378:11; 1202:12; 1381:18, 25; 1397:10, 25; 1398:1, 19; 1309:7; 1401:13; 1402:6, 8, (3. 14, 17; 1404:18; 1508:8; 1407:7, 17; 1408:5, 7 cot [1] : 789:13 could [18] 1290:25; 1292:24; 1210:8, 10; 1358:16; 1301:10; 1365:14; 1367:11; 1309:7; 1376:25; 1277:2; 1379:4; 1:06:2, 3; 1401:7; 1402:13; couldn't [1] 1202:19 counsel [7] 1298:24; 1300:21; 1301:18; 1302:16, 18; 1367:1; 1379:4 count [2] 1390:14; 1402:13 country [2] 1348:24; 1378:10 couple [6] 1305:2; 1368:22; 1379:17; 1403:15; 1406:18; 1407:1 course [1] 1354:16 cover [9] 1290:24; 1367:10; 1376:11; 1377:10; 1367:8, 14, 25; 1404:6 covering [1] 1373:18 cox [0] 1286:15; 1297:3; 1302:9; 1384:1, 13; 1408:15, 24, 25; 1409:16 creete [3] 1389:20; 1392:3; 1395:23 created [3] 1373:2; 1394:17, 18 criteria [1] 1295:4 critically [1] 1378:19 cross [12] 1284:5, 12, 13, 14, 15; 1288:6; 1382:8, 8; 1393:20; 1403:7; 1408:23; 1409:22 crossing [1] 1403:10 current [6] 1291:3, 12; 1362:16; 1355:2; 1357:22; 1571:7 currently [3] 1294:15; 1354:18; 1358:18 customer [7] 1293:4; 1368:11; 1389:15, 20; 1301:23; 1303:3; 1396:2 customers [33] 1291:3; 1295:2; 1352-6; 1358:9, 14; 1369:4; 1362:5, 15; 1363:2, 4; 1364:7; 1375:20; 1347:25; 1388:25; 1380:4; 1390:11, 25; 1302:22, 23; 1303.4, 5, 0; 1304:20; 1305:3, 11, 13, 17, 20, 25; 1390:10; 1408:16; 1409:13, 14

.D.

d [3] 1286:1; 1287:3; 1288:2 darn [1] 1367:18 darned [1] 1367:7 data [7] 1288:24; 1290:24; 1291:23; 1302:6; 1368:12; 1409:5 date [1] 1285:17 dare [3] 1364:23, 24; 1408:23 day [1] 1301:34 days [1] 1379:19 deaf [4] 1349:8, 16, 17; 1357:7 dealing [1] 1349:25 deals [1] 1349:10 deason [17] 1285:14; 1383:14, 17; 1306:17, 20; 1307:2, 13, 21; 1300:13, 18, 23; 1309:3; 1401:20; 1402:1, 16, 20 debated [1] 1303:1 decades [1] 1355:15 deciding [2] 1207:20; 1391:4 decision [2] 1376:14, 15 decisiona [1] 1388:20 decreasing [1] 1367:2 define [2] 1352:15; 1407:12 defined [12] 1351:3; 1353:16; 1354:10; 1370:0, 10; 1371:14, 19; 1381:24; 1285;4, 8; 1404;9; 1400:16 definition [3] 1289:25; 1353:17; 1404:1 definitions [1] 1403:16 degree [2] 1301:10; 1357:25 demand [2] 1374:15; 1375:29 demonstrate [1] 1362:21 dense [1] 1409:13 density [3] 1409:2, 10, 12 deny [1] 1291:18 department [., 1362:8, 10 depends [4] 1385:15; 1387:19; 1403:10, 23 deploy [1] 1294:25 deployed [3] 1290:6, 16; 1309:17 deploys [2] 1290:2, 12 deposit [1] 1379:1 derived [2] 1302:5; 1307:23 describe [1] 1352:19 described [1] 1370:23 describes [1] 1303:22 designed [3] 1294:3; 1366:8; 1400:1 detailed [1] 1291:5 details [1] 1364:25 determination [3] 1295:5; 1302:10, 21 determine [3] 1289:17; 1362:16; 1304:4 determined [3] 1350:23; 1354:14; 1394:23 determining [2] 1292:3; 1404:12 dial-around [2] 1362:16, 18 dickerson [1] 1409:25 dictated [1] 1350:14 didn't [6] 1291:11; 1307:20; 1393:17; 1408:0, 20 difference [2] 1360:1; 1500:3 different [8] 1280:1; 1202:17; 1367:12; 1370:8; 1372:6, 8; 1309:12, 13 difficult [6] 1360:14; 1362:7, 16, 16, 20; difficulty [1] 1283:14 digital [23] 1289:3, 8, 11, 12, 18, 21; 1290:2, 3, 6, 13, 15, 18, 21; 1291:1, 4, 6, 20; 1292:10, 13, 15, 23; 1293:3 dilemma [1] 1356:12 direct [16] 1259:9, 10; 1269:7, 18, 25; 1299:7; 1354:28; 1367:13; 1368:9, 14, 17; 1369:6; 1371:6; 1395:10; 1307:5; 1400:4

directional [2] 1374:23; 1375:15 directness [1] 1384:21 director [2] 1364:17, 18 directory [1] 1290:17 disagree [1] 1292:19 disagrees [1] 1354:12 discount [1] 1402:25 discounts [6] 1374:21; 1378:23, 24, 25; discovery [2] 1302:15; 1383:16 discuss [1] 1301:4 discussed [3] 1364:18; 1395:22; 1409:22 discussing [1] 1304:4 discussion [4] 1294:21; 1297:10; 1385:18; 1401:16 dianey [6] 1375:4, 7, 8, 12, 18; 1376:3 disoriented [3] 1301:16; 1350:7, 1379:3 dispute [1] 1302:15 distance [4] 1296:15; 1389:15, 17, 19 distributed [1] 1383:19 divide [1] 1354:4 dic [2] 1289:12, 22 dochat [4] 1285:4; 1298:18; 1368:16; 1401:12 document [6] 1282:4; 1296:5, 9; 1367:6; 1383:11 documents [1] 1295:25 doesn't [8] 1295:1; 1304:1; 1368:25; 1369:1; 1376:24; 1377:3; 1360:16; doing [9] 1301:21; 1361:14; 1360:23; 1385:13; 1390:21, 22; 1391:6, 9, 16 doller [2] 11:7:1; 1403:24 dollar-for-dollar [1] 1307:23 dollars [14] 1353:10; 1370:21; 1376:10; 1382:3, 8, 9; 1385:12, 21; 1386:11, 12; 1391:13; 1302:17; 1306:10; 1406:5 don't [44] 1290:13, 14, 19; 1298:8, 12; 1366:12; 1366:18; 1366:12, 26; 1350:16, 21; 1301:18, 21; 1362:6; 1363:12, 19; 1364:25; 1368:19; 1309:9; 1372:3; 1374:17, 18; 1377:25; 1380:5; 1382:14, 23; 1384:2, 3; 1386:5, 7; 1388:25; 1390:11; 1394:24; 1395:5; 1306:8; 1402:3; 1404:3, 7; 1405:5, 10; 1406:21; 1408:8, 10, 25 done [6] 1350:20; 1301:9; 1356:11; 1302:4, 5; 1301:4 door [3] 1392:4, 18; 1394:10 doubtful [1] 1395:15 dovetall [1] 1408:1 down [26] 1303:7; 1365:21, 22; 1377:21; 1378:21, 22, 23; 1370:7; 1302:14, 17, 19, 20, 22; 1300:4, 6, 7; 1388:2, 6, 6, 11, 15; 1396:3; 1404:22 downstream [2] 1364:9; 1374:19 downtown [1] 1389:6 dozen [1] 1375:7 dr [3] 1286:4; 1286:4; 1297:3 drag [1] 1393:17 dramatic [0] 1388:2; 1391:6; 1393:14;

1394:14, 16

directed [3] 1349:8; 1767:13; 1368:18

direction [1] 1299:4

drametically (2) 1393:1; 1398:16 draw (1) 1398:3 dream (1) 1388:7 dropped (1) 1356:22 due (1) 1357:12 duly (1) 1298:6 dynamic (1) 1383:3

· E

e [6] 1285:10; 1286:1; 1286:2; 1376:22; each [2] 1309:4; 1407:20 earlier [11] 1293:18; 1297:10; 1349:21; 1360:6; 1364:15; 1369:21; 1370:23; 1379:4; 1390:21; 1401:17; 1402:2 earnings [3] 1299:16; 1302:11; 1360:20 earth [1] 1378:25 eese [1] 1411:1 easier [3] 1367:11; 1381:5; 1384:21 easiest [1] 1407:25 easley [1] 1285:19 easy [1] 1369:11 ebb [2] 1371:23; 1404:13 ebbe [2] 1363:7; 1371:3 economic [65] 1362:16; 1353:2, 14, 16; 1309:4, 5, 11; 1370:7, 17, 25; 1371:9, 11, 14, 19, 23; 1372:2, 10; 1373:3, 18, 23; 1374:3, 5, 6, 23; 1376:15; 1377:11, 17; 1378:11, 12; 1379:14; 1380:15; 1381:13, 18; 1382:12; 1388:19; 1387:14; 1388:20; 1390:15; 1391:2; 1395:4, 8; 1396:24; 1397:9, 10, 15; 1398:5, 10, 19; 1399:10, 13, 21; 1403:24; 1404:9, 16; 1407:16 ecs [2] 1363:11, 15 edict [1] 1251:16 effect [2] 1381:7; 1384:21 efficiency [4] 1358:2, 7, 8; 1364:20 efficient [13] 1356:3, 6; 1357:7, 23; 1358:10, 15, 18; 1359:5, 6; 1360:10; 1301:2; 1300:1 effort [1] 1301;13 either [2] 1380:3; 1391:25 element [13] 1361:3; 1363:3; 1364:10; 1357:14, 20; 1363:29; 1364:3; 1370:7; 1376:15, 22; 1399:7; 16/1:13; 1402:12 elements [8] 1351:5; 1353:5; 1354:13; 1355:11, 12; 1384:11; 1372:4; 1380:2 sityible [2] 1365;24; 1366:1 else [2] 1387:19; 1373:17; 1388:8 embarking [1] 1350:8 empirical [3] 1358:5; 1409:4, 9 employ [1] 1358:19 employed [1] 1298:14 end [5] 1383:6; 1368:4; 1379:13; engineering [3] 1295:22, 24; 1296:3 engineers [1] 1400:15 enhancement [1] 1349:9 enormous [2] 1376:2; 1391:1 ensure [1] 1293:24 enter [8] 1351:25; 1352:1; 1364:5; 1380:21; 1398:8, 7, 12; 1406:4 entered [1] 1357.24

entering [1] 1388:20 entire [2] 1367:19; 1377:1 entirely [1] 1292:17 entirety [3] 1301:7; 1303:19; 1304:13 entrant [1] 1388:22 entrants [1] 1351:25 entries [1] 1411:2 entry [7] 1380:12, 15, 16; 1399:3; 1300:15; 1301:7; 1400:4 environment [4] 1350:7; 1350:17; 1405:21; 1408:3 epcot [1] 1375:9 equal [5] 1291:8; 1370:24; 1371:10; 1371:14; 1404:7 equals [1] 1365:8 equate [2] 1354:18; 1396:23 equatin; [1] 1354:21 equation [1] 1371:22 equipment [7] 1292:18, 20, 21; 1293:3, 16; 1296:1; 1375:25 equipped [1] 1293:7 equity [9] 1299:18, 21; 1300:1; 1301:4; 1302:2, 5, 11; 1303:4, 6 esplanade [1] 1285:20 essence [4] 1363:16; 1367:11; 1379:7; 1386:19; 1396:8 entially [5] 1354:9; 1377:10; 1379:16; 1396:5; 1406:8 establish [1] 1364:7 established [2] 1354:11; 1379:20 establishes [1] 1370:16 estimate [2] 1374:7; 1407:6 estimated [2] 1399:20; 1400:5 evaluate [1] 1376:23 evaluating [1] 1349:13 even [15] 1290:25; 1291:3, 13, 18; 1292:20; 1295:3; 1296:16, 21; 1300:1, 25; 1369:9, 25; 1370:4; 1380:24; evening [3] 1352:11; 1406:25; 1411:7 ever [3] 1374:13; 1388:7; 1386:16 every [4] 1290:14; 1293:11; 1290:18; 1403:24 everybody [3] 1295:16; 1369:10; 1301:14 everybody's [1] 1392:11 everyone [1] 1355:19 everything [1] 1367:19 everywhere [1] 1389:7 e-idence [6] 1297:22; 1300:16; 1358:5; 1377:5; 1410:5, 16 evident [1] 1301:10 evolved [1] 1365:20 exact [1] 1401:3 exactly [7] 1302:20; 1372:15; 1391:18; 1395:5; 1396:7; 1399:6; 1402:18 examination [15] 1286:5, 6, 9, 12, 13, 14, 15; 1268:6; 1297:8; 1298:7; 1302:8, 9; 1303:20; 1403:7; 1409:23 examining [1] 1409:22 example [9] 1374:16; 1375:2; 1377:16; 1387:20, 23; 1388:26; 1380:7; 1390:8; exceeds [7] 1352:18; 1353:14; 1370:24, 26; 1371:13, 18; 1372:10

exchange [3] 1361:9; 1392:24; 1402:24; fifth [2] 1368:20; 1388:16 exclude [1] 1572:4 excuse [1] 1363;20 excused [1] 1411:7 executive [1] 1356:5 auchibit [24] 1297;18, 22; 1298:21; 1299:1; 1302:6; 1305:3, 4, 6; 1365:15, 18; 1366:23; 1383:15, 25; 1384:11, 12, 13, 14; 1309:20, 21, 25; 1400:10; 1410:18, 19 exhibits [7] 1267:1; 1297:17; 1298:19; 1299:3; 1304:25; 1410:5, 13 exist [2] 1301:15, 16 existed [1] 1395:16 existence [2] 1361:13; 1385:18 existing [4] 1373:13; 1400:20; 1403:20; exists [3] 1395:17, 21; 1464:12 expect [3] 1379:5, 9; 1387:22 expense [1] 1364:20 expensive [2] 1382:18; 1391:19 experience [3] 1350:5; 1357:6; 1409:7 experienced [2] 1389:24; 1289:21 explain [6] 1355:10; 1358:2; 1394:7; 1395:1; 1496:11 liek (5) 1350:9, 15; 1351:10; 1385:12; 1393:12 explicitly [1] 1380:4 exposed [2] 1396:13; 1405:20 extended [4] 1292:7, 11; 1293:22; 1294/7 extent [2] 1301:15; 1404:15 extru [1] 1368:22

·F.

f[1] 1285:15 facilities [3] 1296:4; 1356:18; 1361:24 facility [2] 1301:12; 1375:11 fact [12] 1299:22; 1300:13; 1356:14; 1350:5; 1374:12; 1376:5, 8; 1378:4; 1391:2; 1394:20; 1462:13; 1406:5 fair [8] 1301:23; 1352:17; 1368:10, 11, 16; 1307:16; 1308:2, 8 fairty [2] 1389:18; 1401:12 fall [2] 1349:25; 1373:23 familiar [4] 1295:21, 24; 1296:5; 1408:1 family (2) 1350:15, 18 far [4] 1302:19; 1388:3; 1404:8, 22 fashion [1] 1290:12 faurot [1] 1285:21 foo [4] 1349:23; 1360:14; 1358:3; 1378:0 foon [1] 1403:13 february [1] 1349:7 federal [1] 1380:5 fee [1] 1391:12 fuel [1] 1401:8 feet [17] 1288:11, 12, 20; 1292:14; 1203:0, 11; 1204:7, 17; 1206:3; 1200:17, 22; 1297:14; 1400:15; few [6] 1382:12; 1364:10, 22; 1377:4; 1386:20; 1403:10

fiber [1] 1362:1

finding [1] 1401:13 fine [1] 1388:6 finish [1] 1408:12 finished [1] 1396:18 firm [5] 1360:23, 24; 1373:24; 1374:9, firm's [7] 1373:19, 20, 21; 1374:9; 1375:1; 1404:6, 7 firms [6] 1365:24; 1368:2, 7; 1374:2, 3, first [9] 1296:3; 1300:22; 1349:23; 1368:29; 1364:5; 1388:22, 25; 1385:16; 1403:18 five [7] 1352:23; 1350:17; 1301:10; 1403:4; 1408:14, 15; 1411:2 floor [1] 1370:17 florida [32] 1265:1, 7, 20; 1301:12, 21; 1352:2, 10; 1366:1; 1368:16; 1350:1, 14, 19, 20; 1360:13; 1361:1, 5, 10; 1362:6, 13, 25; 1363:2, 22; 1368:18; 1378:4; 1376:14; 1377:17; 1379:10; 1391:1; 1304:8, 15; 1305:14; 1404:0 flow [4] 1370:12; 1371:24; 1395:10; 1404:13 flowing [2] 1373:13; 1403:23 flows [3] 1365.7; 1371;4; 1377;14 focus [2] 1388:18; 1403:5 follow [3] 1349:16, 22; 1389:5 followed [1] 1386:9 following [2] 1302:24; 1391:11 foliows [3] 1288:3; 1298:6; 1368:22 foot [1] 1296:19 force [2] 1360:22; 1380:24 forced [2] 1390:16, 22 forces [1] 1391:16 forecast [1] 1364:20 forecasting [5] 1362:9, 10; 1364:16, 17, forest [1] 1376:7. forever [1] 1379:10 forget (2) 1355:12; 1389:12 forgot [1] 1383:12 forgotten [1] 1289:16 form [4] 1385:24; 1381:8; 1388:15, 17 formula [1] 1379:24 forth [2] 1364:21; 1382:21 forward [3] 1304:9; 1358:8; 1383:2 forward-looking [9] 1253:17; 1359:22; 1364:22; 1370:17; 1374:7; 1375:14; 1383:22; 1407:7, 16 found [2] 1386:24; 1401:12 foundation [1] 1391:3 four [2] 1300:5; 1348:19 fourth [1] 1361:19 frame [1] 1363:12 frames [1] 1369:24 from [42] 1288:5, 5; 1289:11; 1293:20; 1200:0; 1200:16; 1200:24; 1302:5; 1383:25; 1364:8, 19, 22; 1385:7, 13;

Rio [2] 1408;19, 20

filed [3] 1290:18, 23; 1308:18

final [2] 1301:1; 1395:22

find [2] 1367:22; 1361:16

financial [1] 1301:11

1356:6; 1357:6; 1367:2, 16; 1369:16; 1370:5, 24, 25; 1371:4, 13, 18; 1372:23; 1373:13; 1374:22; 1306:2, 13; 1389:14; 1391:13; 1304:19, 20; 1305:25; 1387:4, 6, 24; 1403:23; 1408:21; 1409:7, 15 full [4] 1298:9; 1389:24; 1390:24; function [2] 1284:16, 20 functioning [1] 1380:9 fund [21] 1360:25; 1351:21; 1373:2; 1378:13, 14, 19; 1385:16; 1387:19, 24; 1202:3, 6, 7, 10; 1364:17, 18; 1365:23; 1306:3; 1306:25; 1435:15, 19, 20 fundamental [3] 1300:9; 1349:12, 18 unded [1] 1385:16 further [5] 1296:25; 1297:16; 1364:9; 1303:18; 1306:19 future [2] 1358:8; 1370:15

· G ·

0 [2] 1288:2; 1400:14 gain [1] 1358:7 gains [3] 1350:4, 8; 1364:20 garcia [38] 1385:15; 1378:17, 24; 1380:9, 18; 1381:21; 1382:1, 7; 1383:5, 8, 21, 24; 1384:4, 9, 18; 1385:2, 5, 9, 17, 23, 26; 1386:2, 26; 1347:4, 9, 12; 1388:5, 13; 1389:10; 1390:1, 20; 1301:8, 19, 25: 1303:16, 23; 1304:1; 1299:14 gauge [2] 1295:6, 8 general [3] 1294:4; 1307:14; 1401:22 generate [2] 1354:12; 1372:20 generated [3] 1371:8, 10; 1403:25 generating [1] 1372:23 pentel [1] 1405:29 geographic [2] 1407:7, 14 pets [2] 1378:13; 1368:23 give [14] 1291:7; 1290:10; 1304:17, 19; 1377:8, 22, 23; 1379:5; 1301:9, 10; 1282:7, 8; 1386:10; 1366:6 given [3] 1352:16; 1358:3; 1380:14 gives [2] 1295:18; 1377:10 giving [2] 1379:10; 1382:2 pod [1] 1380:9 goes [5] 1200:8; 1302:3; 1367:5; 1392:17; 1394:12 going [54] 1291:2, 7; 1301:23; 1303:7, 18, 26; 1304:16; 1355:11; 1358:11, 19; 1362:18; 1363:23; 1364:5, 8, 13, 23; 1387:12; 1371:4; 1373:23; 1376:13, 14, 17, 20; 1576:12; 1378:25; 1379:6, 11, 12, 14; 1380:21, 22; 1384:10, 12, 13, 24; 1387:17; 1360:8; 1360:15, 17; 1300:6, 10; 1302:4, 5; 1393:2, 5, 7, 14, 18; 1208:18; 1401:21; 1400:9, 17 going-forward [1] 1350:19 good [7] 1352:11; 1360:23; 1381:3; 1309:10; 1408:25; 1407:19; 1410:4 got [11] 1294:23; 1365:17; 1366:22; 1374:25; 1378-6; 130+.15; 1382:17, 18; 1389:10; 1392:19; 1399:20 government [3] 1384:20; 1396:3;

excess [2] 1361:9; 1404:18

grand [1] 1376:6 grant [2] 1302:23; 1303:13 granted [3] 1302:17; 1304:10, 22 greater [3] 1390:21; 1399:14, 15 grid [2] 1408:20, 22 ground [4] 1376:1, 10; 1377:2; 1403:11 group [3] 1294:21, 23; 1295:10 grow [1] 1376:9 gtd-6 [4] 1358;21; 1350:11, 22; 1360:1 gtd-5s [3] 1308:24; 1359:5, 17 che [50] 1298:1, 16; 1299:22; 1300:9, 21; 1302:16; 1349:16; 1351:13, 24; 1357:27; 1353:11; 1354:12; 1358:8, 24; 1358:1, 9, 16; 1223:15, 17, 21; 1310.17; 1360:13, 19; 1361:1, 4; 1360:6 10, 13, 20, 24; 1363:3, 15, 16; 13/4:11; 1374:2; 1377:10; 1374:13, 19: 13/0:14; 1301:20; 1385:11; 1306:11; 1387:23, 26; 1392:3, 18; 1401:10, 1408:6; 1408:5, 19 gte's [21] 1290:16, 20; 1300:16; 1301:13, 21; 1381:2, 8, 16; 1358:3; 1359:14; 1361:16; 1362:11; 1363:10, 22; 1364:12; 1365:0; 1368:19; 1377:4, 25; 1378:10; 1385:3 gte-specific [1] 1365:5 gteff [1] 1298:5 guarantee [2] 1295:17; 1379:13 guess [24] 1298:11; 1301:17; 1302:25; 1362:17; 1366:12; 1366:11; 1372:3; 1370:7, 23; 1380:24; 1381:4; 1382:17, 23; 1391:14; 1392:12; 1394:6, 11; 1400:17, 18; 1404:5; 1405:11; 1407:19, 21; 1408:13 guide [2] 1401:3, 4 guy [1] 1396:8 guye [1] 1389:13

.H.

hai (2) 1200:22; 1205:7 half [19] 1290:25; 1291:21; 1296:20; 1356:3, 8; 1370:21; 1377:19; 1382:2, 7, 9, 19; 1305:12, 21; 1306:11, 20, 24; 1391:13; 1382:17 handy [1] 1368:23 hang [1] 1385:2 happen [9] 1291:16; 1358:23; 1364:13; 1375:21; 1376:12; 1393:4, 7, 15 happening [2] 1363:19, 20 happens [1] 1406:6 happy [1] 1368:20 hasn't [1] 1204:23 hatch [15] 1286:12; 1352:10, 12; 1380:7, 23; 1381:5, 11, 13; 1382:16; 1383:14, 17; 1384:6, 19; 1383:16, 17 hatch's [1] 1389:11 hate [1] 1395:9 hatfield [10] 1290:11; 1291:1, 12, 22; 1292:0, 20; 1200:21; 1305:10; 1376:11, haven't [3] 1291:5; 1364:3; 1409:6 having [6] 1266:10; 1286:5; 1306:6;

head [2] 1384:15; 1401:11 hear [6] 1303:17, 25; 1304:12; 1380:11; 1400:22, 23 heard [3] 1204:14; 1303:11; 1349:21 hearing [4] 1285:13; 1303:10; 1400:8, help [1] 1300:16 henry [5] 1296:13; 1303:21; 1394:1; 1306:17, 19 here [28] 1280:5, 15; 1202:3, 6, 23; 1200:0; 1302:10, 12, 20; 1303:7; 1367:21; 1370:0; 1372:4; 1370:14; 1377:2, 23; 1378:9; 1381:1; 1382:10, 24; 1383:20; 1396:10; 1388:14; 1308:13; 1399:9, 11; 1403:11; 1410:24 herstofore [1] 1255:23 N [1] 1407:3 hidden [2] 1298:12; 1395:9 high [3] 1363:23; 1364:7; 1405:16 higher [2] 1369:5; 1402:25 him [1] 1303:25 Nia [6] 1200:5; 1209:24; 1299:14; 1300;2; 1301:6; 1302:7 historical [1] 1350:14 history [1] 1350:10 NR [1] 1390:1 hold [1] 1398:24 honor [3] 1u01:2, 9; 1304:5 hotel [1] 1375:6 hotels [1] 1375:11 house [1] 1356:24 households [2] 1350:2 housekseping [1] 1410:18 huge [7] 1381:10; 1374:21; 1378:23, 25; 1369:5; 1406:21 hundreds [1] 1407:20

Pm [63] 1291:14, 24; 1294:10, 18; 1206:7; 1208:10; 1302:9, 23, 24; 1304:8, 12, 16; 1380:21; 1354:6; 1558:11; 1560:6; 1361:6; 1364:17, 24; 1360:14; 1367:11; 1360:7, 10; 1370:3; 1378:9; 1381:2; 1383:1; 1384:4, 18; 1386:23; 1387:4; 1309:14, 17; 1391:10; 1392:9, 12; 1393:9, 16; 1364:1, 24; 1395:1; 1394:9; 1309:0, 11, 20, 24; 1400:7, 9, 12, 15, 17, 18, 19; 1401:1, 2; 1402:5; 1404:8, 24; 1400:21 Pve [10] 1294:14; 1365:17; 1366:22; 1369:16; 1392:19, 20, 21, 22; 1396:20; 1409:21 iom [2] 1360:16, 19 Idea [3] 1373:21, 22; 1309:24 ideally [1] 1200:0 identification [2] 1304:25; 1305:6 identified [5] 1200:15; 1370:10; identifies [5] 1200:9, 10; 1351:10; 1352:22; 1353:1 identity [1] 1379:20 Ignorence [1] 1301:13 ignore [1] 1377:20 ignoring [1] 1362:3

Immaterial [3] 1290:5, 19; 1792:2 impact [6] 1289:2, 17; 1294:22; 1367:25; 1301:0 impaired [1] 1291;10 imperfections [1] 1355:20 Implement [2] 1393:22; 1394:3 implicit [34] 1301:16; 1350:9, 11, 18; 1351:11, 15, 23; 1352:20; 1368:13; 1369:22; 1371:1, 15, 20; 1372:14, 17, 20, 24; 1373:7, 12, 18; 137, "7; 1379:0; 1380:3, 10; 1381:10; 1382:10; 1385:11; 1386:4, 16, 18; 1387:13; 1301:15; 1307:4; 1405:7 important [3] 1300:9; 1301:13; 1379:19 impossible [1] 1361:13 improve [1] 1358:2 Improving [1] 1350:7 incented [1] 1396:1 incentive [6] 1365:21; 1368:24; 1389:1, 6, 11, 12 Incentives [1] 1390:15 Inclined [1] 1302:23 nconcelvable [2] 1356:9; 1357:9 incresse [5] 1382:23, 24; 1386:16; 1387:17, 22 increased [1] 1269:18 increasing [3] 1357:2, 4, 5 Increasingly [1] 1356:13 Incredibly [1] 1388:3 incremental [5] 1360:20; 1374:22; 1402:7, 22; 1405:0 Incumbent [1] 1356:22 Incur [31 1355:4; 1402:8; 1406:6 Indicate [1] 1290:7 Indicated [4] 1398:21; 1397:3, 7, 21 Indicates [1] 1405:1 Indicator [1] 1375:16 individual [1] 1362:15 Industry [7] 1350:12; 1358:4; 1377:9; 1393:14; 1394:14, 22 information [12] 1294:23; 1299:25; 1302:11, 17, 10; 1303:1, 3; 1302:0; 1367:2; 1368:13; 1304:11; 1408:20 infrastructure [1] 1375:22 input [1] 1409:24 inputs [3] 1364:21; 1365:5, 19 inquired [1] 1387:1 inquiry [1] 1300:18 insert [2] 1304:23; 1305:1 inserted [3] 1286:10, 11; 1299:8 Ineide [1] 1408:16 inepired [1] 1301:2 Installing [1] 1362:2 Instance [1] 1389:4 integrated [8] 1290:3, 8, 13, 21; 1291:1, integrating [1] 1291:0 intend [2] 1301:6; 1393:17 Intended [1] 1357:16 Intent [1] 1357:9 Interchangeably [1] 1368:17

Interconnection [3] 1357:14; 1377:18;

Hec's [1] 1355:2 IX-founded [1] 1301:25

Hustrate [1] 1366:13

imagine [1] 1304:3

Interrelate [1] 1301:19 Interrogatories [1] 1366:20 interrogatory (2) 1367:24; 1408:7 interrupting [1] 1384:18 Interstate [6] 1352:25; 1377:16; 1382:16, 20; 1388:15 intervention [1] 1205:15 into [21] 1289:12, 13; 1287:22; 1299:8; 1304:23; 1305:1; 1351:5; 1354:4; 1356:4, 12, 25; 1358:8, 19; 1376:3; 1386:25; 1380:3, 16; 1391:17; 1386:7; intralata [3] 1362:13, 14; 1363:10 intrastate [6] 1299:16; 1352:25; 1382:16, 18; 1386:9, 10 Investment [1] 1356:20 invoice [1] 1396:2 invoicing [1] 1394:21 involved [1] 1289:7 Involves [1] 1294:22 Irving [1] 1298:13 ledn [18] 1292:13, 17, 18, 20, 24, 1283:2, 4, 9, 11, 13; 1294:6, 7, 16, 20. 24; 1295:12, 15; 1296:9 island [1] 1375:9 ian'i [20] 1200:16, 26; 1200:1, 23; 1292:5, 11; 1293:8; 1350:4; 1360:3; 1363:6, 16, 17; 1379:12; 1381:20; 1392:7, 10; 1383:7; 1401:23; 1405:15, loolated [2] 1358:9, 11 issue [18] 1293:11, 13; 1295:17; 1299:14; 1300:12, 22; 1302:2; 1349:7; 1360:4, 10; 1360:4, 10; 1367:7; 1378:5, 6; 1379:4; 1380:6; 1407:5 leaues [11] 1283:15; 1295:9, 14; 1200:19, 22; 1302:26; 1340:17, 25;

1374:6, 1387:9; 1388:7 Hem [2] 1372:5; 1410:18

Items [3] 1295:7; 1370:11; 1410:25

1 [1] 1285:14 Jacobs [15] 1288:16; 1384:2; 1387:10; 1302:7, 10; 1309:18, 24; 1400:4, 9, 13, 22; 1401:1, 7, 16, 13 jane [1] 1285:21 January [1] 1360:18 Job [1] 1380:23 Joe [2] 1285:15; 1403:13 Johnson [44] 1285:14; 1297:1, 3, 17, 20, 23; 1296:2; 1299:12; 1300:3, 6; 1301:1, 3, 8; 1302:1, 8, 22; 1303:12, 16; 1704:2, 5, 9, 16, 21; 1305:1; 1384:1, 3, 15, 17; 1393:19; 1399:10; 1403:2, 5; 1408:9, 12, 16, 22; 1409:18; 1410:2, 7, 11, 14, 23; 1411:4, 6 joint [2] 1349:24; 1379:4 judgment [1] 1349:13 Julia [1] 1285:14 just [82] 1292:10; 1294:2; 1297:6, 11; 1303:2; 1304:7, 10; 1354:3; 1381:15; 1383:16; 1384:8; 1366:2; 1366:25;

1400:7, 18, 19

1369:2, 11; 1374:2; 1375:2; 1377:2, 20; 1380:22; 1381:12, 10; 1382:8; 1383:0, 20; 1384:19; 1388:0; 1389:6, 13, 15; 1391:22, 22; 1393:6, 14; 1390:20, 28; 1387:9; 1389:7; 1400:1, 10; 1401:20; 1402:7, 17; 1403:10; 1407:1; 1409:7, 10, 18, 21; 1411:1

.K.

keep [1] 1378:10 keepe [2] 1362:10, 11 kayer [5] 1286:6; 1297:8, 9, 16, 18 kilohia [2] 1282:16, 17 kind [5] 1703:2; 1360:20; 1376:24; 1382:24: 1401:14 kingdon [2] 1375:5, 9 knocks [1] 1382:18 knowledge [3] 1362:4; 1374:15; 1375:19 known [1] 1375:19

·L-

labeled [3] 1353:1; 1369:4; 1372:13 labor [2] 1356:25; 1357:5 laemmil [1] 1409:23 lagoon [1] 1375:10 large [7] 1351:24; 1362:1; 1364:6, 10; 1376:9; 1389:24; 1392:3 larger [2] 1293:23; 1407:7 last [14] 1358:10, 13, 22; 1357:7; 1359:17; 1360:19; 1371:2; 1376:10; 1384:24; 1389:2, 0; 1400:13; 1408:2; later [1] 1375:8 launch [1] 1364:14 ley [1] 1301:13 least [7] 1292:0; 1359:24; 1360:19; 1381:4; 1388:0; 1391:10; 1388:4 leave [2] 1392:16; 1406:13 leaving [1] 1363:2 lec [1] 1355:22 left [2] 1363:4; 1392:24 left-hand [2] 1218:20; 1366:23 legislative [1] 1300:17 legislature [10] 1300:10, 14, 20; 1301:16; 1349:7; 1368:16; 1386:10; 1394:8, 13; 1407:8 length [1] 1294:22 lengthy [1] 1401:12 leon [1] 1285:16 less [8] 1291:20; 1361:20, 22; 1362:1; 1405:2; 1406:15; 1400:5, 24 let [15] 1202:1; 1355:10; 1361:3; 1369:2; 1370:22; 1377:8; 1381:2; 1383:6; 1391:9; 1394:6, 26; 1390:25; 1397:3; 1400:23; 1404:23 ler's [11] 1288:8; 1292:10; 1508:18; 1360:8; 1369:9; 1372:9; 1388:9; 1308:18; 1389:11; 1304:24; 1390:10 iotter [1] 1298:24 level [17] 1364:25; 1374:11, 13; 1376:5; 1305:4, 7; 1308:1; 1401:21;

1406:1; 1408:8, 8, 12, 19, 20, 22, 23, lovela [4] 1358:2; 1363:23; 1369:8; life [1] 1374:12 like [17] 1283:20; 1297:18; 1549:14, 17; 1301:12; 1302:3, 16; 1367:22; 1368:11; 1378:10, 26; 1379:17; 1383:7; 1391:6; 1383:3; 1406:17; 1410:22 line [30] 1292:16, 22; 1293:2, 6, 11, 22, 23; 1294:8; 1296:9; 1366:1; 1362:23; 1363:14; 1365:3, 4, 20; 1366:2, 3, 10; 1360:4; 1304:19, 24; 1385:2, 6; 1407:13, 21, 23; 1408:3, lines [13] 1294:7; 1295:12, 13; 1289:13; 1309:3; 1303:16; 1304:10; 1361:11, 16; 1305:24; 1308:1; 1400:11 Ret [2] 5367;25; 1384:12 Rated [8] 1354:1, 8; 1397:5, 16; 1398:3; 1400:5, 24; 1409:23 listen [2] 1349:20; 1389:12 Biterature [1] 1391:Z little [6] 1354:3; 1366:12; 1365:10; 1384:21; 1400:18 Rves [1] 1367:10 local [52] 1285:5; 1299:20; 1300:23; 1349:10; 1350:24; 1351:4, 5; 1362:5, 24; 1363:4, 12, 13; 1366:16; 1361:8; 1363:3, 4, 6, 17; 1365:5; 1367:22, 25; 1360:5, 9; 136 12, 16; 1370:1, 10; 1372:4, 9; 1373:3; 1385:15; 1387:17; 1389:13, 19, 24; 1380:6; 1382:8, 11, 23, 24, 25; 1303:1, 3, 10; 1364:5; 1402:23; 1402:10, 25; 1404:2, 10; 1405:8; 1407:8 location [1] 1285:19 locations [1] 1382:19 long [11] 1288:11, 12, 24; 1360:10; 1355:10; 1389:15, 17, 19; 1293:18 long-run [1] 1395:13 longer [5] 1291:9; 1293:14, 16; 1295:1, longest [3] 1291:1, 13, 21 look [28] 1302:18; 1350:15; 1353:20, 24; 1366:8; 1387:16; 1361:10; 1362:21, 27, 23; 1369:21; 1366:3, 20; 1307:21, 24; 1308:22; 1370:4, 12; 1371:3; 1374:5, 6; 1376:10; 1378:5; 1301:3; 1380:0; 1301:2; 1300:14; 1409:2 looked [1] 1372:4 looking [11] 1294:23; 1358:4; 1368:11; 1300:7; 1382:12; 1384:4; 1388:10; 1400:2, 11; 1408:2; 1411:2 looks [2] 1303:8; 1376:20 loop [25] 1289:8, 11, 22; 1290:2, 3, 4, 8, 13, 18, 21; 1291:2, 4, 6, 20; 1292:18, 23; 1203:3, 14; 1204:22; 1206:10; 1563:6; 1302:6, 11, 26; 1303:10 loops [25] 1288:10; 1291:1, 4, 9, 13, 10, 18, 21, 22; 1292:10; 1294:24; 1295:1, 2, 15; 1290:21, 24; 1301:4; 1383:4; 1362:1; 1363:25; 1364:4; 1374:18; 1370:22 lose [3] 1363:8; 1376:7; 1406:2

losing [1] 1363:16 loss [3] 1362:21; 1363:13; 1406:21 losses [1] 1406:8 lost [6] 1362:5, 13; 1382:21, 22 lot [6] 1294:10, 21; 1361:12; 1363:7; 1395:12; 1409:7 low [2] 1396:12, 14 lower [2] 1280:23; 1361:15 lowered [1] 1379:2 lowering [2] 1360:18; 1367:25 lucent [2] 1360:2, 4

- M -

m [3] 1285:10; 1286:4; 1288:4 meade [1] 1298:11 ma'am [4] 1304:24; 1409:19; 1410:17; macrogrid [2] 1297:11, 13 madam [11] 1297:25; 1299:6, 9, 10; 1300:7, 21; 1352:7; 1384:12; 1406:20; 1409:20; 1410:4 made [7] 1291:5; 1351:16; 1360:10; 1370:14, 10; 1370:20; 1303:11 magic [1] 1375:5 maintaining [1] 1261:20 maintenance [1] 1349:9 major [4] 1356:19; 1367:17; 1375:10, majority [1] 1363:10 make [24] 1290:13; 1293:4; 1294:7; 1295:3; 1360:6, 14; 1352:2, 6; 1355:12, 16; 1364;21; 1365;1, 2; 1366;25; 1367:10; 1370:24; 1377:3, 6; 1388:11; 1393:11; 1399:8, 12; 1401:2; 1404:23 makes [3] 1303:24; 1301:5; 1384:21 making [3] 1349:13; 1353:5; 1363:25 mandated [1] 1351:21 manufacture [1] 1300:3 manufacts ad [1] 1360:1 many [11] 1294:5, 24; 1295:2, 4; 1369:6; 1361:3, 8, 10; 1362:5; 1363:4; 1367:20 map [1] 1382:15 marpin [3] 1389:16; 1391:22, 23 mark [3] 1304:25; 1574:11; 1379:7 marked [2] 1305:5; 1367:8 market [11] 1351:25; 1352:1; 1355:4, 8; 1358:18; 1367:24; 1358:13, 19; 1302:11; 1374:12; 1396:8 marketing [1] 1298:17 merketplace [3] 1353:10; 1370:19; 1300:17 marketa (1) 1350:3 mass [1] 1350:10 massive [1] 1389:14 math [8] 1364:6; 1369:15; 1379:23; 1380:20; 1388:10 mathematical (1) 1391:7 mathematics [1] 1279:24 matter [10] 1285:4; 1300:16; 1302:13; 1361:7; 1363:9; 1367:26; 1364:8; 1405:8; 1409:21 metters (1) 1352:5 may [10] 1290:5; 1291:9; 1295:10, 23;

1410:0, 0 maybe [1] 1354:15 mass [1] 1375:10 moglothlin [7] 1286:14; 1403:2, 4, 6, 8, 13; 1400:7 mcl's [1] 1364:10 mcs [1] 1287:6 mcs-1 [5] 1287:5; 1298:19; 1305:3; 1402:11; 1410:9 mcs-2 [2] 1298:29; 1299:1 mcs-2r [2] 1385:12, 15 mcs-3 [2] 1296:21; 1306:3 meade [4] 1286:8; 1297:25; 1298:4, 11 mean [13] 1289:17; 1302:4; 1301:25; 1378:17, 18; 1380:10; 1382:5; 1388:5; 1300:4; 1304:13; 1305:19; 1401:0; 1402:18 means [2] 1370:4; 1394:7 meant [1] 1400:18 measurable [1] 1375:19 mechanism [3] 1357:10; 1391:13; 1394:23 most [2] 1401:23; 1402:7 melson [2] 1297:1, 2 microgrid [2] 1297:11, 12 mid-1995 [1] 1360:17 middle [3] 1386:22; 1399:22; 1400:14 might [4] 1349:20; 1350:3, 16; 1408:18 million [73] 1350;2; 1351;11; 1263;9, 25; 1354:4; 1358:14; 1362:24; 1365:7, 24; 1366:1, 2, 3, 5, 6, 10; 1369:23; 1370:1, 14, 15; 1372:7, 12, 13, 17, 24; 1373:1, 2, 7, 9, 10, 12; 1377:10, 22, 23; 1378:8, 15, 20, 21, 22, 23; 1379:5: 1360:10, 12: 1361:1, 7, 6, 14, 22; 1390:8, 9; 1384:17; 1305:1, 24; 1396:1, 23; 1397:4, 0, 7, 14, 18, 22; 1300:4, 6, 20; 1399:4; 1402:2, 19; 1405:2, 6, 25 millions [1] 1375:20 mind [4] 1294:5; 1350:17; 1376:18; minus [1] 1299;16 minute [1] 1377:17 minutes [10] 1362:11, 12, 14, 15; 1377:7; 1392:21, 22; 1403:4; 1400:14, missed (1) 1351:12 missing [2] 1367:17; 1-403:1 misspoke [1] 1410:8 misunderstood [1] 1291:15 model [22] 1290:6, 10, 20, 22; 1291:1, 13, 22; 1292:8, 25; 1293:6; 1296:7; 1296:21, 24; 1368:10, 19; 1304:9, 10, 12; 1405:1, 5; 1409:23 modeled [2] 1290:9, 10 models [4] 1292:3; 1300:14; 1368:19; modem [1] 1289:19 modems [5] 1288:15, 24; 1284:2; moment [4] 1289:15; 1282:11; 1301:2; money [4] 1379:11; 1382:24; 1388:8; 1391:12 manopoly [2] 1355:16; 1360:23

1301:2; 1401:7; 1404:21; 1406:5;

monthly [4] 1365:22; 1407:13, 23; more [17] 1292:4; 1293:14; 1296:23; 1350:13; 1368:16; 1350:5; 1301:1; 1380:10; 1382:18; 1382:1; 1395:12; 1402:17; 1407:20; 1406:11, 12; morning [2] 1297:13; 1304:5 moet [6] 1294:0; 1295:10; 1355:22; 1357:23; 1358:7; 1400:1 motion [5] 1302:23; 1303:13; 1304:19, 22 move [7] 1297;18; 1300;2; 1358;9; 1383:2; 1389:8; 1410:5, 13 moved [1] 1355:25 moving [1] 1375:25 much [17] 1294:8; 1295:3; 1300:15; 1350:4; 1350:3, 5; 1350:6, 6, 14; 1301:3; 1300:1; 1302:14; 1303:0; 1403:2, 12; 1404:12 n·ultiplying [1] 1365:25 must [3] 1291:15; 1561:16; 1363:18 my [50] 1280:10; 1291:11, 18; 1292:1; 1204:3; 1298:11, 12; 1298:13; 1349:20; 1350:17, 20; 1351:9, 10, 15; 1362:6, 11, 21; 1365:11; 1367:6, 16; 1358:11; 1359:10; 1360:21; 1362:22; 1366.0; 1368:14, 17; 1370:7; 1372:7; 1376:18; 1377:7, 24; 1381:13, 24; 1383:3; 1384:11; 1388:16; 1389:3, 12, 15, 18, 21; 1302:21, 22, 23; 1306:10; 1307:3; 1308:1, 10, 11, 23; 1401:11, 14; 1403:9; 1408:3; 1409:14 myself [2] 1379:23; 1380:19

-N -

n [2] 1288:1; 1288:2 name [5] 1286:3; 1294:14; 1290:9, 11; 1352:11 narrow [1] 1390:11 national [1] 1359:2 near [Z] 1295:13; 1363:24 nearly [3] 1370:21; 1377:10; 1378:23 necessarily [3] 1289:9; 1387:22; necessary [7] 1293:23; 1349:13; 1350:8; 1363:10; 1397:8; 1404:1, 17 need [14] 1292:17; 1304:1; 1365:10; 1368:22; 1369:8, 25; 1376:6; 1380:4; 1383:24; 1394:4; 1396:22; 1397:26; 1404:11; 1405:10 needed [6] 1387:14, 18, 22; 1396:4, 25; needs [3] 1404:22; 1405:5, 13 negative [3] 1200:21; 1370:11; 1371:25 negotiations [1] 1357:14 neighborhood [1] 1377:18 neither [2] 1292:25; 1293:6 net [1] 1372:0 network [36] 1289:7; 1290:12; 1291:6, 12, 19; 1295:7, 11, 18; 1296:1, 4; 1351:3, 6; 1353:3; 1354:10, 13; 1367:13, 20; 1350:12, 13, 21; 1303:5, 25; 1364:3; 1370:7; 1374:14; 1376:14,

22; 1377:1; 1379:20; 1300:2; 1399:7; 1401:13; 1402:12; 1404:10 never [1] 1374:9 new [6] 1361:12, 14, 26; 1366:23; 1374:19; 1386:20; 1388:22; 1389:2 next [7] 1298:1; 1301:5; 1304:2; 1380:24; 1302:16; 1307:3; 1300:23 none [1] 1299:24 nonetheless [4] 1351:17; 1354:12; 1300:0; 1395:0 nonexistent [1] 1288:10 nonmath [1] 1380:25 nor:sense [2] 1378:1 nor [1] 1202:25 note [1] 1355:12 noted [1] 1255:23 notes [1] 1390:22 nothing [5] 1301:19; 1351:14; 1378:16, 17; 1390:19 notice [1] 1379:10 notion [1] 1357:17 number [39] 1267:3; 1269:2, 21; 1296:24; 1302:6; 1351:14, 17, 18; 1353:21; 1356:5; 1558:6, 0; 1362:26; 1363:24; 1365:9, 11, 24; 1366:2, 3, 5, 6, 6, 20; 1367:6; 1369:20; 1376:19; 1377:2; 1386:10, 13; 1306:4; 1300:15; 1401:3. 4; 1402:14, 25; 1405:8 numbers [19] 1301:18, 20; 1302:4, 5; 1383:0; 1383:13; 1388:13; 1368:17; 1309:2; 1372:21; 1377:23; 1364:10; 1388:10; 1385:19; 1398:11, 13, 16, 17; 1400:17

0 [1] 1208:2 oath [1] 1288:5 object [4] 1301:8, 18; 1303:19; 1304:13 objection [8] 1297:21; 1299:9, 10, 14; 1301:28; 1303:23; 1304:21; 1410:15 obligation [1] 1384:9 obviously [2] 1386:13; 1388:7 occur [2] 128(:3; 1387:14 occurs [1] 1363:3 october [2] 1285:17; 1298:24 off [4] 1552:1; 1385:11; 1401:8; offer [1] 1377:5 offering [1] 1382:18 office [4] 1209:14, 23; 1302:16, 16 officer [1] 1302:17 offeet [1] 1397:2 oh [2] 1377:24; 1384:3 okay [33] 1209:16; 1291:14; 1293:6; 1200:2; 1200:12; 1301:0; 1306:17; 1366:7, 15, 26; 1367:9, 10, 15; 1368:25; 1370:22; 1372:9; 1381:21; 1363:6; 1367:13, 23; 1400:12, 22; 1401:2, 19; 1403:17; 1406:12, 19; 1408:22; 1407:11; 1409:4, 10; 1410:2, old [1] 1403:11 older [1] 1295:5 atson [3] 1301:5, 6; 1303:18

one [36] 1284:13, 22; 1292:4, 21; 1294:5; 1295:6; 1297:6; 1300:14; 1302:22: 1304:7; 1350:3, 16; 1354:15; 1355-11, 13; 1365:25; 1367:13, 17; 1371:25; 1375:5, 6; 1378:9; 1380:20; 1301:0; 1302:15, 10; 1304:1, 15; 1363:24: 1366:22; 1306:12; 1309:18; 1400:1, 11; 1407:20; 1409:21; 1410:17 ones [1] 1298:19 only [20] 1268:11; 1296:20; 1290:23; 1300:18; 1301:9 1760:18; 1362:24; 1363:10; 1370:1; 1371:21; 1374:24; 1375:5; 1380:15; 1384:7; 1390:18; 1301:23; 1302:20, 24; 1400:13; 1400:1 open [3] 1389:2; 1300:25; 1394:10 operates [1] 1356:1 operating [1] 1253;14 spinion [2] 1383:4; 1405:2 apportunity [4] 1295:19; 1302:18; 1304:18, 19 opted [1] 1380:18 optimal [1] 1395;12 order [2] 1390:5; 1409:25 ordered [2] 1353:3; 1370:16 orders (1) 1364:11 original [3] 1366:11, 12; 1353:18 other [37] 1268:24; 1291:8; 1293:13, 16; 1294:2, 4; 1295:8, 11, 12; 1300:8; 1301:9; 1366:18; 1350:6; 1363:7; 1307:13, 21; 1370:10, 11, 12; 1371:22, 29; 1372:1; 1377:2; 1378:0; 1379:22; 1301:4; 1300:4; 1302:13; 1300:4; 1399:16; 1403:10, 25; 1410:24 others [1] 1395:12 ought [1] 1309:13 our [10] 1354:11; 1358:8; 1357:12, 19, 21; 1367:10; 1391:8; 1392:4; 1409:15 out [19] 1292:14; 1293:9; 1294:7, 23, 25; 1304:6; 1351:6, 12; 1353:4; 1366:14; 1369:7; 1368:12; 1361:6; 1390:3; 1391:3, 15, 17; 1400:20; outlined [1] 1405:14 outside [5] 1350:15; 1357:3; 1395:16; 1408:17; 1409:13 over [21] 1295:12; 1296:9, 21, 24; 1302:10; 1350:21; 1365:1; 1356:10, 22; 1367:5; 1361:3; 1365:1, 20; 1389:7; 1392:16; 1403:16; 1404:14, 21, 22; 1410:24 overall [3] 1300:18; 1303:8; 1367:18 overbuild [5] 1355:22; 1361:12, 24; 1303:1, 2 overbuilding [1] 1364:6 overheads [1] 1401:23 own [1] 1288:23 owned [2] 1300:3; 1375:12

elson's [10] 1301:4; 1302:6, 12, 14;

1303:2, 4, 22; 1304:13; 1410:18, 20

once [3] 1364:7, 14; 1374:15

p [2] 1285:10; 1268:2 peckage [1] 1383:18

page [55] 1286:3; 1288:8; 1290:24; 1294:19; 1299:12; 1303:16; 1304:11; 1382:21; 1364:25; 1365:2; 1362:22; 1305:1, 12, 19, 21, 22; 1300:2, 2, 5, 6, 22; 1367:4, 6, 13, 17; 1366:12, 14, 21; 1369:3, 23; 1370:6; 1371:6; 1372:2, 4, 11; 1383:12; 1384:13, 22; 1397:5, 10; 1398:3, 10, 1399:22; 1400:1, 10, 15, 24; 1402:11; 1405:14; 1408:3; 1410:19 pages [6] 1265:11; 1291:23; 1294:21; 1298:25; 1368:22 paid [2] 1382:4; 1391:14 pair [2] 1295:10, 16 park [3] 1376:5, 21; 1376:4 parks [2] 1375:7, 18 part [14] 1306:7, 15, 19; 1302:6; 1353:5; 1355:23; 1360:12; 1371:21, 23; 1374:3; 1376:20; 1361:7; 1383:25; particular [1] 1302:14 parties [2] 1409:22; 1410:21 partly [1] 1400:19 parts [1] 1300:8 patiern [1] 1400:13 patterns [1] 1409:2 pay [3] 1365:17; 1366:6, 10 paying [6] 1383:1; 1382:8, 11; 1396:8, 12 pbx [1] 1363:23 penetration [1] 1360:1 pennies [1] 1382:19 penny [2] 1377:19; 1362:19 people [4] 1291:7; 1295:18; 1408:1; 1411:1 peoples' [1] 1294:5 per [4] 1277:16; 1407:13, 21, 23 percent (13) 1290:29; 1291:21; 1290:20; 1299:21; 1350:1; 1354:5, 7; 1301:16, 10, 20; 1362:13 percentage [5] 1290:17; 1.68:23; 1359:1; 1381:18, 21 percentages [1] 1395:19 perfect [2] 1374:15; 1375:19 perfectly [1] 1399:8 perform [3] 1291:2, 20; 1357:11 performance [1] 1291:7 perhape [3] 1303:8; 1381:12; 1406:13 period [1] 1392:16 permit [1] 1294:16 person [2] 1379:23; 1380:25 personal [3] 1356:5; 1357:6; 1398:11 personally [1] 1400:5 personnel [1] 1364:19 pertinent [1] 1300:11 petersburg [4] 1389:12; 1361:12; phenomenon [1] 1363:18 phone [1] 1289:12 phonetic [1] 1294;13 pick [1] 1377:2 picked [1] 1372:5 picking [1] 1382:2 piece [2] 1308:20; 1367:2 pieces [1] 1382:6 place [8] 1356:19; 1357:10; 1374:21; 1376:0, 23; 1378:2; 1306:10; 1404:14

Elite Concordia Utility - CONCORDS

placed [1] 1409:24 plan [1] 1386:10 plane [1] 1304:6 plant [8] 1295:4, 6; 1355:22; 1356:10; 1387:3; 1376:10 players [1] 1391:17 please [4] 1298:9; 1349:5; 1369:8; 1371:0 pleasure [1] 1375:9 plenty [1] 1358:\$ plow [1] 1493:11 plus [2] 1358:14; 1368:3 point [11] 1290:2, 23; 1300:6; 1351:12; 1363:12; 1365:25; 1368:11; 1373:9; 1375:4; 1378:9; 1362:1 points [2] 1302:24; 1409:9 politician [1] 1360:20 po." [1] 1388:16 portion [4] 1299:10; 1300:2; 1301:18; 1357:4 ports [2] 1381:4; 1353:4 Miest [6] 1300:15; 1307:18, 21, 22; 1358:11: 1360:23 positive [3] 1370:11; 1371:26; 1372:23 possible [5] 1292:12; 1352:3; 1358:7; 1362:17; 1393:11 pot [1] 1389:14 potential [2] 1364:2; 1380:5 powell [21] 1286:9; 1297:25; 1296:8; 1289:8; 1300:7; 1301:2, 0; 1302:3; 1304:8, 24; 1349:1; 1382:7; 1384:11; 1408:20; 1409:19; 1410:1, 8, 12, 17; 1411:1, 5 preceding [2] 1400:1, 11 predict [1] 1361:13 predominant [1] 1357:3 predominantly [1] 1290:1 prefiled [3] 1286:10, 11: 1307:5 prehearing [1] 1302:17 prepare [1] 1304:19 prepared [2] 1299:4; 1349:2 presented [1] 1300:15 presently [2] 1293:1; 1388:17 preservation [1] 1348:9 preserve [1] 1303:22 president [1] 1298:16 press [1] 1295:16 presubscribed [1] 1363:14 presubscription [1] 1362:14 pretty [4] 1367:7, 16; 1366:3, 4 prevail [1] 1370:18 price [18] 1383:17; 1365:20, 21, 24, 25; 1356:8; 1360:15, 25; 1374:8; 1376:21; 1382:4; 1380:19; 1400:20; 1401:21, 22 priced [7] 1353:4; 1371:8, 22; 1307:17; 1308:3, 5, 6 prices [14] 1354:11, 15; 1356:22; 1370:16, 17; 1371:10; 1374:24; 1375:17; 1376:15; 1377:21; 1306:15; 1389:19; 1401:13; 1404:5 pricing [4] 1351:7; 1370:13; 1379:25; 1380:14 primary [1] 1352:23 principle [1] 1379:25 principles [4] 1296:3; 1349:12; 1360:7; puts [2] 1376:1; 1361:9

prior [1] 1260:8 pro-competitive [1] 1350:7 probably [12] 1293:12; 1302:20; 1304:6; 1385:10; 1364:12; 1360:9, 11; 1362:15, 20; 1300:6; 1403:4; 1407:25 blom [9] 1298:16; 1374:4, 25; 1384:0; 1382:19; 1401:10; 1410:1 problematic [2] 1363:3; 1401:6 proceed [2] 1304:7; 1349:5 proceeding [11] 1293:17; 1299:15; 1302:21; 1303:9; 1349:10; 1351:2; 1384:11; 1387:15; 1370:7; 1404:9; 1407:5 proceedings [2] 1285:13; 1357:20 process [2] 1280;3; 1367.13 processing [1] 1356:21 produce [2] 1374:13; 1378:11 produced [1] 1377:5 produces [2] 1370:14, 1372:16 productivity [1] 1358:4 profound [2] 1391:7, 9 program [1] 1383:22 programs [1] 1382:19 proper [1] 1293:7 property [1] 1355:3 proposal [9] 1384:3, 11, 18; 1403:14, 18, 23; 140 24; 1405:23 propose [4] 1400:6, 14; 1401:2; 1400:1 proposed [1] 1309:21 proposition [2] 1403:19, 24 propositions [1] 1403:15 proprietary [1] 1384:6 provide [26] 1258:0; 1292:13, 18, 20, 24; 1203:0, 11; 1200:23; 1301:24; 1350:21; 1366:15; 1364:0; 1379:0; 1383:1; 1388:24; 1389:5, 4, 24; 1390:5, 17; 1402:22; 1404:15; 1400:3, 16; 1409:9 provided [6] 1282:6; 1296:10, 11, 15; 1300:22; 1355:16; 1379:2; 1400:15 provider [3] 1355:4, 8; 1360:11 providers [2] 1358:19; 1309:24 provides [3] 1299:15, 17; 1353:13 providing [19] 1289:25; 1301:22; 1354:17, 21, 22; 1365:6; 1363:7; 1365:5; 1271:16, 20; 1277:11; 1381:17, 22, 23; 1382:25; 1300:19; 1300:12; 1402;19; 1408;18 provision [2] 1292:16; 1285:14 provisions [1] 1305:2 proxy [6] 1290:21; 1357:17; 1368:18, 10; 1304:9; 1405:1 prudent [2] 1402:20, 24 public [4] 1268:1; 1302:16, 10; 1363:3 pure [1] 1300:25 purely [1] 1385:13 purpose [6] 1269:17; 1290:20; 1300:17; 1348:0; 1405:15, 19 purposes [4] 1282:2: 1374:24; 1407:11, 15 pursuant [1] 1265:6 put [9] 1387:10; 1370:8; 1372:2; 1374:21; 1370:9; 1377:2; 1300:21; 1302:4; 1300:18 putting [3] 1362:1; 1364:21; 1378:6

. .

q [142] 1288.8, 15, 19, 23; 1289.4, 8, 10, 20; 1290:1, 7, 17, 23; 1201:11, 14; 1292:4, 10, 21, 24; 1293:6, 17, 20; 1294:12, 15, 19; 1295:21; 1296:1, 8, 14, 20; 1297:10; 1298:9, 14, 18, 23; 1200:3: 1340:2, 6: 1352:11, 19: 1363:12, 20, 24; 1364:3, 7, 16, 21, 26; 1355:7; 1357:2" 1358:16, 21, 23; 1350:9, 12, 14 7, 20, 22, 1360:1, 3, 6, 13, 16, 19; 1361:3, 16, 20, 22, 34; 1362:4; 1363:8, 15; 1364:15, 19; 1365:1, 9, 14, 17; 1306:2, 7, 9, 15, 19, 22, 25; 1367:4, 10, 16, 24; 1368:3, 8, 23, 26; 1366.8, 15, 21, 25; 1370:22; 1371:4, 13, 18; 1372:1, 9, 14, 18, 18, 23: 1373:1, 6, 9, 12, 17, 20; 1277:8; 1378:13; 1380:8; 1383:22; 1394:3, 19; 1305:22; 1403:9-18, 23; 1404:4, 15, 20, 23; 1405:12, 15, 19, 23, 25; 1406:25; 1407:4, 11, 18, 23; 1408:3, 18, 24; 1409:4 quality [1] 1200:18 quantified [1] 1403:20 quantities [1] 1364:10 question [41] 1289:18; 1291:11, 14, 15, 24; 1292:4; 1293:22; 1297:7; 1349:23; 1360:13, 17, 22; 1361:19, 23; 1368:1; 1301:7; 1302:7; 1304:24; 1365:2, 10; 1309:8; 1370:22; 1371:2, 17; 1372:3; 1379:18; 1383:7; 1386:16; 1392:13; 1394:2; 1395:22; 1397:3, 20; 1398:2, 8, 23; 1309:18: 1401:9, 11; 1407:19; 1408:8 questioning [1] 1408:3 questions [18] 1296;25; 1297:2, 3, 16; 1349:18, 19; 1362:12; 1360:20; 1363(7; 1363:18; 1366:21; 1369:17; 1403:11; 1408:7, 13, 19; 1407:1; 1409:17 quickly [2] 1301:3; 1403:18 quite [1] 1394:16 quo [1] 1351:20 quotes [1] 1303:21

[1] 1263:2 raise [1] 1303:21 raised [3] 1302:13; 1303:3; 1402:14 range [6] 1292:7, 11; 1293:23; 1294:8; 1290:8; 1264:1 rate [16] 1288:23; 1363:0; 1364:2; 1365:14; 1360:2, 9, 13, 16, 25; 1385:15; 1387:11; 1389:13; 1408:11, ratemaking [2] 1357:11, 15 ratepayer [1] 1388:17 ratepayers [1] 1391:14 rates [44] 1290:25; 1301:18; 1350:6, 11; 1301;13, 15, 20; 1352;5; 1352;4; 1363:22, 23; 1373:13, 26; 1370:17; 1378:2, 20, 21, 22; 1378:26; 1360:1;

1382:18, 24, 1388:13, 14, 16; 1387:7, 8; 1388:2, 9, 10, 15; 1389:8, 20, 22; 1302:10; 1303:3, 10; 1306:24; 1308:24; 1404:5, 12; 1405:7 rather [4] 1361:17; 1367:2; 1368:20; 1390:7 rational [1] 1349:13 rationale [2] 1355:11, 13 reach [1] 1373:25 read [6] 1289:15; 1293:20; 1298:12; 1290:8; 1304:23; 1305:2 ready [2] 1364:10, 12 real [4] 1294:25; 1351:17; 1363:1; 1377:20 reality [6] 1301:23; 1374:22; 1375:15; 1377:4; 1379:21 resitze [1] 1307:24 really [13] 1350:4; 1358:19; 1373:23; 1370:10; 1377:21; 1379:0; 1385:1, 15; 1302:7, 10, 12; 1305:4; 1409:24 reascn [6] 1300:1; 1303:6, 21; 1301:1; 1364:4; 1370:20 reasonable [1] 1377:6 reasonableness [1] 1368:16 ressons [7] 1294:6; 1303:20 rebalance [1] 1388:14; 1398:24 rebalancing [1] 1388:12 rebar [1] 1378:24 rebulid [2] 1375:18; 1377:1 +buttal [7] 1286:11; 1287:4; 1298:20; 1290:7; 1305:4, 5; 1368:15 recall [4] 1293:21; 1294:9; 1360:21; 1401:16 recast [1] 1370:16 receipte [2] 1378:13, 14 receive [3] 1378:19; 1318:23; 1405:25 received [2] 1297:22; 1410:16 receives [1] 1352:23 receiving [1] 1384:19 recently [1] 1294:19 recess [1] 1406.9 recognize [2] 1349:12; 1404:11 recognized [3] 1350:8; 1379:4; 1360:17 recognizes [1] 1350:19 recollection [1] 1409:14 recommend [2] 1300:14; 1405:4 recommendation [1] 1302:6 record [6] 1299:8; 1300:19; 1304:23; 1508:2; 1380:24; 1406:11 recover [4] 1374:1, 8; 1382:20; 1384:22 recovered [2] 1375:1; 1397:25 radirect [6] 1206:6; 1207:5, 8; 1400:17, 21; 1400:18 redistributing [1] 1386:14 reduce [1] 1205:24 reduced [1] 1388:20 reduction [4] 1368:2, 3; 1369:13; reductions [4] 1364:20; 1387:3, 7; 1409:12 refer [4] 1364:17; 1366:12; 1367:11; 1304:23 reference [2] 1290:23; 13u5:14 referenced [1] 1402:2 references [1] 1303:2 referring [3] 1298:12; 1367:4; 1372:11

reflect [4] 1301:21; 1349:21; 1365:3; reflected [1] 1309:19 reflections [1] 1295:9 regard [3] 1367:16; 1363:14; 1379:20 regarding [1] 1291:11 regulated [5] 1299:16; 1300:13, 10; 1384:25; 1385:3 regulation [7] 1355:14, 15; 1357:18; 1300:8, 8, 22, 25 rehwinkel [3] 1409:20; 1410:3 relate [1] 1302:2 related [3] 1300:22; 1302:17; 1367:1 relates [2] 1358:25; 1408:3 relationship [1] 1381:8 release [1] 1298:16 relevance [2] 1302:9, 19 relevancy [1] 1302:25 reserrant [5] 1299:14; 1300:1, 24; 1302:20; 1303:6 chied [1] 1368:13 relies [1] 1302:7 rely [1] 374:5 remember [1] 1363:24 remind [1] 1390:25 remove [1] 1356:10 removing (1) 1356:6 rent [2] 1302:8, 11 repeat [3] 1369:8; 1371:17; 1397:19 report [7] 1349:7, 8; 1350:1; 1407:5, 11, 15, 25 reported [3] 1285:21; 1296:2; 1407:24 reporting [1] 1394:13 reports [1] 1364:18 represented [1] 1399:11 representa [3] 1353:2; 1360:2; 1399:10 reprice [3] 1353:18; 1357:11; 1393:13 request [2] 1368:12; 1383:16 require [1] 1357:10 required [1] 1393:12 requirement [2] 1351:21; 1372:7 requires [1] 1293:2 resale [5] 1301:11; 1364:11; 1380:1; 1390:12; 1402:25 residence [5] 1368:5, 9; 1370:1; 1372:6; 1392:25 residential [13] 1367:18; 1369:12; 1372:1, 19; 1377:11; 1388:25; 1390:6, 11, 25; 1393:3, 6; 1396:23; 1390:24 resold [1] 1301:17 respect [3] 1300:11; 1360:3; 1410:16 responded [1] 1408:10 response [5] 1300:6; 1301:1; 1307:2, 25; 1408:12 responses [1] 1366:19 responsible [1] 1382:9 rest [2] 1292:1; 1394:21 restate [1] 1350:19 restructuring [1] 1394:14 result [4] 1356:21; 1384:17; 1405:23; results [3] 1300:18; 1301:12, 13 retail [8] 1350:6; 1378:2; 1379:28; 1387:20; 1395:2, 3; 1399:10; 1404:5 retailing [4] 1360:1; 1402:12, 14, 17 retool [2] 1390:14; 1391:5

return [16] 1299:17, 20, 25; 1301:4; 1302:1, 4, 11; 1303:4, 6, 9; 1356:15; 1360:8, 9, 16, 25 revenue [42] 1380:19; 1351:13; 1362:16, 22; 1363:13, 18; 1365:2; 1386:3, 7, 8; 1387:12, 10; 1332:22, 24; 1363:17; 1367:21, 22; 1368:1, 5; 1369:28; 1370:6, 11, 19, 24, 25; 1371:13, 18; 1372:10; 1377:4; 1381:1; 1384:25; 1385:8, 19, 20; 1387:1, 21; 1390:7, 14; 1395:2; 1400:20; 1403:20; 1400:5 revenues [22] 1290:17; 1353:25; 1354 8, 18, 22; 1367:17, 18; 1369:16, 22; 1371:8, 9; 1373:3, 14; 1376:11; 1381:6, 10; 1305:25; 1404:16, 17; 1405:21; 1400:2 review [2] 1304:18; 1386:20 reviewed [1] 1351:2 revised [1] 1508:12 ridge [1] 1298:12 ridiculous [2] 1378:19, 21 ridiculously [1] 1363:23 right [32] 1293:8; 1362:19; 1354:6; 1306:0; 1309:19; 1371:12; 1373:22; 1379:0; 1384:4, 9, 22, 23; 1385:4, 10, 19; 5306:22; 1367:4, 6, 9, 18; 1368:12, 18; 1300:4; 1301:18; 1303:11; 1384:21; 1399:9; 1400:2; 1401:18; 1410:22 rings [1] 1362:1 river [1] 1378:10 roads [4] 1374. . 5; 1375:11, 22; 1376:1 robert [2] 1288:4; 1286:4 roughly [4] 1368:3; 1385:12; 1384:19; 1408:14 round [1] 1365:25 route [2] 1363:15, 16 routes [2] 1363:10, 11 routinely [1] 1382:4 rpr [1] 1265:21 rubbing [1] \$401:11 rule [1] 1304:17 run [2] 1292:7; 1366:12; 1386:19 running [1] 1402:21 rural [6] 1350:3, 9, 12, 14; 1300:12 runcus [3] 1200:5; 1200:7; 1290:25

...

a [1] 1288:2 a-2 [1] 1287:8 a-c-m-a-n [1] 1290:12 sale [1] 1298:8 said [18] 1291:25; 1304:14; 1200:21; 1284:15; 1288:21; 1370:15; 1271:3; 1373:16; 1370:22; 1382:11; 1380:3, 4; 1387:10; 1285:5; 1410:11 same [15] 1280:6, 21; 1290:22; 1200:13; 1286:10; 1303:20; 1384:22; 1306:19; 1301:23; 1383:2; 1306:2; 1306:19; 1301:23; 1303:10; 1203:10, 22; 1290:6, 8, 16; 1303:10; 1304:12; 1370:3; 1380:11; 14; 1382:7; 1380:0, 9,

24; 1389:11; 1396:4; 1398:15; 1399:8; 1404:25 saying [10] 1353:15; 1358:10; 1363:2; 1373:23; 1377:22; 1379:6, 18; 1360:8, 11, 19; 1385:1; 1391:11; 1385:14; 1306:9; 1309:3, 9, 11; 1400:23 says [11] 1208:24; 1208:15, 17; 1358:12; 1306:4, 21; 1374:4; 1384:24; 1385:7; 1392:19; 1395:4 scenario [4] 1355:25; 1356:8; 1390:20; 1200:5 schedule [1] 1368:21 scheduled [1] 1301:5 schedules [1] 1369:7 scheme [1] 1376:6 seaman [78] 1206:8; 1267:5; 1297:25; 1298:4, 8, 11, 14; 1290:15; 1302:7; 1303:21; 1304:25; 1349:2; 1362:7, 11; 1303:9; 1304:16; 1370:10; 1379:10; 1300:11; 1301:19, 24; 1302:6; 1303:3, 8, 11, 18, 20, 23; 1384:23; 1385:4, 7, 10, 19, 24; 1306:1, 23; 1387:2, 6, 11, 15, 19; 1388:12, 18; 1389:23; 1300:4, 23; 1301:18, 21; 1302:2, 0, 12; 1306:21, 26; 1307:12, 10; 1355:8, 14, 22; 1309:2, 6, 15, 23; 1400:3, 7, 12, 18, 25; 1401:5, 9, 18, 25; 1402:3, 0, 18, 23; 1403:12; 1400:28; 1400:16 seaman's [5] 1290:7, 11; 1300:8; 1301:11; 1410:5 seamlessnees [2] 1301:11; 1302:4 searching [1] 1401:1 second [5] 1296:3; 1350:13; 1353:1; 1350:4, 18 section [1] 1285:6 see [21] 1200:13, 14; 1201:10, 25; 1302:9; 1303:7; 1365:8; 1362:23; 1343:22; 1365:3, 7, 1371:11; 1308:1, 4; 1389:0; 1390:11, 12, 10; 1393:5, 14; 1309:25 seem [1] 1300:18 segue [1] 1388:4 select [1] 1394:9 selected [1] 1407:14 selecting [1] 1384:12 selling [1] 1363:25 sense [2] 1303:24; 1349:19; 1350:13, 22; 1376:2; 1376:24, 25; 1377:3 sent [1] 1408:7 sentence [1] 1294:3 separate [1] 1296:16 septamber [1] 1290:20 sequence [1] 1411:\$ sequences [1] 1208:3 perios [1] 1349:12 serve [3] 1368:17; 1404:6 served [6] 1291:17, 19, 22; 1356:5; 1380:11; 1360:22 serves [3] 1358:18; 1360:22; 1376:6 service [89] 1265:1, 6; 1291:10; 1292:13, 17, 10, 26; 1294:22; 1295:17; 1200:20; 1300:12, 24; 1301:22, 26; 1340:10, 11, 26; 1350:3, 4, 9, 18, 18, 24, 26; 1361:8, 11; 1362:2, 4, 10, 24; 1383:3, 6, 8; 1384:17, 19, 22, 23;

1265:5, 16; 1250:16; 1260:7, 8;

1384:11; 1385:0; 1309:12, 10; 1370:1, 24, 25; 1371:7, 13, 14, 18; 1372:1, 19; 1378:17; 1377:11, 29; 1378:13, 14, 19; 1365:15; 1387:7; 1380:21; 1380:4, 13, 19; 1300:2, 6, 17; 1392:22; 1393:11; 1204:5: 1205:8, 16, 21; 1201:10, 23; 1403:19, 25; 1404:2; 1405:10, 15, 20; 1407:9 services [54] 1292:10; 1293:13, 24; 1294:2, 4, 16; 1295:10, 11, 15, 19; 1296:1, 6, 9; 1290:17; 1351:6; 1352:25; 1354:1, 0; 1367:11; 1350:4; 1368:23; 1370:12; 1371:8, 22; 1372:18; 1373:18, 21; 1374:8; 1376:13, 22; 1377:14; 1379:2; 1381:17, 19, 20, 23; 1382:11, 13, 15, 22; 1383:1; 1389:25; 1360:10, 24; 1393:13; 1397:4, 16; 1306:2, 6; 1402:22; 1403:26; 1404:15, 18; 1408:18 serving (2) 1381:4; 1362:5 set [7] 1300:20; 1374:24; 1375:16; 1396:15, 16; 1401:20 seventh [2] 1382:21; 1388:15 several [1] 1355:24 shape [2] 1381:5; 1386:15 share [2] 1382:6, 12 shift [2] 1379:1; 1391:12 shocking [1] 1361:17 short [2] 1372:23; 1373:24 shorter [2] 1291:9; 1295:3 shortest [3] 1291:3, 13, 18 shortfell [1] 1360:17 should [18] 1290:20; 1298:18; 1303:9; 1349:12; 1358:8; 1360:2; 1397:17; 1300:3, 5, 6; 1405:3; 1407:24; 1400:5, 7, 9, 24; 1410:11 show [6] 1297:20; 1361:13; 1367:20, 22; 1405:8; 1410:14 ahows [Z] 1308:9; 1405:9 sic [1] 1305:3 mide [3] 1367:3; 1363:4; 1365:23 sight [1] 1376:7 sign [2] 1371:25; 1372:4 signal [1] 1209:11 significant [6] 1363:13; 1364:2; 1400:15; 1400:1, 12 significantly [3] 1296:23; 1382:20; signa [2] 1370:0; 1372:8 simple [3] 1378:18; 1395:10; 1405:8 almplicity [1] 1381:2 simplify [2] 1360:24; 1382:8 simply [13] 1300:1; 1303:22; 1301:7, 14; 1362:6; 1363:8; 1366:26; 1376:11; 1377:20; 1381:3; 1383:2; 1388:14; 1409:15 simultaneously [1] 1367:13 since [4] 1358:7; 1360:17; 1362:14; single [2] 1298:21; 1410:18 slphon [1] 1382:1 atr [1] 1297:23 ait [1] 1409:13 site [Z] 1293:4 sitting [3] 1376:11; 1378:9; 1396:13 steth [2] 1382:14; 1368:16

size [5] 1283:23; 1297:11; 1350:25; 1352:3; 1376:16 slippery [1] 1303:7 slope [1] 1303:8 small [2] 1361:10; 1396:11 amailor [2] 1299:24; 1408:5 smarter [1] 1294:10 sold [2] 1361:11; 1364:3 solution [1] 1360:24 solutions [1] 1290:4 some [33] 1290:15; 1294:20; 1295:24; 1296:12, 15; 1302:16; 1303:3, 9; 1304:19; 1350:1; 1351:11; 1365:19, 24; 1746:22: 1376:24; 1377:4; 1370.13, 20; 1380:5, 15, 17; 1388:14; 1301:2, 12, 13; 1305:12; 1347,17; 1300:4, 6, 20; 1404:15; 1400:20; 1410:20 something [11] 1/90:15; 1354:9; 1371:15, 20; 1378:24; 1301:2; 1382:23; 1300:13; 1301:6; 1400:9, 24 eometimes [1] 1225:4 eomewhat [1] 1401:5 somewhere [6] 1303:24; 1371:18; 1377:18; 1301:0; 1300:14; 1300:0 sorry [16] 1291:14, 24; 1304:8, 12; 1360:5; 1365:14; 1369:10; 1364:18; 1386:23; 1392:9; 1393:16; 1394:1; 1300:20; 1400:7, 9, 15 sort [4] 1294:4; 1373:21; 1391:12, 16 sound [1] 1378:25 source [2] 1292;5; 1351;12 south [1] 1293:17 speak [2] 1349:14; 1383:20 specializa [1] 1389:18 specific [2] 1349:17; 1367:4 specifically [2] 1291:25; 1408:8 specify [1] 1408:6 spectrum [2] 1389:24; 1380:24 aprint [2] 1299:24; 1409:21 equarely [1] 1392:4 et [4] 1350:12; 1363:12; 1362:2, 17 etaff [10] 1297:3; 1302:8, 19; 1383:24; 1384:16; 1409;21; 1407:1; 1408:7; :409:23; 1410:21 staff's [3] 1383:18, 25; 1409:17 stamp [1] 1364:7" etamped [2] 1367:5, 6 stand [7] 1289:24; 1292:2 etandpoint [1] 1355:13 start [2] 1303:7; 1361:3 starting [3] 1291:14; 1355:1; 1365:4 startling [1] 1301:20 state [16] 1291:12; 1290:9; 1301:12; 1349:24; 1358:2; 1358:14; 1363:2, 22; 1377:16, 17; 1387:21; 1301:1; 1304:15; 1305:14; 1404:23; 1407:17 stated [4] 1366:16; 1360:5; 1407:21; statement [6] 1291:18; 1293:25; 1352:17; 1356:6, 7; 1360:7 states [4] 1290:9; 1350:3, 14; 1378:3 status [1] 1351:20 statutes [1] 1285:7 stay [6] 1304:1; 1379:11; 1385:20; 1389:18; 1390:3, 18

stick [2] 1369:11; 1368:0 etili [8] 1250:2, 15; 1284:1; 1372:10; 1373:13; 1386:13; 1400:19; 1401:22 etipulations [1] 1344:15 stockholder [1] 1377:24 stranded [2] 1380:5, 6 stream [8] 1366:3, 8; 1367:12; 1362:22; 1370:10; 1377:5; 1365:10; 1400:21 atreams [5] 1950:19; 1353:19; 1356:7; 1357:17; 1390:14 atricken [2] 1306:3; 1377:6 etrict [2] 1307:15; 1306:5 strictly [2] 1367:8; 1374:5 strike [8] 1300:2; 1302:23; 1303:13; 1304:10, 22; 1360:6 strikes [1] 1301:17 studies [7] 1351:3; 1368:3; 1368:16; 1374:12, 23; 1306:15 studios [1] 1375:9 etudy [2] 1375:14; 1405:9 etuff [1] 1381:4 subject [1] 1354:5 subscribe [1] 1392:23 subscriber [1] 1383:2 subsidies [8] 1301:15; 1369:22; 1373:13; 1380:17; 1386:16; 1404:13 subsidize [1] 1206:23 subsidized [3] 1373: 0; 1378:15; 1404:17 auhaldy [23] 1354:8; 1363:21; 1306:16; 1370:12, 20; 1371:1, 16, 20, 24; 1272:7, 14, 17; 1372:6; 1381:7; 1388:21; 1306:13; 1398:26; 1404:12; 1405:1, 3, 25 substantially [2] 1356:22; 1370:6 substraction [1] 1383:9 subtract [4] 1300:15; 1373:9; 1380:1; subtracting [1] 1397:24 such [4] 1296:11, 15; 1290:10; 1290:23 suggest [11] 1303:5; 1349:19; 1350:5; 1381:1, 22; 1359:3; 1376:20, 25; 1377;20; 1380:13; 1382:13 suggesting [2] 1303:8; 1404:8 suggests [1] 1258:6 summary [2] 1340:2; 1352:6 supplement [1] 1374:16 support [44] 1292:8; 1351:11, 15; 1382:4, 15, 20, 24; 1383:8, 10, 13, 22; 1364:10; 1366:16; 1360:21; 1370:20; 1371:4, 7; 1372:14, 20, 24; 1373:12, 18; 1376:17; 1377:14; 1382:10; 1300:18; 1387:13; 1300:21, 23; 1300:4, 5; 1303:0; 1304:23; 1305:7, 0; 1307:4; 1402:10; 1404:1, 17; 1405:13, 10; supported [3] 1373:17; 1387:20 supports [19] 1300:9, 11, 16, 19; 1351:24; 1352:2; 1368:14; 1379:7; 1300:4; 1301:16; 1302:10; 1365:11; 1386:4; 1391:16; 1393:12; 1396:6; 1404:5, 13; 1405:7 supposed [1] 1365:17 mure [16] 1290:8, 7; 1302:9; 1300:21; 1354:6; 1361:6; 1365:2, 3; 1366:25; 1370:2; 1377:8; 1370:9; 1302:13;

1304:25; 1300:13; 1300:8; 1400:21, 22 surely [1] 1307:21 surprise [1] 1406:21 surprised [2] 1303:12; 1363:1 surprising [1] 1301:17 surrogate [1] 1360:10 survive [1] 1300:5 susan [1] 1285:15 swinging [1] 1384:10 switch [1] 1350:24 switched [2] 1377:15; 1378:23 switches [8] 1356:24, 25; 1356:21, 24; 1350:7; 1362:2; 1374:19, 20 switching [6] 1391;4; 1356:15, 20, 23 sworn [1] 1298:6 system [2] 1364:12; 1395:23 systems [2] 1292:23; 1364:10

.T.

1[5] 1352:13; 1304:0; 1377:20, 22; 1379:10 T's [2] 1300:19; 1305:7 table [10] 1268:14, 25; 1351:9; 1382:21, 22; 1387:25; 1300:19; 1370:5; 1378:6; 1410:25 take [29] 1303:25; 1355:15; 1366:14; 1964:10; 1372:16; 1373:9; 1376:23; 1377:21, 23; 1378:7, 8, 20, 21, 22, 23; 1379:26; 1381:14; 1383:7; 1386:1, 20; 1301:16; 1382:18; 1383:9; 1386:9; 1401:21: 1400:5 taken [1] 1300:4 taking [6] 1289:18; 1359:7; 1387:5, 1300:14: 1300:2 talk [5] 1202:10; 1349:10; 1301:24; 1365:10; 1367:12 talked [3] 1292:22; 1297:12; 1408:10 talking [6] 1360:7; 1367:9; 1303:9, 23; 1394:12; 1452:5 talishasses [1] 1265:29 tampa [7] 1269:9, 10; 1361:12; 1362:2, 17; 1389:8; 1396:6 taps [1] 1295:5 target [2] 1309:6; 1300:19 targeted [1] 1351:25 targeting [3] 1363:21; 1364:6; 1369:7 tax [1] 1395:9 tears [1] 1376:1 technical [2] 1293:15; 1294:6 technology [3] 1290:8, 9; 1359:23 telecommunications [10] 1285:5; 1205:22; 1296:2; 1299:20; 1300:24; 1349:11; 1350:24; 1351:0; 1377:0; telephone [2] 1290:14, 1350:3 tell [2] 1301:2; 1401:6 telling [3] 1379:3, 12; 1381:6 teiric [3] 1374:12; 1300:20; 1400:5 ten [2] 1302:25; 1353:9 tend [2] 1379:23; 1380:19 tenth [1] 1385:11 terminal [1] 1289:23 terms (8) 1363:22; 1301:7, 10; 1306:10; 1369:2; 1372:14; 1378:22; 1388:1

territory [8] 1361:8; 1363:11; 1358:17; 1350:15; 1301:4; 1302:5; 1305:6; 1370:1 terry [1] 1288:14 test [11] 1288:22; 1289:1; 1352:15, 19; 1363:12; 1370:23; 1371:7, 11, 20; 1275:3; 1370:24 testified (2) 1293:17; 1290:6 testimony [87] 1286:10, 11; 1286:5; 1293:21; 1294:3; 1298:19, 20, 25; 1290:3, 7, 11, 14, 24; 1300:2; 1301:4, 6, 11; 1302:7, 12, 14; 1303:2, 4, 18, 22; 1304:13; 1349:3, 20, 21, 22; 1350:21; 1381:10; 1362:14, 21; 1364:17, 25; 1360:8; 1382:23; 1366:8, 12, 13, 15; 1367:14, 16; 1368:14, 17; 1371:6; 1374:4; 1306:21; 1307:6, 11; 1403:14; 1408:4; 1410:0, 18, 20 testing [2] 1289-2, 5 toots [1] 1292:5 texas [2] 1298:13; 1366:2 thank [16] 1297:16, 23, 24; 1300:7; 1303:14; 1304:20; 1380:9; 1384:17; 1200:10; 1401:10; 1402:6; 1400:16; 1410:3, 15, 17; 1411:4 that's [66] 1289:6; 1293:24; 1295:19; 1297:15; 1300:24; 1303:10; 1353:15, 23; 1364:2, 20, 24; 1360:26; 1363:1, 19; 1306:8, 18; 1367:20, 22; 1368:2, 7, 11; 1300:24; 1371:21; 1372:12, 15, 18, 22, 26; 1373:8; 1374:3, 4; 1377:7; 1378:1, 24; 1381:5, 19; 1382:9; 1385:10; 1384:3; 1388:16; 1390:11, 12; 1303:11; 1300:10; 1307:12; 1300:2, 8; 1400:4; 1401:25; 1403:22; 1407:19; 1408:1, 18 their [14] 1290:12, 22; 1299:25; 1300:23; 1360:2; 1371:8, 10, 23; 1273:18; 1276:23; 1381:17; 1287:13; 1300:5; 1401:22 theme [5] 1378:5, 7, 18, 21; 1376:3 there [100] 1203:15, 21; 1204:2, 23; 1295:4, 5; 1297:10; 1299:10; 1301:10, 19; 1302:15, 25; 1304:22; 1349:19; 1360:1, 10, 17; 1361:14; 1386:2, 10, 12, 10; 1356:10, 23, 24, 25; 1358:8; 1350:2, 7, 14; 1301:9, 11, 15; 1342:16, 18, 23, 24; 1383:13; 1364:1, 2, 4; 1365:2, 23; 1366:7; 1367:14, 20; 1368:25; 1369:5, 9; 1371:1, 22; 1373:2; 1374:8, 25; 1378:5, 6; 1377:13; 1379:1, 16, 22, 24; 1300:3, 21; 1301:13; 1382:25; 1363:6, 10; 1304:6, 7, 25; 1306:20; 1300:3; 1307:2, 3, 6, 16, 21; 1389:5, 16; 1390:7; 1301:3, 22, 23; 1306:11, 20; 1306:9; 1307:4, 7, 10, 13, 22; 1300:16, 24; 1390:9, 12; 1401:12; 1404:13; 1408:20; 1407:19, 20; 1408:15; 1409:1, 12, 18; 1410:19, 20 thereby [1] 1388:17 therefore [1] 1363:8 thereupon [1] 1298:3 thing (6) 1290:22; 1301:9; 1354:22; 1363:3; 1302:24; 1393:10

territories [1] 1350:7

things [19] 1291:8; 1294:5; 1295:14; 1302:22; 1352:22; 1354:15; 1357:1; 1362:3, 10; 1363:7; 1367:12; 1376:7, 23; 1379:17; 1300:20; 1302:10; 1399:10; 1404:7, 25 think [45] 1288:8; 1290:19; 1292:2; 1300:16; 1301:10; 1302:19; 1350:3, 9, 16; 1350:10, 16, 18; 1350:3; 1300:24; 1371:2; 1376:3; 1379:23; 1380:17, 19; 1386:7, 12; 1388:4, 14; 1389:23; 1391:5, 10; 1392:14; 1394:8, 24; 1306:9; 1307:2; 1369:9, 14, 15; 1401:5; 1402:19; 1404:3; 1406:15; 1407:15; 1408:15, 18, 24; 1409:25; 1410:7, 4 thinking [4] 1388:23; 1392:15; 1395:1; third [8] 1295:4; 1350:22; 1353:8; 1365:20; 1384:14; 1365:7; 1366:21; those [53] 1286:1J, 15; 1289:0; 1291:5 0; 1294:16, 21; 1297:20; 1300:3; 1301:13; 1306:2, 1349:14, 18; 1360:11, 26; 1351:7, 13; 1362:2; 1363:8; 1354:12; 1357:1; 1361:13; 1362:12, 15, 19; 1368:17; 1369:22; 1370:19; 1375:18; 1370:11; 1379:2; 1387:10; 1389:4, 8; 1393:12; 1395:10; 1398:1, 11, 13, 17, 19; 1309:10; 1400:10; 1402:12; 1404:7, 11, 17; 1406:7; 1408:6; 1410:14, 21 though [5] 1290:23; 1299:8; 1304:23; 1305:2; 1389:11 thought [1] 1291:24 three [8] 1296:2; 1364:26; 1362:22; 1366:11, 12, 25; 1360:13; 1300:7 three-volume [1] 1295:21 through [13] 1285:11; 1299:13; 1300:4 5; 1303:15; 1304:10, 11; 1352:1; 1364:16; 1377:14; 1360:22; 1381:4; 1404:8 tighter [1] 1409:11 time [9] 1285:18: 1299:6; 1355:18; 1357:0; 1363:12; 1364:8; 1371:3; 1389:8; 1410:5 times [2] 1366:1 today [38] 1290:12, 13, 14; 1293:25; 1297:10; 1301:15, 16, 22; 1349:20, 25; 1350:12; 1361:14, 24; 1352:5, 23; 1355:4, 9; 1357:21, 24; 1364:9; 1374:16, 21; 1375:18, 19; 1376:17; 1378:2; 1382:15; 1389:1; 1390:11; 1391:6; 1383:10; 1396:7, 11; 1388:17; 1404:6, 12; 1405:7; 1410:22 today's [1] 1354:2 together [2] 1370:9; 1371:24 told [2] 1386:10; 1400:10 toli [16] 1352:25; 1362:14, 23, 24; 1363:8, 10, 16, 16; 1377:15; 1378:22; 1382:15; 1388:3, 7; 1391:22, 23; tomorrow [8] 1301:23, 24; 1304:4, 5, 17; 1362:6; 1406:10; 1410:19 tonight [1] 1304:6 tona [1] 1293:15

top [2] 1365:1; 1367:25 torn [1] 1374:16 total [35] 1363:21, 22, 25; 1365:3; 1358:16, 17; 1362:11, 12; 1366:5, 22; 1368:5; 1369:21, 22; 1370:12; 1372:6; 1373:6, 18, 20, 21, 23; 1374:8, 20; 1378:1; 1301:1, 6; 1384:24; 1385:3; 1302:19; 1397:8, 23, 25; 1300:1; 1402:0; 1404:7; 1407:12 totally [1] 1401:8 totals [1] 1400:16 track [2] 1362:10, 11 tracy [1] 1362:11 transcript [2] 1288:3; 1411:8 transmission [3] 1295:22, 24; 1296:2 treatice [1] 1295:22 trees [1] 1376:0 trick [1] 1386:9 trouble [3] 1450:7, 19 troubled [1] 1380:3 true [9] 1289:16, 20; 1290:1, 23; 1202:5, 11; 1203:0; 1363:9; 1392:2 by [6] 1294:25; 1383:6; 1394:6, 25; 1300:9; 5403:11 trying [8] 1298:20; 1302:22; 1368:23; 1308:21; 1399:24; 1404:24 tucek [3] 1384:23; 1408:23; 1409:9 tuesday [1] 1288:17 tune [1] 1585:12 turn [6] 1288:8; 136 .: 25; 1365:1; 1301:11; 1302:11 turned [2] 1209:12, 13 twelve [1] 1300:1 two [21] 1288:16, 19; 1289:9, 20; 1290:10; 1300:14; 1302:25; 1353:0; 1356:19; 1356:1, 9, 14; 1362:19; 1300:13; 1307:12; 1300:7; 1371:24; 1370:10; 1302:10; 1404:7; 1410:14 type [1] 1303:9 types [1] 1200:6 typhoon [1] 1375:10 typically [1] 1380:4

ubiquitous [2] 1366:5; 1366:12 ub-huh [1] 1410:7 ultimate [1] 1349:8 ultimately [1] 1360:4 unbundled [10] 1351:3; 1353:3; 1364:10, 13; 1357:13, 20; 1363:26; 1364:3, 11; 1370:7; 1376:14, 22; 1380:2; 1389:7; 1401:13; 1402:12 undur [14] 1288:5; 1289:24; 1298:24; 1299:4; 1355:23, 25; 1350:8; 1357:10, 17; 1360:16; 1372:13; 1360:13; 1300:20; 1301:4 underestimating [1] 1352:3 underlie [1] 1351:6 underpinning (2) 1379:14; 1392:15 understaing [1] 1351:21 understand [14] 1302:13; 1303:5; 1304:18; 1362:14; 1364:7, 19; 1366:7; 1370:4; 1372:3; 1376:0; 1377:4;

1200:23; 1391:9; 1397:11

- U -

1384:20; 1391:10; 1407:4, 9 understated [1] 1400:24 une [7] 1351;2; 1354;11; 1370;18; 1200:13; 1301:29; 1300:14; 1401:21 uneconomic [2] 1377:13; 1380:15 unes [1] 1379:19 unfortunately [1] 1380:19 unheard [1] 1362:25 unit [1] 1289:22 united [2] 1360:2; 1378:3 universal [40] 1209:9, 11, 21; 1290:2, 15, 18; 1291:4, 19; 1300:12; 1301:22, 24; 1340:0, 25; 1350:4, 9, 25; 1351:11, 21; 1382:2, 4, 24; 1363:7; 1371:7; 1379:0; 1370:10; 1377:25; 1370:13, 14, 19; 1388:21; 1390:2; 1391:12; 1303:11; 1304:5; 1305:8, 15, 21; 1396:10; 1405:15, 19 universally [1] 1293:10 unless (2) 1393:1; 1406:20 unlikely [2] 1364:9, 12 unmeasurably [1] 1367:11 until [2] 1304:16; 1406:9 unusual [1] 1301:19 unwarranted [1] 1350:16 up [18] 1294:17; 1296:17; 1302:25; 1363:0; 1364:10; 1360:17; 1372:0; 1373:3; 1374:11, 17; 1370:1; 1379:4, 7, 13; 1380:2; 1398:24; 1406:12; 1409:21 upon [1] 1403:15 usage [2] 1353:4; 1368:2 use [17] 1282:12, 18, 16; 1295:19; 1367:17; 1368:21; 1362:11, 14; 1300:10; 1360:17, 10; 1370:3, 16; 1377:17; 1302:5; 1305:6; 1408:24 used [6] 1290:20; 1291:4; 1292:8, 1300:25; 1374:23; 1409:21 useful [1] 1288:9 user [3] 1294:20, 23; 1368:4 uees [3] 1289:7; 1290:3, 21 usf [1] 1373:2 uning [11] 1289:21; 1290:24; 1291:1; 1202:7; 1203:2; 1204:7; 1365:4; 1381:13; 1384:8; 1389:7; 1407:6 utopia [2] 1374:13; 1376:5

understanding [6] 1290:10; 1359:10;

.V.

valid [1] 1401:8
validity [1] 1349:14
variation [1] 1409:1
variety [1] 1390:24
vast [1] 1393:10
vandor [1] 1374:22
varsion [1] 1383:15
varsus [3] 1282:11; 1408:17; 1409:13
vartical [8] 1362:24; 1372:16; 1377:15; 1372:21; 1382:12; 1387:7; 1380:10; 1392:22
vary [28] 1294:0; 1300:11, 15; 1301:19, 23; 1360:10; 1301:4, 10, 24; 1362:2; 1383:6; 1368:18; 1368:10; 1308:8; 1302:14, 20; 1363:6; 1364:24;

1400:13, 1403:16
vice [1] 1298:16
view [7] 1351:16; 1372:7; 1378:10, 11;
1389:2; 1388:13; 1401:14
village [1] 1375:8
virtually [1] 1367:19
virtue [1] 1351:16
visit [1] 1378:21
visited [1] 1378:4
volume [11] 1288:10; 1287:1; 1288:3,
5; 1296:1, 4; 1364:7; 1374:20; 1411:8
volumes [1] 1288:2

-W-

wade [1] 1381:4 weit [1] 1304:16 walk [1] 1370:5 want [15] 1290:13; 1297:11; 1365:1, 2; 1366:25; 1367:1; 1360:5, 15; 1383:0; 1364:19; 1305:5; 1306:5; 1368:14; 1395:20: 1403:16 wanted [1] 1409:21 wants [1] 1362:16 wasn't [1] 1363:1 way [28] 1265:20; 1354:11; 1361:6, 14; 1302:4; 1364:14; 1369:3, 10; 1370:15; 1372:0; 1374:4; 1376:21; 1377:21, 24; 1379:1; 1381:8; 1383:3, 0; 1385:14, 22; 1300:15; 1387:25; 1388:3; 1301:5; 1382:20; 1384:12; 1395:19; 1398:9 ways (3) 1350:1; 1391:1; 1305:12 web [2] 1294:19, 21 were [32] 1291:17; 1292:7, 22; 1299:3, 5; 1300:3, 4; 1303:18; 1355:16; 1360:7, 24; 1362:4, 10, 18; 1364:15; 1366:13; 1368:15; 1369:15; 1370:4; 1371:10; 1378:17; 1378:6, 10, 26; 1381:6, 9, 10; 1387:20, 23; 1305:1; 1208:14 whatever [3] 1294:6; 1402:7; 1407:14 whatnot [1] 1302:11 when [26] 1290:3; 1293:22; 1294:25; 1303:7; 1350:16; 1351:25; 1300:18; 1301:24; 1363:0; 1370:20, 1371:25; 1374:5, 24; 1376:13, 15; 1389:21; 1300:14; 1282:3; 1383:13; 1389:3, 8; 1402:9, 10; 1409:6; 1410:8 where [16] 1291:3, 4; 1362:16; 1360:7; 1363:21; 1366:17; 1370:23; 1371:4; 1379:20; 1301:12; 1362:17; 1365:25; 1300:10; 1302:10; 1408:4 whereby [1] 1395:23 whether [8] 1290:11; 1290:20; 1353:12, 13; 1383:18; 1384:25; 1408:22; 1400:8 whole [V] 1300:11, 17; 1375:10; 1379:25; 1383:6; 1385:16, 17; 1389:2; 1300:24 wholesale [1] 1350:24 whom [1] 1298:14 wide [1] 1384:10 win [1] 1398:2 wire [9] 1407:8, 20, 21; 1408:5, 10, 14, 22, 25; 1409:2 wires [2] 1295:17; 1356:25

took [2] 1373:16; 1396:22

within [1] 1409:2 without [7] 1296:12; 1297:21; 1367:12. 15; 1363:14; 1401:11; 1410:15 witness [66] 1287:5; 1297:24; 1290:1, 5; 1303:2; 1278:18; 1379:16; 1380:11; 1381:19, 24; 1382:0; 1383:3, 6, 11, 16, 20, 23; 1384:23; 1388:4, 7, 10, 19, 24; 1380:1, 23; 1387:2, 6, 11, 15, 19; 1388:12, 18; 1389:23; 1390:4, 23; 1301:18, 21; 1392:2, 9, 12; 1309:25; 1307:12, 19; 1361:5, 14, 22; 1309:2, 6, 15, 23; 1400:3, 7, 12, 18, 25; 1401:5, 9, 18, 25; 1402:3, 9, 18, 23; 1409:23, 24; 1411:6 witness' [1] 1384:20 witnesses [3] 1229:2: 1349:16; 1403:10 won't [5] 1374:8; 1390:17; 1391:22, 23; -Z -1393:4 wonder [1] 1303:24 wondering [1] 1408;11 word [1] 1395:9 words [3] 1370:10, 13; 1379:22 work [13] 1203:4, 12; 1204:7, 24; 1295:1, 3; 1296:17, 18; 1360:10; 1364:24; 1380:22; 1384:10; 1389:16 worked [1] 1357:18 working [2] 1295:12 world [7] 1294:25; 1375:4, 7, 12, 18; 1370:3; 1309:2 worry [1] 1377:25 worse [4] 1352:5; 1392:14; 1393:8; 1296:4 worst [1] 1399:5 worth [1] 1408:14 would [189] 1280:3, 25; 1291:18; 1292:15, 17, 19; 1293:10, 11, 20; 1297:10; 1299:6; 1301:10, 18; 1302:19; 1304:13, 24; 1349:14, 17, 19; 1360:5, 8, 13, 22; 1361:1, 12, 19, 22; 1382:15, 17, 19; 1353:13; 1354:4; 1355:4, 17; 1356:9; 1357:9, 10, 23; 1350:1, 9, 12, 22; 1361:1, 6, 13; 1362:25; 1363:1, 5, 19; 1365:1; 1367:6, 9, 18, 19, 22; 1368:3, 4, 5, 9, 11; 1309:17; 1370:3, 13; 1371:10; 1373:3; 1375:3, 21, 22, 23, 24; 1376:1, 25; 1377:10, 20; 1378:9, 21, 22, 23; 1379:1, 2, 17; 1380:10, 12; 1381:15, 16, 17, 21; 1382:12, 13, 14, 16, 19, 20, 22, 23, 24; 1383:7; 1384:7, 23; 1385:13, 20, 22; 1386:1, 2, 5, 14, 15, 16, 10, 26; 1307.5, 3, 6, 10, 12, 13, 21, 25; 1368:1, 3, 4, 5, 6, 7, 9, 10, 14, 15, 18, 23, 24; 1389:2, 3, 5, 7, 8, 20, 23; 1390:4, 5, 21, 22, 25; 1301:0, 8, 11, 13, 15; 1392:2: 1393:24; 1394:16, 17, 19, 21; 1395:2, 16; 1396:1, 4; 1398:9; 1399:18, 25; 1400:5, 14, 16; 1401:2; 1406:2; 1407:11, 12, 13, 17, 21, 23, 25; 1409:24; 1410:12, 22 wouldn't [12] 1290:7; 1369:1; 1367:16, 22; 1389:10, 12; 1390:23; 1393:24; 1384:4; 1397:15; 1398:2; 1400:15 writing [1] 1390:4

-x-

x [1] 1286:1

year [1] 1293:18 years [12] 1258:10, 13, 23; 1358:5; 1369:18; 1360:19; 1362:25; 1363:9; 1375:6; 1370:10; 1392:17; 1400:7 yet [3] 1384:2, 3; 1394:23 yields [1] 1408:1 you've [4] 1374:28; 1376:8; 1382:17,

zaro [7] 1306:5, 6, 7, 18; 1387:5, 10, 11