BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for increase in rates by Gulf Power Company. DOCKET NO. 110138-EI

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DEPOSITION OF:	DAVID L. STOWE
TAKEN AT THE INSTANCE OF:	Florida Public Service Commission
DATE:	Tuesday, November 29, 2011
TIME:	Commencing at 1:00 p.m. Concluding at 2:05 p.m.
PLACE:	Room 362, Gunter Building 2540 Shumard Oak Boulevard Tallahassee, Florida
REPORTED BY:	Laura MOUNTAIN, RPR Court Reporter Notary Public in and for the State of Florida at Large

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Bill McNulty

Also Present Telephonically:

Vicki Kaufman

Jeff Pollock

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I N D E X

The deposition of DAVID L. STOWE was taken on oral examination, pursuant to notice, for purposes of discovery, for use in evidence, and for such other uses and purposes as may be permitted by the Florida Rules of Civil Procedure and other applicable law. The reading and signing of the deposition by the witness is not waived.

* * *

MS. BARRERA: We're here on the deposition of David L. Stowe, which was duly noticed for today, Tuesday, November 29th, 2011, at 1:00 p.m. My name is Martha Barrera. I'm the attorney for the Commission staff in this matter. With me is Bill McNulty, Commission staff.

MR. MELSON: Richard Melson, appearing on behalf of Gulf Power.

MS. BARRERA: Hello? Can you enter your appearances for the record, please?

MR. THOMPSON: Major Thompson with FEA.

MR. POLLOCK: Jeff Pollock, witness for FIPUG.

MS. BARRERA: Okay, can you please swear in the witness, Ms. Decker?

MS. DECKER: I sure can. Do you, David L. Stowe, solemnly swear that the deposition that you are about to give will be the truth, the whole truth, and nothing but the truth?

THE WITNESS: I do.

Thereupon,

DAVID L. STOWE

was called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MS. BARRERA:

Q Mr. Stowe, can you please state your name and your business address for the record.

A Yes, my name is David L. Stowe. My business address is 16690 Swingly Ridge Road, Suite 140, Chesterfield, Missouri, 63017.

Q And where are you employed?

A I'm employed with Brubaker and Associates.

Q And what is your position with Brubaker and Associates?

A I'm a consultant.

Q And can you please state your duties as a consultant.

A Yes. My duties include primarily review and analysis dealing with cost of service and assisting with other issues such as rate design. I am also responsible to perform distribution analyses from time to time.

Q And what is the nature of your involvement with this case?

A I reviewed the direct testimony and cost of

service study provided by Gulf witness -- is it Marcus or Michael O'Sheasy?

Q Do you need to check on that?

A I do. It's Michael T. O'Sheasy. Thank you.

Q Do you have your direct testimony with you?

A Yes, I do.

Q Okay, please refer to page seven of your direct testimony.

A Yes, ma'am, I'm there.

Q Referring to lines 16 through 19 and you state here that MDS costs include only that portion of total distribution costs the utility must incur to provide service to customers. You further state that it does not include costs specifically incurred to meet the peak demand requirements of the customers.

Does your definition of peak demand include the maximum demand for electric power that determines the generating capacity required by a utility, or more generally stated the maximum load consumed or produced over a stated period?

A I believe I have most of that question. Could I ask you to repeat that, though, for my clarification?

Q Yes. We're asking whether your definition of peak demand is the maximum demand for electric power that determines the generating capacity required by a utility or

more generally stated the maximum load consumed or produced over a stated period.

A No, as I -- as I mention it here, we're talking -- I was referring to specific facilities that are part of the distribution system and it would be the maximum demand placed on those facilities by the customers connected to them.

Q When you discuss peak demand in your testimony are you referring to the peak demand of the individual customer rather than the aggregate demand across all customers?

A No, I'm referring to the aggregate demand of the customers, but I'm referring only to the aggregate demand of those customers who are physically attached to those facilities and require those facilities for their service.

Q And is there any reference, study or information source that you rely upon for your definition of the MDS methodology, especially as it relates to the costs it estimates?

A Again, could you repeat the question?

Q Yes. What reference, study or information source do you rely upon for your definition of the MDS methodology, especially as it relates to the costs it estimates?

A Well, one of the primary resources was the NARUC manual. Also, I've worked with the MDS for a number of years, and so from my experience I'm aware that the MDS is intended to refer to the facilities that are necessary to

provide service to customers but do not -- are not incurred -- or do not vary with demand. At this point I would -- the NARUC manual is a --

Q Okay, you're breaking up.

A Can you hear me now?

Q Yes.

A At this point I would say the primary resource would be the NARUC manual. I do not remember all the other manuals or references over the years that I've seen that talk about MDS.

Q Okay. Please turn to your testimony on page 17, lines 21 to 25. Let me know when you're there.

A Okay, I am there.

Q Okay. In your testimony you state that a better description of MDS is that it reflects the smallest lowest cost distribution system that must be installed for the utility to meet its obligation to provide services to its customers but does not contain costs incurred to meet the customer's peak load.

In your opinion does MDS identify the costs to serve that portion of demand that is not peak demand?

A I think the MDS -- I would say no. The MDS is a method that is used to identify the portion of costs that are related to those facilities that must be purchased and constructed in order to serve the customer.

(Off the record)

THE WITNESS: As I understood the question, it was asking about the MDS in relation to demand.

BY MR. BARRERA:

Q Yes.

A In my opinion the cost related to the minimum distribution system is not a cost that is related to any -- is not a cost that's related to peak demand.

Q What about the demand that is not peak demand?

A You mean -- let me ask, are you asking whether the MDS, as I define it, is capable of carrying some demand?

Q It's whether MDS identifies the cost to serve a portion of demand that is not peak demand.

A I think that it would be a misstatement to say that that's the case. What the MDS identifies is the customer-related cost and it is trying to identify the cost related to the cost causative factor of the number of customers.

The MDS that's based on the -- as I have defined it -- would be capable of carrying some demand and in that regard it would be similar to, say, services and meters which are also capable of carrying demand but classified as customer-related costs.

MR. MELSON: Can we turn the volume down a little?

(Off the record)

BY MS. BARRERA:

Q Were you finished with your answer? I'm sorry.

A Yes.

Q In your opinion what is the level of demand needed for the utility to simply meet its obligation to provide service to its customers? Is it a level of demand which is presumably lower than the customer's peak demand or lower than the customer's non-peak demand?

A I'm sorry, I'm hesitating because the idea that the MDS is related to some level of demand is confusing to me. I think that the NESC establishes some minimum clearance and minimum strength requirements of some of the facilities and that requires that the facilities be of a certain strength or size and those facilities will be capable of carrying some demand. But those facilities are not installed to meet any -- necessarily any portion of the demand of the customer.

Those facilities are installed because of the requirement to conform to the minimum standards of the NESC. So I don't believe I know how to answer the question if it is does the MDS serve some portion of the demand or what portion of the minimum demand is served by the MDS.

(Off the record)

THE WITNESS: Are you able to hear my answers in full or am I still breaking up?

BY MS. BARRERA:

Q We weren't sure on this last one. We're able to hear you; there was a pause. So we'll let you know if we think it's not coming through.

A Okay.

Q Can you turn to page 18 of your testimony, lines four to six?

A Yes, I'm there.

Q And in this portion you state that the MDS consists of the network of electric lines conforming to the NESC requirements. Do you include the poles and transformers in the network of electric lines?

A Yes, I do.

Q And can you turn back to page 17, line seven, where you state that MDS costs include only that portion of the total distribution costs the utility must incur to provide service to customers.

In your opinion, what would be the size of poles, conductors, and transformers which would equate to the smallest, lowest cost distribution system for Gulf Power at the secondary distribution level necessary to serve the non-peak demand requirements of the customers?

A I believe the starting point -- let me ask you, could you repeat the question again, please?

Q Sure. In your opinion, what would be the sizes of

poles, conductors, and transformers which would equate to the smallest, lowest cost distribution system for Gulf Power at the secondary distribution level that are necessary to serve the non-peak demand requirements of the customers?

A Let me try to answer that as best as I can. And I have to admit I do not have a copy of the NESC in front of me, and furthermore, the copy that I do have is a 2002 copy. Now, my understanding is the answers I am about to give you are not -- have not changed since the 2002 version of the NESC.

Furthermore, I'd like to, if I can, separate these -- the question into two pieces and deal with, for instance, size of poles first and then later the size of the conductors, themselves. Is that acceptable?

Q Yes.

A For the size of poles the NESC has certain clearance requirements and the primary one would be the clearance requirement between the minimum height or minimum point -- the lowest point on an overhead conductor and the ground.

Now, that varies throughout the NESC depending on the use of the land below it. So, for instance, if a line is going over a highway the clearance requirements are much greater than if the line is going over a park or a green field area that is not going to have any traffic on it.

The minimum requirements of the NESC pertain to those areas that are more like the second one I just described. I just heard a beep. Are you still hearing me?

Q Yes. Did anybody join the deposition?

MS. KAUFMAN: Hey, Martha, this is Vicki Kaufman. I'm just going to listen in for a bit.

MS. BARRERA: Okay.

THE WITNESS: According to one of the tables in the NESC, as I recall, there is a minimum height requirement. The lowest height requirement between the lowest point of the wire and the ground is somewhere in the vicinity of about nine-and-a-half feet. Now, depending on the span of the poles, that's the distance from one pole to the next pole.

There is going to be a certain sag in the wire and so the attachment point on the pole, itself, will have to be high enough that even with the maximum sag at the midpoint of the span the wire still is the approximate nine-and-a-half feet off the ground. Poles also have to be buried at a certain depth for stability, and the strength requirements of the poles dictate that.

And there is also the requirement that if you're going to have a circuit you'll have to have a ground wire on that pole, as well, and there are certain clearances between the phase wire and the ground wire.

So without the actual engineering specs in front of me, I cannot tell you precisely what the minimum height pole would be, but it would be a pole that can meet the burial requirements -- in other words, how much of the pole goes underground -- the minimum height requirements, from the lowest point on the wire to the ground below it, and the clearance requirements between that phase wire or ground wire and a phase wire and the clearance requirements between those wires and any kind of appliances such as a transformer.

But the NESC will, by using those different clearance requirements, will allow an engineer to determine what the minimum height pole would be.

Now, if I move to the wire diameter, there's also strength requirements pertaining to the wire diameter and in my version of the NESC -- and I believe it's in Table 263-1. I am not positive of that, but I believe that's the table number.

There is specified in there for both aluminum type conductors as well as copper conductors the minimum gauge relates to the minimum diameter of wire allowed by the NESC.

For an aluminum conductor in the 2002 NESC that minimum gauge is a number six AWG wire, which says that in no circumstance can a wire be installed -- aluminum

wire be installed that is less than that gauge of wire.

I believe those answers get to your -- the answer to your question. Now, I know it's been a long answer and I want to stop and ask, is there any part of your question that I have not addressed?

BY MS. BARRERA:

Q What about the transformers?

A I am not aware of any NESC requirements that are based on specifically the size or capacity of transformers. In fact, I'm not aware of any NESC requirements that's specific to the capacity, meaning the electrical current capabilities of any facilities. However, there are clearance requirements that would affect the height of the pole and the spacing of wires around transformers.

Q Please turn to page eight of your direct testimony at lines four to seven.

A Did you say page eight?

Q Yes.

A Okay, I'm there.

Q Here you refer to the statement, on page 63 of Commission Order Number PSC-02-0787-FOF-EI that the company and staff have proposed the use of a theoretical minimum distribution cost as part of the customer cost; is that correct?

A Yes, that's what it says.

MS. BARRERA: Could you mark this, please, as Exhibit 1. That would be Order PSC-02-0787-FOF-EI. The exhibit has pages one and 71 to 78.

(Whereupon, Deposition Exhibit No. 1 was marked for identification.)

BY MS. BARRERA:

Q Do you agree that the statement cited on page 76 of the Commission Order in Exhibit 1 is a direct quote from Commission Order 9599, which was issued October 17th, 1980, in Docket Number 800011-EU?

A I can agree to that subject to check. I do not have that order in front of me and I don't see in my quote or excerpt of that portion of the order that I have referred back to a previous order, but I can accept that subject to check.

Q Okay. But you reviewed the Commission Order, Exhibit 1, for your testimony; is that correct?

A Yes, I read over certain portions of the order that dealt with this issue.

Q Okay. Do you agree that the Commission orders rejected the argument that a theoretical cost of a minimum distribution system is appropriate?

A Yes.

Q Please turn to page ten of your testimony, line six to nine.

A I'm there.

Q Here you state that Rule 25-6.0342 of the Florida Administrative Code referring to electrical infrastructure storm hardening causes Florida electric utilities to incur costs in a manner that is directly related to the existence of customers on the system.

Do other factors also cause the utility to incur costs for storm hardening?

A I'm not -- I'm not sure how to answer that. I would say I don't know, but let me ask a clarifying question, if I may. Is your question about what other factors affect the storm hardening rules?

Q The costs for --

A I'm sorry, go ahead.

Q The utility's costs for storm hardening.

A I don't know.

Q When you state that utilities incur costs in a manner that is directly related to the existence of customers on the system, do you mean that costs are incurred in a manner directly related to the number of customers on the system wherein a greater number of customers causes a higher level of costs?

A Yes.

Q Please turn to page nine of your testimony.

A Okay, I'm there.

Q Here you state that rule 25-6.0345, Florida Administrative Code, mandates that certain facilities be constructed to NESC standards that are significantly higher than the minimum NESC requirements.

Would you agree that the utility facilities that are required to be built to the higher standard are new construction, major plant work, and critical infrastructure?

A Can you repeat the different types of structures that you mentioned there? Please repeat the question.

Q Yes. Would you agree that the utility facilities that are required to be built to the higher standards are new construction, major planned work, and critical infrastructure?

A Yes, I believe that's correct.

Q And would you agree that these standards include wind loading standards?

A I can agree to that subject to check.

Q And would you agree that pursuant to sections (3)(c) and (d) of the rule, utilities must also harden to mitigate damage to facilities due to storm surge and flooding and must place facilities to promote efficient access?

A I can agree to that subject to check.

MS. BARRERA: Okay, I'm marking as Exhibit 2 the National Electrical Safety Code, 2007 Edition, pages 177 to 182.

(Whereupon, Deposition Exhibit No. 2 was marked for identification.)

BY MS. BARRERA:

Q Do you have a copy of that exhibit?

A No, I do not.

MS. BARRERA: Major Thompson?

MR. THOMPSON: Yes?

MS. BARRERA: Did you get our FAX?

MR. THOMPSON: I did.

MS. BARRERA: Okay.

MR. THOMPSON: Let me -- I will scan this and send this to Mr. Stowe. How about that?

MS. BARRERA: Okay.

MR. THOMPSON: Let me go do that.

MS. BARRERA: Hello?

THE WITNESS: I'm here.

BY MS. BARRERA:

Q Referring to the National Electrical Safety Code, can you turn to page 182.

A All right, let me see if I can find 182. I have -- it appears to be a cover sheet of the 2007 edition and then I begin at page 177 and I progress through page 181.

Q 182 should be the last page.

A Okay, on the back of the FAX cover sheet is 182. Okay, I'm there. I've got it.

Q Thank God. Looking at page 182, would you agree that the extreme wind loading requirements as specified in Figure 250-2(d) of the NESC, referenced in Rule 25-6.0345 does not apply to poles less than 60 feet above ground and water level, that are typically found within the electrical distribution system?

A Can you tell me where you're getting that information? I mean, is that the requirement on this figure?

Q Okay, go ahead and refer to page 177.

A Okay.

Q Paragraph C.

A Okay.

Q Under extreme wind loading where it states if no portion of a structure or its supported facilities exceed 18 meters, 60 feet, above ground or water level, the provisions of this rule are not required.

And the question is, would you agree that the loading requirements specified in the figure on page 182, Figure 250-2(d), does not apply to poles less than 60 feet above ground and water level?

A I think paragraph C has an exception there. It says that if no portion of the structure or its supported facilities exceed 18 meters or 60 feet above ground or water level the provisions of this rule are not required except as specified in Rule 261A1 -- I believe that's C and 261A2e or

261A3d.

So I'm not sure whether I can answer that, given the information I have in front of me, unless I have those other rules.

Q Would you agree that the primary determinants for wind loading standards are geographical location and pole size rather than number of customers connected to the system?

A Can you ask the question again?

Q Yes. Would you agree that the primary determinants for wind loading standards are geographical location and pole size rather than number of customers connected to the system?

A I really don't know what the IEEE, which is the people that write the NESC, base their wind loading standards on. I'm not sure if it's any of the things you mentioned.

Q Okay, so you don't believe that it's -- that wind loading standards of geographical location and pole size are not the primary determinants for wind load standards?

A I don't know if they are or not. I don't know.

Q In looking at Figure 250-2(d), which is a wind loading map, would you agree that wind loading standards are set by geographic region?

A Let me -- give me a few minutes to look over this figure.

Q Sure.

A I can see from the figure that there is a series of contour maps or contour lines and I'm assuming the numbers next to those contour lines are wind speed and meters per second and then miles per hour. And I can see how those contour lines change across the region as displayed there in the figure. Does that answer your question?

Q Well, would you agree that the wind loading standards pursuant to this figure are set by geographic region?

A I don't know how the IEEE sets the wind loading standards and I don't know the criteria that they use for that.

Q Okay, would you agree that the primary determinant for storm hardening costs incurred to address flooding and storm surge is geographical location rather than the number of customers?

A I don't know what the primary determinant would be. I'm sorry, I just don't have the answer for you. I don't know the answer.

Q Would you agree that electric utility transmission and distribution facilities known as critical facilities are required to be built by utilities to meet extreme wind loading standards?

A Are you saying that's the case or are you asking me if I know that to be the case?

Q I'm asking you if you agree with the statement.

A I think there's -- it looks to me, even from the copies of the 2007 NESC that you've sent me that there are some criteria applied to the wind loading.

If the transmission lines are over 60 feet it looks like there are some conditions where the wind loading standards do not apply. However, there's some exceptions to that. I just don't know the answer to the question you're asking.

MS. BARRERA: Please mark as Exhibit 3 the National Renewable Energy Laboratory subcontractor report dated October, 2002.

(Whereupon, Deposition Exhibit No. 3 was marked for identification.)

BY MS. BARRERA:

Q Mr. Stowe, do you have the report in front of you?

A Yes, I do.

Q Okay, can you please turn to page 11 of your direct testimony, lines 21 to 24.

A Okay, I'm there.

Q Where you state that the empirical evidence provided in the National Renewable Energy Laboratory subcontractor report clearly shows that both the number of customers and peak load contribute to a utility's investment in substations and transformers and in overhead and

underground circuits.

You've included a quote from the report that correlations of investments with the number of customers show high R-square values for such equipment; is that correct?

A That's correct.

Q Now, please turn to the Exhibit 3, which is the subcontractor report, page eight of the report.

A Okay.

Q Can you see read the top paragraph on page eight, please, on the record.

A It begins: Even though costs show a higher correlation?

Q Yes.

A Even though costs show a higher correlation to number of customers system expansions are usually engineered on the basis of peak demand and not directly on the number of customers. A review of actual distribution system plan expansion and upgrade projects considered by Commonwealth Edison in 1999 showed that the projects were analyzed and sized and the basis of peak demand.

Q Do you agree with the authors' statement that it is peak demand and not number of customers that drive investments and system expansions?

A No, I would agree that the system expansions are engineered on the basis of peak demand. It means they're

designed to meet a peak demand. However, the analysis by NREL shows that the costs are more closely related to the number of customers, even more closely than the peak demand. But I think this paragraph says specifically that the system expansions are engineered on the basis of peak demand and not directly on the number of customers.

Q In your testimony can you explain why you added number of customers to the drivers for investment and system expansion and not solely peak demand as concluded by the report?

MR. MELSON: Object to the form of the question.

BY MS. BARRERA:

Q Go ahead and answer, please.

A Can you repeat the question for me?

Q Yes. Can you explain why you added number of customers to the drivers for investment and system expansion and did not limit solely being peak demand as concluded by the report?

A Yes, I can explain that. First of all, it is not my belief that the report concluded that only demand was the driver but the analysis showed that both demand and number of customers were highly correlated with the costs related to those facilities, those facilities being substations and transformers and lines.

So I believe and I interpret this analysis to mean

that not only demand but demand and customer number are factors that contribute to the cost of these facilities.

MS. BARRERA: Okay. Do you have anything else? All right, that concludes our portion of the deposition. We have no more questions.

MR. MELSON: Gulf has no questions.

MS. BARRERA: Does anyone else have questions? Hearing none --

MR. MELSON: Major, are you there?

MR. THOMPSON: I don't have any questions, either.

MS. BARRERA: All right. Well, Thank you very much, Mr. Stowe. This concludes our questions.

(Whereupon, the deposition was concluded at 2:08 p.m.)

CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF LEON)

I, LAURA MOUNTAIN, Court Reporter, do hereby certify that I was authorized to and did stenographically report the foregoing deposition; and that the transcript is a true record of the testimony given by the witness.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

Dated this 30th day of November, 2011.

_____
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