96-04227

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of	:	**DOCKET NO.**
	:	
Application for a rate increase and increase in service availability charges by SOUTHERN STATES UTILITIES, INC. for Orange-Osceola Utilities, Inc. in Osceola County, and in Bradford, Brevard, Charlotte, Citrus, Clay, Collier, Duval, Highlands, Lake, Lee, Marion, Martin, Nassau, Orange, Osceola, Pasco, Putnam, Seminole, St. Johns, St. Lucie, Volusia and Washington Counties.	:	**950495-WS**

SECOND DAY - EARLY AFTERNOON SESSION

VOLUME 8

Pages 783 through 863

PROCEEDINGS: **HEARING**

BEFORE: CHAIRMAN SUSAN F. CLARK
COMMISSIONER J. TERRY DEASON
COMMISSIONER JULIA L. JOHNSON
COMMISSIONER DIANE K. KIESLING
COMMISSIONER JOE GARCIA

DATE: **Tuesday, May 1, 1996**

TIME: Reconvened at at 1:00 p.m.

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

REPORTED BY: SYDNEY C. SILVA, CSR, RPR
Official Commission Reporter

APPEARANCES:

(As heretofore noted.)

I N D E X

MISCELLANEOUS - VOLUME 8

WITNESSES - VOLUME 8

PROCEEDINGS

(Hearing reconvened at 1:00 p.m.)

(Transcript follows in sequence from Volume 7.)

CHAIRMAN CLARK: We're ready to go back on the record. I had indicated previously that we would take up the Motion to Strike the testimony of Mr. Broverman. Mr. Beck, it is your motion. And I understand it has already been argued once in front of the Prehearing Officer. Do you want to add anything to your written motion?

MR. BECK: I'll be glad to waive oral argument and make it on the written motion.

CHAIRMAN CLARK: Okay. Mr. Armstrong.

MR. ARMSTRONG: Yes. As indicated previously, I believe when the argument was made, I wasn't here to discuss that before Commissioner Kiesling, but there was a question in terms of what testimony is this actually rebutting? And I knew there was plenty of testimony that it was rebutting and I just took a half hour and went through.

CHAIRMAN CLARK: Okay.

MR. ARMSTRONG: September 20, 1995, at Jacksonville, Witness Herbank indicated, "I think if SSU doesn't learn how to manage a company, they ought

to get out of the business and let somebody do it that can."

October 3, 1995, Temple Terrace, Witness Freund indicated, "These folks have an administrative problem from the top down . . . what are they currently doing to reduce fixed and operating costs?"

In Ocala on October 11, Witness Guypert, G-Y-P-E-R-T, indicated, "Somebody had better find out where we are putting this money."

In Sanford on October 12, 1995, Witness Oranchik indicated, "If they need to cut money they need to look at their management, you know, their employees."

On January 30, 1996 -- I don't know which area this was, but Witness Daundores said, "The cost of doing business their way is astronomical." And he was followed up by Witness Cowin, so I guess this is Sanford, where she asked the PSC to "look at salaries and benefits of SSU." This is about FAS 106.

In Stuart, February 1, 1996, Witness Van Dien said, "None of the information I've seen . . . shows me that SSU is cutting their expenses involved in trying to make their profits better."

As I indicated, I just went through quickly in the matter of a half an hour and picked those out.

I know there are other instances.

CHAIRMAN CLARK: Okay.

MR. ARMSTRONG: But, Madam Chair, what we wanted to do, Witness Lock had indicated in her prefiled direct that we did not have the actuarial report and she advised the parties that were trying -- that we would be filing that. We did file that with everybody in January when it was received in response to a discovery request.

So what we wanted to do through Mr. Broverman was provide an actuarial report to the Commission as well as he had testimony in here that said Southern States has taken significant steps to control and reduce costs. And actually, he states that, "It's apparent that SSU is among the frontrunners in its efforts to control postretirement costs."

We thought it would be good for the customers and the Commission to realize that, you know, in addition to the other testimony that exists, Mr. Broverman could provide testimony to rebut some of the information requested by and statements made by the customers in the customer service hearings.

CHAIRMAN CLARK: Okay. Mr. Beck, briefly?

MR. BECK: Yes, briefly.

I think Mr. Armstrong has made my case for me. That if you take those comments from customers at the hearings stating a generalized dissatisfaction with the way Southern States runs its business and use that to put in what purports to be a rebuttal from an actuary on FAS 106 expenses, it's a sham that they are trying to perpetrate on the Commission with this.

There has been no testimony by any of the intervenors addressing the FAS 106 expenses of the Company; nonetheless, they're trying to slip this in as rebuttal when it is not rebuttal to anything other than generalized statements from the public that they are dissatisfied with Southern States.

If you accept their argument, that will allow them to as purported rebuttal address anything in the entire case and try to buttress their case and put on issues that no one else addressed and do it at the last hour. You shouldn't allow them to do that.

CHAIRMAN CLARK: Okay. I have reviewed the testimony and the motions and I have to say that I am in agreement with the motion that it should be stricken. I think it is a tenuous link between the general suggestions by customers of inflated MFRs and other issues of mismanagement supports the conclusion that further information on just one expense item is

appropriate.

As Mr. Beck indicated, that in effect would open up the door for every expense to be relitigated; in effect, giving a second bite of the apple.

I would further state that I don't think it can be inferred that other expenses are reasonable just because one particular one is shown to be reasonable. All of them have to be evaluated on their own basis.

And I think you have impliedly acknowledged that this is in fact supplemental by the statement that Dale Lock indicated the 1995 SSU actuarial valuations would be forthcoming.

So it is my view that it is not appropriate rebuttal and that it is inappropriate to allow you to select one category to use actual expenses as opposed to budget expenses in the use of a projected test year. And for that reason, I will strike the rebuttal testimony of Mr. Broverman.

MR. ARMSTRONG: Thank you, Madam Chair.

CHAIRMAN CLARK: Thank you.

We are on cross examination of Mr. Hartman. Go ahead, Mr. Reilly.

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GERALD C. HARTMAN

resumed the stand as a witness on behalf of Southern States Utilities, Inc. and, having been previously sworn, testified as follows:

CROSS EXAMINATION

BY MR. REILLY:

Q Good afternoon, Mr. Hartman.

A Good afternoon.

Q First I would direct your attention to Pages 5 and 6 of your prefiled direct testimony. On these pages, you advance the proposition that the PSC's used and useful methodology does not encourage planning, environmental responsibility and economies of scale; is that correct?

A The strict use of the -- that is correct when the strict use of a formula is applied. That is a lot count method.

Q Isn't it correct that the PSC has always allowed the costs caused by the Department of Environmental Protection regulations as long as it was required through consent orders, notices or inspection reports?

A I don't have the knowledge of all the situations, so I can't answer that from that standpoint. I have been involved in rate cases like

in Sarasota County where 100% of the regulatory requirements were included as 100% used and useful.

Q So, generally, specific requirements imposed by the DEP are acknowledged in the PSC orders?

A I can't say so in the PSC orders, I can say so in the Sarasota County orders. The PSC many times looks at just consent orders, notices of violation and requirements from that standpoint versus the statutory requirements that if you just comply with those then you default into this formula, which may not provide for regulatory requirements for threshold sizing.

Q But my question relates to those consent orders and notices and so forth, that in fact when they are -- when those requirements are imposed by those means, by the DEP, that the PSC acknowledges them and passes those costs on to the ratepayers; is that generally correct?

A In some rate cases that I have reviewed, yes, that has been correct.

Q So as long as DEP provides written notice of the requirement, do you believe the PSC will disallow those costs?

A First, what was your question?

Q The question is, if DEP actually makes a specific requirement of the Utility and the Utility

carries out that requirement, do you believe the costs associated with meeting that requirement would be disallowed by this Commission?

A It has been. DEP requires looping in certain instances and the lot count method does not allow the recovery of that investment.

DEP requires two wells; and many times the Commission has not allowed recovery of the full capacity of those facilities.

DEP has required 20% of reserve. Mary Clark's order to the City of Cocoa is an example of that, August and October 26 of 1990. Various administrative cases they require margins of reserve of 20% and yet this Commission does not provide for that recovery.

Q But my question relates to when DEP issues specific consent orders -- for instance, in your case you mentioned looping. If they said this system does not meet requirements, you must provide a looped system within some time certain, would the Commission not acknowledge that requirement and allow the Utility to pass those costs on to the ratepayers?

A In an enforcement action, yes, the answer to your question is yes. Typically I've seen that in the cases that I've been involved in, but relating to

enforcement action versus a regulatory standard and regulatory requirement puts and incredible burden on FDEP to issue enforcement letters to get investment into rate base, which doesn't make a lot of sense to me.

Q Are you familiar with the term AFPI or allowance for funds prudently invested?

A Yes.

Q Isn't it correct that the PSC allows AFPI charges to recover the carrying cost of nonused and useful utility plant in service?

A When applied for, sometimes, yes. When applied for, sometimes, yes.

Q That is available to utilities to recover their carrying costs of plant in service that has been deemed not used and useful; is that correct? It's up to the Utility to seek that relief and to be granted that relief?

A That is one mechanism, yes, to --

Q If the utilities have good planning for phased developments, then the risk of having nonused and useful plant in service would be significantly reduced, is that not correct?

A No. That's exactly wrong. Because what happens, if you plan appropriately, as it just showed

in the economies of scale aspect, your risk for investment is great because the most cost-effective solution for the customers long term would give you very low used and useful analysis.

Q I understand your example about the economies of scale with the different sized plants. But, for instance, on collection and distribution lines, doesn't a utility have a choice -- when I say "phased development," to put in -- to phase in the collection and distribution lines as they project the need for those lines will be there as the number of customers that they think they will be coming on line?

A To answer areally, your answer is in an areal extent?

Q Right.

A Okay. If you don't build it in that area, then you don't have a risk for nonused and useful, my answer to that, of course, if you don't make an investment, you don't have any risk, of course.

Q On the subject of peak hour demands for storage and pumping and maximum day demands for treatment and supply on Page 8 of your prefiled direct, I guess I'd draw your attention particularly to Lines 10 through 12. Didn't you state that, "Storage and pumping is designed to meet peak hour

demands while treatment and supply sources must meet only maximum day demands." Is that correct?

A When storage is available. That means all of the peak hour demands, yes, that is the case.

Q Okay. Isn't it correct that engineering design criteria require treatment and supply sources to meet maximum day demands and fire flow should not be included?

A When you have adequate storage for fire flow storage, it wouldn't be included, of course. With adequate storage. But only in those cases.

Q Isn't it correct that it is not cost-effective to use treatment plant or supply wells to meet fire flow demands?

A Oh, that's totally false. Because when you look at the vast majority of the systems in the state of Florida, most of them are just wells with a chlorinator and a hydropneumatic tank. The cheapest storage in the state of Florida is the aquifer when the aquifer is available. It is the largest storage reservoir we have and the most prolific.

A much more expensive situation is when you have those resources is to build these other facilities. That's why you see in the various systems that you will have multiple well and hydropneumatic

systems the wells meet peak hour instantaneous peak, and that's the design. Because they use the aquifer for the storage, so you don't have to buy and build or invest for storage when the resource is fresh, clean, good water.

Now, when, as I testified before, when the resource has to be treated with softening, reverse osmosis, or has to be aerated and you have to build the storage tank anyway, then yes, you get the dual use of treatment and storage and it is more cost-effective in that fashion. But it should be limited only in those resource circumstances that need treatment.

Q But is it cost-effective to require this large amount of supply and treatment to provide for this large amount of instantaneous demand and then have this much larger sized plant having to be carried in rate base to provide the average daily flow that is otherwise called upon?

A Well, first, you have confused water and wastewater. It is called upon as maximum daily flow for water.

Secondly, when you consider the plant, you're only talking about the supply component and chlorination. And if you look on the cost or

investment and you look at the economy of scale, you can build with a ton cylinder a half-million-gallon-per-day plant or a 10-million-gallon-a-day plant for the difference of $2,000 or $3,000. It is so much cheaper to do it in that fashion. It is the most prudent investment by far. All my entire report shows that, every professional engineer that has practiced in this state would tell you the same thing.

Q Earlier I thought you said the engineering standards did not call for supply and treatment to provide fire flow; is that correct?

A Only when there is sufficient storage. Remember, I said when you have storage, then the storage tank provides for the fire flow in that situation because you made that investment. And then you don't have to have fire flow from your wells when you have sufficient storage. But when storage is not sufficient, the least cost approach is to get it from your wells.

Q Now, does the Ten States Standards or AWWA manuals, do any of these support your contention that without the storage that it is engineeringly sound to ask the supply and water treatment facilities to provide a fire flow provision?

A Yes. If you look at the DEP standards, DEP provisions for small water systems, USCPA Manual of Practice for Small Water Systems, et cetera, et cetera, there is a litany of them out there.

Q Let me direct your attention to Page 9, where you talk about maximum day demands should exclude line leaks, firefighting. In fact, particularly on Lines 2 through 4, you state, "I agree that max day demands should be adjusted for natural occurrences such as line breaks and firefighting but only if adequate storage is available to meet the requirements of such condition." Is that correct?

A That's correct.

Q For systems without adequate storage, are you saying that it is all right to have line breaks or leaks included in the max day demand?

A When you don't have storage it's a moot point. Again, to educate, when you have adequate storage, you look at the storage to meet those requirements. When you don't have adequate storage, the design condition, again, for the wells, is not average day, it is not maximum day, it is a peaking condition. And the peaking condition would then flow without the storage back to the well.

In fact, many well pumps and motors are

sized for fire protection because you don't have an intermediate facility, there's no investment in between, to meet that condition. So of course.

Q So these unusual occurrences should be included in the max, the max day conditions?

A No, it is a different design condition. The wells are not based on the maximum day when you don't have adequate storage, that's what I testified to earlier.

The wells are changed to a peak condition and therefore are included. The emergency storage, you include the emergency storage requirements that otherwise would be provided by a storage tank in the capacity of the well. Because we don't have the tank, you still have to meet the emergency, you still have to fight a fire.

Q On Page 10, on Lines 2 through 8, you talk about critiquing the average five max day demand used by Public Counsel. You stated that the average five max day demand produces a lower used and useful. Is that correct?

A That's correct.

Q Isn't it true that using the average five max day demand level can level out the effect from known or unknown water loss or breaks during the max

day demands?

A Well, that's a hypothetical. The hypothetical is, of course, yes. Whenever you average something, you always average out the event; so, theoretically, of course.

But in this case, I believe the Staff and specifically Mr. Bliss can testify to the fact that they eliminated the abnormal events; so, therefore, they use the actual data.

Q Those that they knew about.

A Well, you only can do what you know, that's correct.

Q Well, wouldn't, though, the ability to average the five very max days create an opportunity to level out aberrations that would not have occurred but one single time -- a spike on the graph, as you might say -- that would give you a more accurate reflection of what a max day should be?

A No. When the -- absolutely not. The five day averaging effect, the way that is advocated here by Public Counsel, creates a situation that you never can recover a portion of your investment that's required by regulation to be made because you can never hit the maximum that you have to meet.

You can't design a water system serving the

hospital or any other type of facility or home and say you are going to meet it -- five days out of the year you're not going to meet the needs. You know, you have to meet every day's needs 24 hours a day and the peaking condition. It's a public health, safety and welfare issue and it is something that is a requirement of the State of Florida. It is a regulatory requirement.

Q But wouldn't you assume that the five max days would be approximately the same, the same amount of flow, anyway, without considering an aberration; and that the averaging of those five max days shouldn't produce a number that is so significantly different than the single max day unless there was, of course, some aberrant event?

A Well, that's a statistical analysis. I've done that on larger water systems in the Tampa Bay area where the average of the five days -- in doing my work for the West Coast Regional Water Supply Authority we looked at all the water and wastewater systems in the Tampa Bay region, three counties.

My analysis of demand conditions of all those systems in the 1970 through 1978 period -- that's eight years going way back, water conservation wasn't in effect back then -- was that the five

average days or peak week, we used seven days versus five, came in around 82% of the maximum day. So it would be 12% would not be typically utilized. But that was back in a regional system in West Coast. I have not done it for these systems.

Q Excuse me, the last?

A I have not done it for these systems.

Q But you would expect the results to be even closer using the five max days as opposed to seven you just referred to?

A It would be a little bit closer but not much.

Q On Page 10, beginning on Line 10, you state that, "It creates," it being the five max days, "creates a direct disincentive for proper facilities sizing. It sends an economic signal to the utility to reduce the size of the facility." Is that correct? Is that your position?

A Which page?

Q We're on Page 10, Line 10, starting on Line 10, your direct.

A Page 10, Line 10. (Pause)

I think you are reading from a different direct than I am. It says here that "would disallow investment to meet regulatory requirements, standard

design criteria, and the Commission's own rules."

Q I'm looking at Page 10, Line 10. And it says, "As I indicated in my comments earlier, it creates a direct disincentive for proper facility sizing. It sends an economic signal to the utility to reduce the size of its facility." have I got a different version of your testimony?

A Okay, that's Line 12. Are you talking about Line 12?

Q Well, it starts on 10 and ends on 12.

A Okay. "It creates a direct disincentive for proper facilities sizing and it sends an economic signal to the utility to reduce the size of the facilities despite the design requirements, so as to reduce the risk of not recovering the investment for proper sizing."

I think that's what it sends to management, definitely. I mean, I have had clients, I serve 27 different investor-owned utilities in the state of Florida and four of the top five. And I have had people talk to me and say, "You know, we can't recover it all." And it's a constant battle between the engineers to put everything in.

It's improper to have a regulatory requirement and not be able to recover the regulatory

requirement.

Q Isn't it correct, though, that the utilities have options to avoid risk by having developers contribute the capital costs through prepaid CIAC or advances to construction? That these are some of the options that utilities can use to reduce these risks and help support these economies of scale that you have been talking about?

A That, theoretically and hypothetically, that is a possibility. I have to admit that, yes, that is a possibility. But in reality, how many developers come in to pay for the next size increment of the central utility plant? And the reality of that is it is remote.

Q Could I direct your attention to Page 16 of your testimony, where we begin talking about reuse facilities and whether they are 100% used and useful or not. You talk about Chapter 367.0817(3) that talks about all prudent costs of a reuse project shall be recovered in rates.

In your understanding of this statutory requirement, does the statute expressly say that all reuse facilities are 100% used and useful?

A It does say that you recover 100% of the cost of prudent investment, yes.

Q That wasn't my question.

A And the prudency of the investment is considered, you know, five times. First, the consultant looks at the prudency of the investment --

Q So --

A -- and as I responded in deposition and to you, people don't go and take money and just put it in the ground for reuse, it's imprudent.

Q So recover --

A Secondly, the client reviews it. Thirdly, the water management district approves it under the consumptive use permit aspects.

So it is reviewed for prudency those three times, as well as the financing institution that they borrow the money from; and finally here in this Commission they review it, and there's a review for prudency by the FDEP. So you have five or six reviews of prudency of reuse investment. And I think I haven't seen a project that people have been investing money in reuse that has been imprudent.

Q So your response in terms to whether it is recoverable in rates, you do acknowledge in that response that prudency obviously would be a statutory requirement before recovery; is that correct?

A The word "prudent" is in there, yes.

Q I mean, if a company builds reuse facilities that are underutilized, can the PSC determine that such expenditures are not prudent? Is that within their purview?

A Utilization is not one of the prudency aspects as I understood the water management districts in using this rule. I was involved a little bit in water management district involvement in this; and what they were looking at, and the state legislature was looking at, was to get reuse in the state of Florida. And it is a beneficial reuse for this state.

And the incentive for doing that wasn't that when you build the facility and Day One you only have 50% of utilization and therefore it's 50% utilized and therefore you only get 50% return, no. It was for 100% recovery. It was clarified later on after comments by the Florida Legislature.

Moreover, when I serve every single one of my public governments, 67 cities and counties that our firm serves statewide, 100% -- 100% -- of that reuse investment is recovered in rates and charges to the customer.

Q Now, that was a no with an explanation? To my question? That it is not within the purview of this Commission to try to evaluate the degree that the

facilities are utilized; and if in fact a utility builds, spends $1 million on a reuse facility that there's no one to use that facility, that they couldn't deem that facility as being an imprudent expenditure and not recoverable in rates or not recoverable totally in rates because of its underutilized? That wouldn't be within the PSC's purview?

A That becomes a legal question on what the rights and duties of the PSC Commission are. And I would think there's a very broad discretion with the Commission.

I'm not an attorney, I couldn't respond to that.

Q I'm really not asking a legal question so much as whether in your judgment the degree of utilization of a facility is part of this issue of prudency. I think you answered no, it shouldn't be?

A And that is all the discussion --

Q Is that your opinion?

A -- that I have been involved in rulemaking of that rule, in the clarification of that rule that was reissued just a few years -- you know, just the next session later it was clarified. Because there was some discussion about whether it would be 100%

used and useful or not, and they strengthened the language to say 100% of the recovery of investment.

Q Let me explore one other thing. There was a little discussion of some discussion between a Commissioner and an earlier witness about what constitutes reuse and whether -- because the term was being very broadly applied by certain SSU witnesses where they said "recharge" was somehow being equated with "reuse."

Would you give me your opinion of what constitutes reuse? Would you consider a perc pond a reuse asset or would you consider it a recharge utility asset?

A Well, it depends on the use of perc pond. In the abstract I can't even answer your question; because the perc pond will be part of facilities, a part of facilities serving a function. So if you give me the example or give me the question with some specificity.

Is a perc pond that provides for wet weather storage part of the reuse asset? The answer is yes. Is a perc pond that provides for emergency storage a reuse asset? Yes. Is it for substandard recycle? Yes. For withdrawal back and reuse? Yes. Multiple ponds in a recharge like rapid infiltration system?

Yes. So, you know.

Q Well, I guess the question is, if you are -- if we are talking about disposal of effluent, if the effluent is given a greater level of treatment so that it can actually be applied as a replacement for water source for irrigation purposes, that's my common understanding of reuse.

Is your understanding that reuse is something broader than that? That's the nature of my question.

That if it doesn't have an impact on reducing that customer's use of water, potable water, that it would not qualify as a reuse asset.

A Okay. You are defining reuse as reducing the potable water demand.

Q I'm attempting to, yes.

A Okay. And a perc pond as part of a reuse system that has some portion that reduces the potable water demand would then qualify in your analogy? I'm trying to understand your question.

Q I just wanted you to explain what you --

A Okay. I think, I think -- and I'm an older sanitary engineer, so I think of reuse, which is called beneficial public, unlimited public access reuse, as being sprayed and reducing some type of

irrigational demand or potable water demand.

You said just potable water demand. It's really both, it's the resource utilization.

In contrast, if you have a single perc pond to a wastewater treatment plant, it is considered recharge reuse by the state of Florida. In the classic definition of demand reduction, it doesn't reduce demand.

Q I think that's the term I was looking for was "public access."

A That's just one classification of reuse, there are four of them.

Q What do you think was envisioned by the legislature when it used the language it did in the statute I quoted earlier?

A The purpose --

Q Were they speaking of public access reuse or were they talking about recharging the aquifer?

A My understanding from the water management district work that I was involved in was it was a definition of reuse pursuant to the FDEP definition of reuse, which includes all four classifications as the state defines reuse.

Q Let me direct your attention to Page 17 of your prefiled direct where you make references to some

of the DEP letters.

CHAIRMAN CLARK: Before you leave that, Mr. Reilly, let me ask some questions just so I'm clear.

You indicated that you think the statute in 403-whenever-it-is having to do with putting in reuse facilities meant facilities more than the public access reuse?

WITNESS HARTMAN: Yes.

CHAIRMAN CLARK: What are the other? You said there were four. Can you give them to me?

WITNESS HARTMAN: There's recharge reuse, which means --

CHAIRMAN CLARK: Okay.

WITNESS HARTMAN: -- you know, I'd have to look at. There is a, there is unlimited public access reuse. There's limited public access reuse. And there's demand substitution reuse.

CHAIRMAN CLARK: All right. Tell me, explain to me the characteristics of each of those.

WITNESS HARTMAN: Okay. For just simply recharge reuse, you would have an infiltration system and its recharging the aquifer to benefit the water resources of the state. The design standard for that is lower, it may be secondary treatment. The

requirements on Class I reliability are not there.

Then there's demand substitution reuse, which is the next level in my book. And that is reuse for a specific purpose, such as industrial cooling water or some other type of facility. And the design standards for that vary for the application applied. And I consider that a beneficial reuse.

Then there is the standard of nonpublic access reuse. And that's where you are allowed to irrigate --

CHAIRMAN CLARK: Wait a minute, you have now introduced another term. You gave me recharge, unlimited public access, limited public access --

WITNESS HARTMAN: Well, nonpublic access, limited public access is the same thing. There's limited public access --

CHAIRMAN CLARK: Hold up. Give me the four categories again.

WITNESS HARTMAN: Unlimited -- at the very top is unlimited public access.

CHAIRMAN CLARK: Okay.

WITNESS HARTMAN: That means you can go play golf, reuse water can hit your golf ball, you can clean your golf ball, you can have it hit you sometimes. I don't like it that much, but -- and you

can play in it, basically.

CHAIRMAN CLARK: Okay.

WITNESS HARTMAN: Then you have what we call limited public access reuse, where you are reusing the effluent but you shouldn't come in contact with it because of the total suspended solids treatment level is not high enough for proper and complete high level disinfection.

Then there is --

CHAIRMAN CLARK: Wait a minute, give me an example of that.

WITNESS HARTMAN: That type of reuse would be to a sod farm, to irrigation below edible crops, down below that the spray does not hit it. To that kind of thing.

CHAIRMAN CLARK: Okay.

WITNESS HARTMAN: Then there is demand substitution for industrial purposes or cooling water. And that has a variety of standards.

CHAIRMAN CLARK: All right.

WITNESS HARTMAN: Then there's recharge reuse, and that's from the infiltration basin system that may have -- you may create these infiltration basins to push the water down the aquifer of fresh water to keep salt water back and then be able to

withdraw from that same aquifer. That's our biggest storage tank is the aquifer, to pull back out of it.

CHAIRMAN CLARK: All right. Now, getting to The Statute 403 that allows -- is it 403 that allows for the full recovery of reuse?

MR. REILLY: It's --

WITNESS HARTMAN: 403.064(10).

CHAIRMAN CLARK: All right. 403.?

WITNESS HARTMAN: 064(10).

CHAIRMAN CLARK: All right. Is it your view that that statute calls for the recovery of reuse facilities in any of those categories?

WITNESS HARTMAN: In those four categories, yes.

CHAIRMAN CLARK: And it is not limited to unlimited public access?

WITNESS HARTMAN: That is correct.

CHAIRMAN CLARK: And on what basis do you draw that conclusion?

WITNESS HARTMAN: From my work with the water management districts and involvement in this.

CHAIRMAN CLARK: Can you be more specific?

WITNESS HARTMAN: We've discussed -- because I made the segregation between that and a simple singular perc pond.

CHAIRMAN CLARK: Okay.

WITNESS HARTMAN: A singular perc pond just for disposal purposes is not recharging the aquifer. There is a distinction.

CHAIRMAN CLARK: All right. Thank you, go ahead, Mr. Reilly.

Q (By Mr. Reilly) And you do acknowledge as we go up the chain to limited to unlimited public access that it is a higher level of treatment and more expensive treatment necessary to produce effluent that can come in contact with the public; is that correct?

A Yes, it is. As you -- depending on. There's the demand substitution can be very expensive also. But the limited public access versus unlimited public access, it is more expensive for the unlimited public access.

Q And while there's an obvious public benefit to recharge in the aquifer, you can see the conservation implications that the legislature would want to encourage for actual demand substitution where the level of treatment would be, although quite expensive, would actually substitute for potable water; is that correct?

A Well, I thought the legislation was relative to water resources of the state. And to limit it to

solely potable water I don't think that's the intent at all.

Q On Page --

CHAIRMAN CLARK: Can I ask another question?

MR. REILLY: Go ahead.

CHAIRMAN CLARK: What among those four categories be would be demand substitution?

WITNESS HARTMAN: The unlimited public access, in certain case the limited public access, and the demand substitution for industrial.

CHAIRMAN CLARK: Okay.

WITNESS HARTMAN: The recharge aspect also is considered if you look at the -- and this gets technical and I hate to do this to everybody. But it's called the free added surface pressure gradient in the aquifer. By pushing the water down here it thickens the fresh water lens that we get water out of. One foot of these perc ponds that pushes the fresh water in gives us 40 feet in our wells for supply.

CHAIRMAN CLARK: But it doesn't substitute demand.

WITNESS HARTMAN: It doesn't substitute demand but it increases the fresh water resource of the state.

CHAIRMAN CLARK: Okay.

Q (By Mr. Reilly) Concerning these letters we were talking about, DEP letters, on Page 17, is DEP the state agency that determines used and useful issues for the privately owned utilities in Florida?

A What was the first part of that? Somebody determines the used and useful issues?

Q DEP. I'm sorry.

A No.

Q Okay. and has PSC ever acknowledged Mr. Harvey's 100% used and useful statement about reuse facilities?

A I don't know.

Q Isn't it correct that DEP often implements stringent regulations on private utilities without fully considering the rate impact to customers? Or would you even have an opinion about that?

A I don't think -- first, to my knowledge, the only rule promulgation for DEP is on environmental protection and doesn't segregate out or discriminate on the utility, whether it is investor-owned or publicly-owned or somehow. It is just for utilities to comply with for environmental protection of the state.

So your question, I would have to answer it

no because of how you formed the question.

Q Does Mr. Harvey's 100% used and useful opinion on reuse facilities represent the current official opinion of DEP?

A To my knowledge.

Q Do you know where this opinion is codified in terms of any rule or written policy statement that you could offer the Commission?

A I believe that it is 403.064(10).

Q It is the statute you're speaking of?

A It is in the statute.

Q But there's no statement from the agency interpreting that statute that conforms to your opinion?

A I do not have a statement relative to a used and useful practice because I don't believe the FDEP does used and useful work like that.

Q Okay.

A That's this agency, I believe.

Q Could I direct your attention to Page 19 of your testimony. And more particularly on Lines 1 and 2 of that page, you state, "It is simply excess capacity required by regulations and therefore used and useful." This is DEP-required excess capacity.

Isn't it correct that the PSC has also set

up AFPI charges for the utilities to recovered nonused and useful excess capacity? I guess I asked you that before. These are methods that the PSC has implemented to allow utilities to recover nonused and useful excess capacities?

A Well, first, you have take that a little bit out of context. We're talking now about margin of reserve, we're changing topics.

Q That's correct. That's correct.

A And we're also saying that the DEP's rules are showing you have to have the five-year period in the planning process through construction for your margin of reserve and therefore you must have in your plant sufficient excess capacity to meet those requirements at all times it is held that way.

Now that has become a regulatory requirement. So in my way of reading everything I've seen with this Commission, that a regulatory requirement is considered 100% used and useful. I thought. I thought you were saying that before.

Q No, I don't believe I did. But I did say that this perceived excess capacity, that there are different ways to allocate that cost. And I wanted you to acknowledge if you have knowledge about it that there was this mechanism, AFPI, that can allocate

these costs and allow the Utility to recover these costs.

A I'm not a rate design person for this case. I'll just -- other than what I answered before on AFPI, I'll just stay with that.

Q To probe a little bit more on this DEP Rule 62-600.405, I'll push you forward to Page 27 of your testimony, particularly on Lines 6 and 7. If you are there, you state, "Although the rule," this rule I just quoted to you, "does not directly state a utility must maintain capacity necessary to meet demand for the next five years."

As to that statement, isn't it correct that the Rule 62-600.405 requires wastwater utilities to submit capacity analysis reports at a maximum five-year intervals or shorter intervals of four, three, two or one years are sometimes required? Is that not what that rule requires?

A The rule requires, that's a part of the rule, yes. A part of the rule does require -- a component of the rule -- to answer your question. Yes, a component of the rule does require the preparation and submittal of the capacity analysis report once the facility reaches 50% of its capacity.

Q Now this rule, of course, makes no mention

of margin reserve, obviously. But does it, underpinning this whole concept of margin reserve, where in this rule does it actually say a five-year capacity? I understand it says you should be planning in all these planning stages, but where does it say the utility should maintain this five-year excess capacity? Could you direct me to that exact language, help me out?

A In the rule itself, there's no, right in that section of the rule it doesn't specifically state the utility must maintain a five-year excess capacity or --

Q But does it say even four?

A -- or any --

Q Or three?

A -- or any number in the rule --

Q Okay.

A -- because the rule is not written that way and the application of the rule is not that way. So of course it doesn't say that.

So, you know, your question is, is it required? And I'm representing to you I think if you pull another professional engineer that practices in the state here, put him in my chair, he'll say the same thing to you, that yes, you must maintain the

five-year requirement or you may start making an investment.

Q Or you are in the process of planning for capacity? Isn't that what the rule says?

A Yeah, the very first step is planning, of course, in every process.

Q So the requirement of the rule is that you continue to monitor and understand what capacities you have; and when you reach these thresholds, you begin reporting to us what your plans are for providing for additional capacity as you get closer to full capacity? Isn't that what this rule says?

A The rule says at 50%, yes, you start that planning process and reporting process, yes.

Q So how do you take that huge leap from this planning process into a DEP requirement --

A It's how it is applied, sir.

Q -- to -- for this large amount of capacity that this requirement must be now recognized by the PSC to impose a cost on current ratepayers to maintain a capacity which you are somehow inferring out of this rule?

A I am not inferring it. What it is is the application of the rule. You must have, it's a five-year window, to implement the capacity. So

therefore, it is an application of that rule and it would result in a five-year margin of reserve.

Q If we could move on to the subject of fill-in lots on Page 31. And particularly I direct your attention to lines 13 through 16, where you say, "Lot count methodology does not account for those fill-in lots, unconnected lots located between connected lots, which may never be built on by reason of zoning, the owner's purchase of the fill-in lot adjacent to the one upon which he or she has built, or other reasons."

Normally, lots in a subdivision are developable and don't have zoning problems or else they wouldn't be platted lots; is that correct? Wouldn't that normally be the case?

A Normally? I have seen zoning problems after you have had a plat; but normally, that's not the case. You normally don't have zoning problems after the plat unless you are changing the product, if you will, associated with that development.

Q Why would you not normally -- it's true, I agree with your statement, you normally don't have zoning problems after a plat. Wouldn't the proper zoning be one of the many elements that would go into the approval of the plat in the first place?

A Yes.

Q And even a zoning change after plat has already been approved would be grandfathered in, would it not?

A In some instances.

Q Would it be fair to say that fill-in lots that can't be built on or for whatever reason won't ever be built on account for a very small percentage of most developments? Do you have an opinion about that?

A Typically it is a smaller percentage. But it proves a point that, having anything like that, you never can get to 100% used and useful in that development -- as well as is it, using the lot count method, is it the utility owner's risk for development for a phase-in period?

Your AFPI only gives five years. You look at a lot of developments that are in this case, they were built in the 60s; so the five-year period in the AFPI would have been quenched 25 years ago and the carry for the last 25 years would never be realized.

Q You said because of this small percentage of lots that might for whatever reason not be built on, you could just never reach that 100% figures?

A That's true.

Q Isn't it true, however, that this Staff and the PSC has historically when you get to almost virtually 100% used and useful that virtually every time they will round it and make it 100% used and useful. Is that not correct?

When you get that close to 100%, do they -- have you seen recommendations and orders come out of this Commission, "You are 95% used and useful, you are 99% used and useful"? Have you seen that? Is that standard practice of the Commission?

A I can't -- see, you're asking me something probably you should ask the PSC Staff what all the different statistical analyses of their orders have been.

But I have seen when you consider the economy of scale and you allow engineering judgment versus the formula, which the Commission has done historically, then yes, there's a rounding. Because the margin reserve, if it is 80%, should be rounded up to 100% used and useful due to the facilities.

But the fill-in lot, that misses the whole purpose of the fill-in lot theory. No lesser of a facility would have been required to serve that customer.

Now, for me to run a line between me and

you, counselor, the fill-in lot theory would say that where Brian Armstrong is, there's no pipe, therefore, I can't even serve you.

See, the situation is, it is should be the minimum facility. There's a threshold that used to be used in this Commission, a threshold of getting that service to you should be considered 100% used and useful to get to you, such that you have service because there's a requirement to the utility to provide service to these customers.

Now, oversizing would be at risk. I mean, oversizing the facility bigger than you need and that incremental investment, sure, is at risk. But providing the service is fundamental.

Q Did I understand your answer to my question that the small number of lots that might cause the utility to otherwise not become 100% used and useful, but in your -- let me ask you this question. You previously were a Staff person at the Commission?

A No.

Q Years ago? Never? But you have practiced before the Commission for a number of years?

A For a period of time, yes.

Q Okay. And from your personal experience it is your testimony that it would be rounded up and that

the utility would not be kept from being 100% used and useful because of a little small scattering of lots that somehow for whatever reason did not get built on?

A It depends on the Staff reviewing engineer sometimes.

Q Is that a yes or no and the explanation? I didn't get the yes or no.

A I've seen it case-by-case. Sometimes when you have a Staff engineer that does provide judgment versus the application rotely of the formula, yes, it is rounded. But when the formula is solely utilized, there is no rounding.

Q Can you quote --

A So it depends on who you get.

Q -- quote me ever an example where it was with a small amount of fill-in lots that it was not rounded up, any specific example where that was ever done?

A I didn't come prepared today, but I think you probably could go back to the prior rate case order in '91 or something like that and find it. I can go back and do that analysis for you and do a late-filed on it.

Q That's all right. If I could direct your attention to your rebuttal testimony? On Page 2,

beginning on, focus your attention on Lines 7 through 10. You speak of, "These witnesses, Mr. Biddy and others, argue against SSU's requested used and useful percentages and in so doing disregard the economies of scale I cited in my direct testimony." Is that correct?

A That's correct.

Q Does Mr. Biddy's testimony ever expressly mention the term "economies of scale"?

A That's the point I'm making.

Q Well, I understand that, but --

A Disregarded it.

Q But he did mention it?

A What?

Q But he did not -- he never stated and opinion by OPC that we were opposed to a utility utilizing the economies of scale in designing systems; is that correct?

A He disregarded the issue. And I think, you know, for the customer -- as I showed earlier and in my rebuttal testimony -- it's very clear that the economy of scale protects the customer and the economy of scale actually gives the customers lower rates. I would think since you represent the public you would be in favor of economy of scale.

Q Indeed we are. The question is, who do those economies of scale, how should you allocate that benefit? Should it be allocated to all the customers where the customers and the utilities benefit from that economies, or will the current ratepayers receive no benefits from the economies of scale?

If those customers don't come on line, if those customers come on line at a much slower rate than projected by the utility, those economies are never realized; is that correct? The only way that you can keep your per unit cost --

A No, that's not correct.

CHAIRMAN CLARK: Excuse me just a minute.

I need to ask both of you not to interrupt each other because it is difficult for the court reporter. So, Mr. Reilly, will you make it clear when you have ended your question? And likewise, please don't interrupt his questions.

MR. REILLY: Thank you.

WITNESS HARTMAN: Yes, ma'am.

Q (By Mr. Reilly) Go ahead.

A That is not correct. I showed even in our analysis at 1% growth rate there is an economy of scale. It could be much less than -- it can be realized way out in a period of time.

The allocation of costs should be down to the threshold facility necessary to provide the service, and that's what I showed in the graphs. That should be in the rate base. And then move with the demand.

If there's no increase in demand, then it is a flat curve and it doesn't get up to the investment; and you're right, the company is at risk for that differential. But it should not be artificially at greater risk because of an adjustment of used and useful. That's improper.

Q Let me direct your attention to Page 7 of your rebuttal, particularly Lines 17 through 19. You speak of these tables in your study portraying the long-term cost savings to the customer with the larger tank as compared to the smaller tank.

Now, SSU proposes to require existing customers to pay for a larger, either the whole or a larger portion, of the cost of this larger tank through an imputation of the margin reserve and the utilization of this hydraulic analysis; isn't that correct?

MR. FEIL: Excuse me. Did you say, "imputation of margin reserve"?

MR. REILLY: Well, we're considering it

imputing margin reserve, yes, imputation of margin reserve. We've always viewed it as an excess capacity for future ratepayers.

Q (By Mr. Reilly) But we'll just say applying a margin reserve and the utilization of this hydraulic analysis, that this would impose the higher cost on the customers?

A No. There's no higher cost from the threshold facilities required for service. I mean, what you have to have, you have to start with, "What is the regulatory requirement?" And that's, if you went to that '82 memoranda, the first thing said it must meet all rules and regulations in the state of Florida. So you start there.

Your basic pipeline from me to you, let's say it is a lateral sewer, is a eight-inch gravity sewer. That's the minimum I can build to meet the regulations to get service to you.

Now, if I oversize that to a ten-inch, that incremental cost, the differential cost in the investment, should be at risk --

Q In the example --

A -- but not the basic cost for the eight-inch system to you.

To put that in numbers so it is easier to

comprehend, for me to build an eight-inch lateral from me to you, let's say that's 60 feet, may cost, I'm going to round up a little bit, $200. A ten-inch might cost $220. But the difference in the capacity may be 60%. So 60% of $220 is only $132. So now we're looking at only recovering $132 for a $200 investment just to serve you.

So that's why it is wrong to go behind regulatory requirement with this used and useful application and deprive the Company of the proper return.

Q But in the example that we were talking about about the two tanks, it seems logical to me that although -- let's say you have a customer base that requires and has an immediate need for 20,000 gallons per day; but through the engineering studies and cost/benefit analysis, it was deemed that the tank should be 100,000 gallons per day. And that certainly it would produce a per unit cost far less than a 25,000-gallon-per-day facility.

And the point is that I was making about, well, that's great, the economies of scale are realized when and if those customers come on line to get it to that level where it is in fact producing 100,000 gallons per day. But if those customers do

not come on line, that per unit cost is never realized. Because, obviously, that 100,000 gallons per day capacity is there and the capital cost associated with that investment is there; and yet, year after year with 1% or 0% growth, your per unit cost is greater than if you had not sought those economies of scale. Isn't that correct? You have to have --

A No, it is not.

Q -- eventually you have to get the customers on line to support that investment.

A Not -- I guess I didn't fully communicate, no -- the answer to your question is no because I didn't fully communicate to you the application method. And possibly in showing directly to the Commissioners and your not seeing the charts, that's the problem here.

What I'm saying is that, okay, in your example, a 20,000 gallon tank is all the people need and then all of a sudden there's no growth ever again, okay?

Q Uh-huh.

A And the utility puts in a 100,000 gallon tank, okay? Your example.

What I'm saying is the cost for a 20,000

gallon tank, which is the minimum facility required to serve those customers, be in rate base and considered used and useful. The differential cost between that 20,000 gallon tank and the 100,000 tank is at risk and does benefit -- if no growth, there's no benefit to the present customer other than emergency service, redundancy, having those types of things available, which is a hard-to-quantify benefit.

But other than those benefits -- in a wastewater treatment plant, you can show a lot of other benefit. But on a tank, other than those benefits, there's no other real benefits to the existing customers.

No growth, you hold that constant across there, and yes, the Company made a bad choice or whatever and you don't get the recovery.

But the difference is not 20% of the price of the 100,000 gallon tank, which might be $160,000, let's say; 20% of that price is only $32,000 in rate base.

Well, the 20,000 gallon tank might cost you $80,000. How can the present customer put the Company at risk for the minimum service for that present customer? That's not right.

Q Well --

A The regulatory requirements don't provide for that.

Q On your analogy, though, then you would not give the current ratepayers any benefit from the economies of scale --

A If there --

Q -- no immediate benefit. To the extent that the customers come on line and the unit costs go down, then the current plus the future customers would get some benefit from these economies of scale. But the current ratepayers under your scenario would receive no benefits from the economies of scale; is that correct?

A In a storage tank financially under a no-growth situation from a pure cost standpoint --

Q Right.

A -- that is correct.

Q Okay. Let me direct --

A But that's a very unusual example.

Q Okay. Let me direct your attention to Page 10 of this rebuttal testimony, Lines 1 through 4. And you're talking about the economic signal sent by the intervenors to the Commission is to build plant in small increments, ignore economies of scale and bear inordinate risks for even threshold sizing.

Don't utilities have choices to make developers of future customers contribute to the construction costs for lines and plants, reducing the risk to the utility?

And I guess you answered that before and said yes, they have that, but in the real world situation it doesn't work that way? Is that pretty much your answer?

A It's remote for the total entity. I mean, the developer may contribute for his first phase of the subdivision or may contribute the lines right in the subdivision, something like that. But when the utility is serving not just this subdivision but the whole area, the developer doesn't pay for incremental sizing in the central utility plant. That doesn't happen.

Q But, of course, all of our examples you have given us are utilities who are going to make these decisions, economies of scale decisions.

But really what we are dealing here in this rate case is that SSU chose to bear these risks; that SSU went out and bought a number of systems that have sparse customers, low density developments and high used and useful figures. And now with this rate case you're coming to the Commission and saying, you know,

is it really fair to ask the customers to pay for these risk decisions after the fact?

A Well, if you -- first, I don't understand that they are paying for risk decisions after the fact. I mean, the way the used and useful used to be applied there wouldn't be this risk. It's only now how it is being applied you are creating the risk.

It is almost like a pendulum. At one time it was in the middle; and there was engineering judgment and economy of scale was considered and threshold sizing was considered and the minimum facilities to serve the customer was considered, all in the used and useful. Now it has gone to, "Well, I've got a 100 lot subdivision, there's one person out there, so all the facility out there is 1% used and useful."

You know, it's a whole different way of looking at things.

Q On this same page on Lines 8 through 11, you say, "To take advantage of the economies of scale, the minimum margin reserve period should be seven years." Isn't it correct that to increase the margin reserve will offset the benefits of the economies of scale for existing customers and they will be forced to pay higher rates?

A Well, when you look at -- and what I said there is it is based on our studies. When you look at the 3% companywide growth rate, the answer is no, long term there's a significant savings to the customers.

Initially there may be a slightly higher rate due to the margin reserve being provided; but long term, the customer saves quite a bit in facilities sizing and reaping the economies of scale.

So the answer to your question is no, the customer actually long term -- because that service is perpetual. When you have a meter and sewer lateral to a home, when they connect to the system, they have that service perpetually. That's forever in the future. So long term for that customer -- even in a short term thing, 20 years, 15 years, that kind of thing -- that customer is saving money.

Q But isn't it correct that SSU bought a lot of existing systems which have significant excess capacities, especially the Deltona systems; is that not correct?

A That's not correct.

Q It's not correct that those systems didn't have --

A Oh, what are you -- are you talking about the treatment plants and the water supply facilities?

Absolutely not. No, that's totally in error.

Q Talking about the distribution and the water lines, the --

A Oh, for a minor component of them, that's correct. If you picked out a little component, that is correct.

Q It's a little component, the distribution and collection?

A Well, it depends on what -- you look at all the different components of the system.

COMMISSIONER GARCIA: Excuse me, but are you speaking about the full system, or are you speaking about the Deltona system? Because now you guys have confused me. What in particular are you speaking of?

WITNESS HARTMAN: I'm speaking of --

COMMISSIONER GARCIA: The Deltona system?

WITNESS HARTMAN: Well, I was talking of the total statewide system. Then if you look at capacities of all the plants and capacities of all the facilities systemwide, you said all the acquisitions and all the systems.

Q (By Mr. Reilly) Well, no, the question actually was these Deltona systems.

A I'm sorry, I misunderstood.

Q And the thrust of the question is SSU did

would you like current ratepayers to pay where they

not design these systems but now SSU is asking credit on excess capacities because of economies of scale. Is that not correct?

A That is not correct. Because all the economies of scale is bolstering or bolstering or backing up the three- and five-year margin reserve periods. We're only asking for one year margin reserves in the lines. That's totally incorrect.

It's showing this is what should be the way we're going is a better way. And also to cut back a three- and five-year margin reserve doesn't make sense because the economy of scale shows the cost-effectiveness would give you a seven-year margin reserve. It is better for the customer for facilities sizing.

So it is bolstering, in the MFRs there is no economy of scale direct curve calculation there. It bolsters the three- and five-year margin reserves to a minimum of seven, should be the first step.

Q This keeps expanding. We were at five, now we're at seven. If seven serves the customers so wonderfully, would ten serve them even better?

A It depends on the asset.

Q How many years of margin reserve capacity would you like current ratepayers to pay where they

would receive all these benefits that you are talking about?

A Again, it's case-by-case and the various assets being provided. I mean --

Q System-by-system, do you mean?

A Case-by-case, facility-by-facility, you would look at it. I mean, case-by-case. But overall, systemwide, I think we're looking at the first step, three-year margin reserve for water treatment facility, five-year for wastewater treatment facilities and effluent disposal, and reuse at 100% used and useful, and lines at one year.

Q Isn't it unfair to ask existing customers to pay for excess capacities which Southern States probably acquired at a discount price?

A I don't understand, I'm not a -- I don't understand your question. This might be a question better for an acquisition adjustment witness. I'm an engineer.

Q Isn't it correct that margin reserve was originally set up by the PSC to accommodate near future growth?

A And variability in demand, I would think. The fluctuations in existing customer demand should be considered also in the margin reserve.

Q Is it your testimony that a five- to a seven-year margin reserve period represents in your judgment near future growth?

A I believe we show in the case three- to five-year definitely, five-year for certain, because in the comp planning aspects we have to look at having sufficient facilities for the five years. And the seven years it shows economically appropriate.

Q Directing your attention to Page 11, Lines 11 through 16, you talk about the Commission's goals should be influenced by economies of scale and efficient service at an affordable price. Is that correct?

A Sure.

Q Now do you think that efficient service at affordable prices can be achieved by forcing existing customers to pay for substantial amounts of nonused and useful plant? Or is I guess the way you get around that is just by calling it used and useful through the hydraulic analysis; is that correct?

MR. FEIL: I'm sorry, I didn't understand the question --

A I don't understand the question.

Q (By Mr. Reilly) Well, how can the PSC achieve affordable prices while allowing five- and

seven-year margins reserve which will substantially increase water and wastewater rates?

A Okay. You get it through the --

Q For current customers.

A You get it through the sizing of the facilities. As long as you size it for a larger facility, you get the economy of scale benefit.

As you can see in the data presented in my rebuttal as well as on those charts, differential in cost, the unit cost, can be 100%. So now you would, if you take away that incentive or that savings in investment, then you are actually causing the customers to pay more money.

You are far better off having the incentive for that investment of a larger facility -- just like cities, counties, not-for-profits, they are not regulated by this Commission. Long-term, affordable prices, that should be the goal of this Commission. I agree. That's exactly what it says.

MR. REILLY: Wait one second, please.

CHAIRMAN CLARK: While they are consulting, I had a question. I think it was in your rebuttal you talked about the 1.3 and the 2.0. I forget exactly what it has reference to.

WITNESS HARTMAN: Peaking factors.

CHAIRMAN CLARK: And on the one hand the Public Counsel suggestion at the minimum 1.3. I understood your testimony to be at the maximum 2.0 given the size of the facilities?

WITNESS HARTMAN: That is correct. I can substantiate that. The 1.3, there's no small system that I know in the state of Florida.

CHAIRMAN CLARK: I understood you are saying a smaller needs a larger percentage -- I mean a larger system needs a smaller percentage?

WITNESS HARTMAN: That is correct. Also understand where that range came from, from the Manual of Practice for 10,000 and bigger communities.

When you get to these smaller facilities, the peak hour to maximum day ratios can be 3 very easily. In fact, I have reports from other cities that were smaller like Zellwood and other smaller cities showing that the peaking factors, the City of Hawthorne was 3.0., Melrose -- 630 people or customers. Melrose, 430 customers, very similar to a lot of our systems at SSU, 2.9. Highland Park, 400 customers, 2.5. Zellwood, peak hour average ratios 2.1, customers 340.

CHAIRMAN CLARK: What is that again, the peak hour ratio?

WITNESS HARTMAN: The peak hour to maximum daily ratio. For Ocoee, 5,900 customers, you're talking about a 2 ratio. So.

CHAIRMAN CLARK: But am I correct that you were suggesting using the 2.0 ratio?

WITNESS HARTMAN: That is correct.

CHAIRMAN CLARK: And as I understood your rationale, it was because most of the plants are small plants?

WITNESS HARTMAN: That is correct.

CHAIRMAN CLARK: Would it make any sense to do it on a plant-by-plant basis and then average it?

WITNESS HARTMAN: That can be done.

CHAIRMAN CLARK: You obviously don't think it should be done, if you say it can be done.

WITNESS HARTMAN: Well, in these systems, the vast majority, if you look at all the customers, the vast majority of the customers are in the smaller sized systems. And even in -- and these are smaller sized systems based on AWWA. You consider these systems large systems or A Class systems that AWWA considers the smallest. So --

CHAIRMAN CLARK: So even our Class A facilities or systems, you would -- under AFWA they would be considered small systems?

WITNESS HARTMAN: Yes.

CHAIRMAN CLARK: Okay.

WITNESS HARTMAN: Like Ocoee, 5,900 customers connections, almost 6,000 connections, would be an A Class system for you. It is considered a small system --

CHAIRMAN CLARK: What is the breakdown then in systems that are AFWA --

WITNESS HARTMAN: AWWA, American Waterworks Association. They look at population and --

CHAIRMAN CLARK: Do they look at population or customers served?

WITNESS HARTMAN: Population served. They do it on a population basis. And they take them from 10,000 up to 10 million, such as New York City, that kind of thing.

CHAIRMAN CLARK: So is it 10 million, is that the 1.3 is typically a 10 million customer or population served system, that the ratio is 1.3?

WITNESS HARTMAN: No, the typical for 1.3 -- well, you would think it would be about 1.3 for that, but let me give you some Florida examples.

City of Jacksonville is 1.4, that serves 600,000 customers. Pinellas County water system serves 1.5 million people, the peak hour to maximum

daily ratio is 1.5.

CHAIRMAN CLARK: Okay.

WITNESS HARTMAN: To give you some feel.

CHAIRMAN CLARK: Thank you.

Q (By Mr. Reilly) Let me direct your attention to Page 20 of your rebuttal testimony. And here you talk about Mr. Biddy's view of fire flow. And you speak of fire flow test results are not a filing requirement, facilities are sized to provide the service, fire service.

Though the MFRs do not require fire flow records, isn't SSU still required to prove the provision of fire flow before the customers are required to pay for it? Would that be correct in your judgment?

A If they filed for it, you know, the hydrants are there, the pumps are there. I don't understand your question. It's there. So, I mean, prove it, how do you prove it?

Q Prove that the flow is there that would be sufficient to provide the fire flow that the people are being charged.

A Well, you could do that. I mean, you could go out and have a lot of fire hydrant tests; that's pretty expensive on each system. That would drive way

up the cost of regulation. It could be done, but it's there and the fire departments prove it.

Q Well, you say it's there. I understand that there are some systems that the lines are sufficiently big to possibly handle some type of fire flow but there are no hydrants to deliver that fire flow. Is that correct? Or is that not your understanding on some of these systems? And yet the customers are still being charged a fire flow provision.

A I don't know of a system that does not have a hydrant that we're requesting fire flow of.

Q Okay. On Pages 20 and 21, you speak of pumper trucks and you talk about, "Pumper trucks commonly used in rural areas which SSU serves have the ability to fight fires." Is this kind of fire flow provision acknowledged by any of the fire marshals that you are aware of? This type of fire flow?

A Fire flow, is it recognized?

Q Is it recognized by any fire marshals or any of the regulations that you are aware of, the pumper truck?

A Relative to fire marshals, is it recognized that that type of fire flow can be provided through a pumper truck, the answer is yes.

The regulations, is it their minimum

standard below 20 PSI, the answer is no.

You asked two questions.

Q Okay. Well, thanks for the clarification.

Isn't there a potential to create a vacuum in the distribution system when pumper trucks are pulling water which may let the pollutants get into the system?

A Oh, there's a potential for vacuum. But on every pumper truck there's a pressure gauge on the suction side of that pumper truck in downstream hydrants, the typical practice of rural fire departments, and they will break it. I mean, they understand that, too. And there are safety provisions to make sure that doesn't occur.

Q If the system just does not have enough water to provide firefighting, can you still expect a pumper truck to function correctly?

A Yes. Because the pumper truck also typically holds a reservoir of water; and with the use of whatever is there, plus the reservoir combined, it will fight a fire. In fact, many fires are fought that way.

Q And if you don't have enough storage in this reservoir, then obviously it wouldn't perform; is that correct?

A Well, after your storage is gone, it performs to a lesser extent. But it still performs to whatever water is in the system.

Q But is that what people are paying for when they are paying for additional capacity of fire flow in the lines, that this truck is going to drive up and provide the water? Is that what you are envisioning in fire flow provision in some of these small rural systems?

A No. You've now taken something and added it to something else and asked me another question that's not what I said.

Q Okay.

A The situation is the fire flow facilities are in place. And your hypothetical was that there is no water there. Well, then you're not having the service. If you don't have the service at all, then of course the hypothetical is it doesn't work.

But since the water is there, the pumper trucks do meet the demand and therefore they should pay for the service.

Q My question wasn't that there was no water, there was just inadequate flow to provide this added measure of -- added service of fire flow, fire protection. That's my example. It's not that there's

no water there.

And then the damage done to a system when you bring a truck in and try to suck water out at a great rate can do damage to the system, I guess is the nature of my question. And of course you did say --

A I have never -- I have never seen a situation where you have six-inch pipes with a pumper truck that has a nozzle three-and-a-quarter inch that could suck the total system dry. That doesn't happen. So your hypothetcal, even though it is theoretically possible, in reality never happens because you have a three-quarter-inch coupling that goes on a six-inch system.

Your example doesn't make any sense in reality.

COMMISSIONER GARCIA: Just so I could follow you better, could you tell me where you are getting at?

MR. REILLY: Where am I getting?

COMMISSIONER GARCIA: Where are you taking this? Because I --

MR. REILLY: Well, we're taking it, the issue is there have been systems where a fire flow provision is being charged to the customers and there's some question in our mind whether they are

really getting the service they are being charged. I think even in our rebuttal testimony -- we don't have rebuttal -- in our direct testimony we are even going to be making some adjustments to --

We in discovery had asked for proof of the provision of fire service. They did provide it for a few of the systems and didn't for many others. So to the extent that fire flow provision is actually there and available and being provided to the customers, then they should bear that cost. When it is not, then we are wanting adjustments.

COMMISSIONER GARCIA: Your point there is?

MR. REILLY: About these rural systems that we don't think it's going to work quite like it's being suggested by Southern States, that these trucks are going to pull in to these inadequate systems that have inadequate flows. That all sorts of bad things can result from this ostensible fire flow protection that people are getting in rural areas. That's as far as it goes on that.

Q (By Mr. Reilly) Moving along to Page 22, Lines 12 through 14, again on this issue of fire protection, you're talking about fire protection without storage tanks. You state, "If firefighting service is needed, there usually is a fire well pump

or two or more wells which together provide fire service"; is that correct?

A That's correct.

Q Does any engineering guideline or manual suggest using groundwater wells for firefighting?

A Yes.

Q And you can't -- you just say there were a bunch of them, but could you give us even one here today?

A Sure, the NSPF Fire Protection Guide --

Q NSPF?

A National, yeah, it's the Fire Protection Manual.

Q All right.

A Provides for services off lines, services off storage tanks, services off wells, services off all kinds of different facilities. That is the Red Book.

Q That number on that particular NSPF Fire Guide?

A That's the name of it, it's the Fire Protection Manual.

Q But you don't have any particular citation?

A It's in in manual, I didn't come here memorized --

Q That's fine. That's fine.

Do insurance companies accept this type of fire protection?

A Yes. ISO in Jacksonville provides as long as you have auxiliary power to a well supply, yes, they do provide for that fire service protection from a well. In fact, the City of Jacksonville has one of the highest fire flow -- or the lowest fire flow ISO ratings from ISO in Jacksonville.

Jacksonville Utilities has a 2 rating and I think Orlando Utilities Commission has a 3 rating, some of the lowest ratings in the state. The City of Jacksonville has some fire protection from some wells before they got all their reservoirs in. Now they have more reservoirs in Jacksonville. But historically they did provide fire protection from there and it was inspected by Insurance Services Offices but auxiliary power was provided.

Q On the same page, different subject, I guess we're talking about Lines 18 through 19, comparing single maximum day versus average five max day demand, you state that the single maximum day water demand is the minimum design requirement; is that correct?

A For a treatment facility with storage, yes.

Q With storage. Isn't it correct that in

design the maximum day demand is projected from some average flow data, historic average usage, or estimate with a peaking factor?

A It can be, or could be of record. Depends on the records of the system.

Q Okay. On the very next page over on Lines 17 through 19, Page 23, now you state, "SSU has excluded known unusual events such as line breaks from the maximum days used in the analysis."

How can the PSC be sure that there are no unknown leaks in your single maximum day demand?

A Well, they can't know that there's any unknown leaks, because we don't know them, we can't know. So the question is of course the PSC can't know if there's anything unknown.

But if you have the operators there daily with their reports -- and we're talking about breaks, now, not -- all systems leak some. And if there's no record of a break or no record of any unusual event, then the best data available was utilized to screen the data used in the analysis.

If you don't know something and it occurred, then there's no assurance we could give you for something unknown.

Q But if this one max day is so materially

different than the second, the third and the fourth max days, would that not lead the reviewer of this data some question as to whether that one particular day's reading was an aberrant reading, or an unknown event could have accounted for that, and that by averaging you helped take that factor out of it?

A I'm trying to keep your questions, to answer each one of them in that long question.

Q Okay.

A First, to answer your first question, if there's a tremendous disparity between the single maximum day and the next highest maximum day, would that give you some cause for concern to look at the system?

Q Right.

A On smaller systems, not so much because the peaking factors vary, you might have had a large influx of customers or customer usage and then leaving.

Daytona Beach is a great one when it is Beach Week, you know everybody goes in there. I serve the Utilities Commission of New Smyrna Beach and the Easter Weekend is a tremendous peak.

The small systems, not so much. Large, as the system gets larger, if there's no known cause,

then there would be more reason to consider that there is something -- there may be something happening; you would want to look at the situation.

You get to a system that is pumping out 5 million gallons per day and there's a change from the next highest maximum day by 100%, another 5 million gallons a day or something like that, you had better investigate that. It's prudent to investigate that type of situation. I agree with you.

To my knowledge, in talking with Chuck Bliss and the Company staff, they did. So yes, that was reviewed and discussed.

But does that mean that the data point is wrong if it did occur? And I also answer your question, I have to flip-flop on my answer, is of course not. Peaking conditions happen in these systems and you have to meet the demand.

Q Have you quantified what you feel is the appropriate difference between that peak day versus the second highest peak day? What is your level, does it depend on the size of the system and the circumstances is basically what you are saying?

A It's engineering judgment with experience. I can't just give you a rule of thumb for that.

Q Let me direct your attention to Pages 25 and

26, and we are talking about where you talk about firm reliable capacity adjustment. And isn't it correct that the chance is very small of having two components out of service and a fire break out, as Mr. Biddy has discussed? Yes, no, and with explanation.

A Well, statistically, yes, it is remote, because emergencies return frequency are remote. There's no doubt about it.

Does it occur? Yes, it does occur.

Do you have to provide facilities to meet emergency conditions, meeting design standards of reliability? And the answer is yes.

So, therefore, what he is promoting not only doesn't make any sense but doesn't meet design standards. You know, if you have to meet a service condition and meet it reliably, you have to have the facilities to do it.

Q But is it cost-effective, though, to have so many components with their added reliable capacities given the small likelihood of them occurring? Is that cost-effective?

A Yes, it is. Because it is the nature of the business and the nature of the service of public health, safety and welfare.

Look at any of these small systems. Orange

City, Polk City, I serve them. We spend and put in rates all these same facilities. No difference. Polk City is right there next to Lakeland and Orange City is south of Deland. These are small little cities. I serve 30 of those and we don't do anything different for them. And they're on rates.

Q Isn't it correct that EPA's MCD-05 publication you reference here on Page 26 is for wastewater facilities but we're discussing water systems here?

A MCD-05 is written for the wastewater grants program and for wastewater facilities, that is correct. It has also been included by reference in application on mechanical reliability for water facilities.

Q Are you suggesting this then is applicable to what we are talk about here with water systems?

A The concept of reliability is. The actual clarifier design aspects or having preliminary treatment units and that kind of thing, of course not.

Q On Page 30 you talk about Mr. Biddy's view on emergency storage where you speak of Mr. Biddy's recommendation to eliminate emergency storage. Isn't it correct that Mr. Biddy already provided some emergency storage through a half-day storage in his

testimony?

A I don't know that. A half-day storage? Half of what, the average day that he was talking about?

Q It is my understanding, yes, half of the --

A Average day.

Q Right, average day.

A That doesn't provide for adequate overall storage.

Q It is a provision of?

A Well, when you take that for all aspects of storage, depends on which one you cut out, diurnal or peaking hour storage and fire flow protection storage. If that's all the storage you're using, then it's inadequate --

Q Well, on --

A -- and you're bumping it out. I mean, something has to give.

Q Well, on Page -- are you finished?

A Yes.

Q Okay. On Page 30, you mention the firefighting in Deltona Lakes. Is that correct?

A That's correct.

Q And didn't SSU already ask for fire storage allowance and you are now requesting emergency storage

for the same reason? Is that correct?

A Okay. That's, let me clarify that testimony for you.

Q Okay.

A Fire flow storage is for like residential or commercial fires. That instance was a forrest fire emergency situation. You are probably not familiar with it. And the whole side of the development went up in a blaze, and it was fought off of these facilities.

A similar thing happened to Palm Coast when the big ITT Palm Coast fire for the whole region happened. You've heard of those types of situations in Southern California fires. That's an emergency and that's not contemplated in fire protection.

Q On Page 30 of Lines 20 through 21, you talk about Mr. Biddy's view on dead storage. And you said here, "Dead storage is commonly encountered in Florida."

A That's correct.

Q It is not very difficult to find out the dead storage in ground storage tanks, is it? Can't you just simply check the as-built drawings? Would that tell that you the dead storage in that facility?

A No.

Q Okay. Why not?

A Because the dead storage is a function of the NPSH, which is the net positive suction head of the pumps and the vortex capabilities under the hydraulic institutes of those pumps. So as you change out pumps, the dead storage does modify.

Q Wouldn't the lowest level that you can draw in the tank be in the design, in NPSH, is already included in the design?

A I'm trying to understand your question, I couldn't make out your question.

MR. REILLY: Hold one second, let me consult.

CHAIRMAN CLARK: Mr. Reilly, let me ask you. How much more do you have for this witness?

MR. REILLY: Depends on how it goes, but not too much. It's hard for me to estimate, really.

CHAIRMAN CLARK: You are in the best position to estimate it.

MR. REILLY: I'm in the best position to estimate this. No, I think this gentleman can go five minutes or one minute. His answers dictate the time more than anything else. Could be 15 minutes or an hour.

CHAIRMAN CLARK: We'll take a break for 15

minutes until 5 after 3:00. We'll take a break and give you time to consult.

(Brief recess.)

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(Transcript continues in sequence in Volume 9.)