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31

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbus Southern Power Company for Approval of its Electric Security Plan; an Amendment to its Corporate Separation Plan; and the Sale or Transfer of Certain Generating Assets	)	Case No. 08-917-EL-SSO
In the Matter of the Application of Ohio Power Company for Approval of its Electric Security Plan; and an Amendment to its Corporate Separation Plan	)	Case No. 08-918-EL-SSO

PREFILED TESTIMONY
OF
RICHARD CAHAAN
CAPITAL RECOVERY AND FINANCIAL ANALYSIS DIVISION
PUBLIC UTILITIES COMMISSION OF OHIO

Staff Exhibit _____

November 7, 2008

1. Q. Would you please state your name, position, and background?

A. My name is Richard C. Cahaan, and I am employed by the Public Utilities Commission of Ohio, 180 E. Broad Street, Columbus, Ohio, 43215, as the Chief Economist in the Capital Recovery and Financial Analysis Division of the Utilities Department. I have been employed by the Staff of the Commission since 1983 and have testified in numerous rate cases and other proceedings before this Commission. A large proportion of my testimony before this Commission has been regarding the cost of capital and the rate of return to be granted to regulated utilities, although I have also presented economic analysis regarding other issues, including the rate stabilization plans of First Energy, CG&E, and AEP.

I have received a B.A. degree from Hamilton College and an M.A. degree in Economics from the University of Hawaii, and I have completed all course work and passed the written and oral general and field examinations at the Ph.D. level at Cornell University. I have been a faculty member, either fulltime or part time, at the State University of New York -- Cortland, Eisenhower College, Ithaca College, Cornell University, the Ohio State University, and the Graduate School of Business Administration of Capital University. Prior to joining the Staff, I taught economics at the Ohio State University.

2. Q. What is the purpose of your testimony in this proceeding?

A. This testimony addresses issues in the following areas:

1. Identification of baseline FAC in the current SSO;

2. Increases in the non-FAC generation component;

3. Phase-in and deferrals;

4. Dedicated purchased power;

5. POLR charges; and

6. The annual earnings test.

3. Q. What is the issue regarding the baseline FAC?

A. As stated by company witness Baker, "In the context of implementing the FAC it is necessary to establish a baseline that represents the level of FAC costs that are reflected in current rates. The difference between that baseline and the projected 2009 FAC costs would be the basis for the initial FAC costs to be recovered in 2009." The companies propose a methodology of establishing the baseline by which the 1999 rates are brought forward to 2005 due to the rate freeze and then escalated by the 3% (CSP) or 7% (OPCO) increases of the RSP.

4. Q. What is the Staff's opinion of this proposal?

A. The Staff believes that actual costs, rather than 1999 rates, are more appropriate for establishing the baseline of what is currently in the SSO. (For ease of discussion, I will use the term "fuel costs" to refer to fuel, purchased power, and all other costs that comprise the FAC.) The companies were obviously "covering" their fuel costs in 2007, or their earnings would have been negative or, at least, insufficient. Thus, the logical conclusion to be drawn is that the actual economic state of affairs in 2007 is an accurate indicator of what was actually

"built into" the Standard Service Offer under the RSP at that time. Following the methodology proposed by the companies, the Staff has escalated the 2007 actual amounts by 3% and 7% to bring them forward to 2008 for CSP and OPCO, respectively.

5. Q. What is the issue regarding the increases in the non-FAC generation component?

A. The companies propose to increase the non-FAC generation rates of CSP and OPCO by 3% and 7% per year, respectively, during the life of the ESP. This average of 5% for the two companies may have been a reasonable expectation of cost increases at the time that the ESP was contemplated, but not now. With the recent financial crises, we are entering a recessionary, and possibly a deflationary, period, and any expectations of price increases need to be revised downward. The Staff believes that a more appropriate escalation of the non-FAC generation component would be half of the proposed amounts, or 1.5% and 3.5% respectively for CSP and OPCO.

6. Q. What is the issue regarding the phase-in and deferrals?

A. AEP is proposing to mitigate the rate impact on customers by deferring such FAC costs, which would cause rates to increase by more than 15%. These unrecovered incremental FAC costs would earn a carrying charge and would be recovered by a non-bypassable FAC phase-in rider.

7. Q. What is the Staff's position on this proposal?

A. The Staff recommends against deferrals. Our experience with deferrals shows that they cause many problems and should be avoided whenever possible. Also, if the Staff's proposals for the FAC cost baseline and for the non-FAC increases are adopted, the rate shock problem of the FAC would be mitigated. Staff would not be opposed to smoothing out rate shock problems by some kind of levelization process within the ESP period, but does not recommend a process that extends the collection through an unavoidable charge beyond the ESP period.

8. Q. What is the issue you have identified as dedicated purchased power?

A. The companies propose to purchase power on a slice-of-system basis in increments of five percent in 2009, ten percent in 2010, and fifteen percent in 2011. One of the reasons given for these purchases is that they reflect the additional load responsibilities for Ormet and for the former Mon Power service territory. The Staff concurs with this reasoning, in that AEP was asked, after the deregulation of generation, to take on these additional responsibilities. But Staff notes that these loads represent approximately seven and a half percent of the AEP-Ohio load. The Staff thus recommends that the purchased power authorization be that amount on average, i.e., increments of five percent, seven and a half percent, and ten percent.

9. Q. What are the issues regarding the POLR (provider of last resort) charge?

A. The companies claim that their legal POLR obligations place them in the precarious position of being exposed to losing generation load when the market

price is low, but needing to stand by ready to begin serving that load when the market price is high. This "optionality" can be evaluated by using the same techniques used to value financial options, namely, the Black-Scholes model.

There are actually two risks involved. The risk that is usually discussed in the context of the POLR obligation is the risk of customers coming back. But before a customer comes back, the customer must leave in the first place, so there is also the optionality associated with leaving. The companies are claiming that this optionality also has a value for which compensation must be made.

10. Q. What is the Staff position on the POLR charge?

A. Staff believes that the risks associated with returning customers can be avoided. Usually, the means of avoiding this risk is to require that a returning customer pay back at market prices and not the SSO price. Company witness Baker makes a strong argument why this policy would not truly eliminate the risk. But the key guarantee against the risk is not the price a returning customer must pay, but the source of generation services for the returning customer. If the ESP specifically provided that the additional power could be procured on the market, then the companies would be protected. Either the returning customers would pay market prices or the incremental costs of the purchased power would be recovered through the FAC.

Regarding the optionality of allowing customers to leave when market prices are low, the problem lies in establishing a value for this risk. A financial option will certainly be exercised once it is "in the money," but there are many reasons to think that substantial migration will not quickly occur, even if the market price falls below the SSO price. Thus, a POLR charge, if one is considered appropriate, would be significantly below what AEP is requesting. The current level of the POLR charge under the RSP would be more reasonable.

11. Q. Before proceeding on to the issues surrounding the annual earnings test, are there other topics you would like to address?

A. Only one. Staff witness Soliman is testifying to the carrying costs of environmental compliance. I have examined the carrying costs rates provided to Mr. Soliman and found them to be reasonable.

12. Q. What are the issues surrounding the annual earnings test?

A. Ohio Revised Code Section 4928.143(F) calls for establishing a "comparable group" of companies and then seeing if "any such adjustments resulted in excessive earnings as measured by whether the earned income on common equity of the electric distribution utility is significantly in excess of the return on common equity" of the comparable group. This paragraph of the legislation continues discussing this earnings test, using the term "significantly excessive earnings" three times. So there are two issues. One issue is the methodology for establishing a "comparable group," and measurement of the earned return on

equity of that group. The other issue is to determine the meaning of the terms "significantly" and "excessive" in the context of this earnings test.

13. Q. Company witness Dr. Makhija has proposed a method of selecting and evaluating the earned returns of comparable companies. Does the Staff wish to accept this methodology for use in determining a comparable group of companies in the annual earnings test for application to CSP and OPCO?

A. No, we do not. I have some major reservations regarding the methodology's use of "beta" as a primary discriminant in this case. But a more important concern is procedural. The Staff feels strongly that, excepting for cases in which the issue can be resolved by stipulation, a single methodology should be adopted across all EDUs for the selection of comparable companies in an annual earnings test. In addition, the Staff believes that a formal hearing process is a poor venue for deciding technical issues of methodology. I propose some process (workshop or technical conference) outside of a formal hearing for all interested parties to explore the issue, hammer out their disagreements, and see if they can agree on a method to use in the "comparable group earnings" part of the "significantly excess earnings" test. The results could then be presented to the Commission. If there was dissent, that could also be presented. Personally, for reasons that I will explain later in this testimony, I think that there would be a high chance of agreement on methodology.

14. Q. Are you suggesting that the method for determining "significantly excessive" in the earnings test also be a subject of the workshop or technical conference?

A. Absolutely not. I believe that it is important to determine that issue now.

15. Q. What do you see as the main problem in determining the "significantly excessive" issue?

A. The main difficulty lies in interpreting the word "significantly." The term "in excess of" simply means "more than." It is a quantitative concept. The term "excessive," however, although having quantitative overtones, is essentially qualitative. It means more than just "more than," for it contains a judgment of "too much more." The idea is that a little bit of "in excess of" is not "excessive." At some point however, a qualitative distinction is made, and "more than" becomes "too much more than," and "in excess of" becomes "excessive." The legislation says that this point is where the earned return is "significantly" in excess of the returns of the comparable group. Everything hinges on the meaning of the word "significantly."

16 Q. And what is the meaning of the word "significantly"?

A. I have looked at a number of dictionaries. Generally there are five definitions for the word "significant." Two of these are qualitative, essentially implying meaningfulness, either overt or covert. Two of these definitions are quantitative, either in absolute magnitude or in terms of effect. And the fifth is a statistical definition. Dr. Makhija has adopted the statistical definition, as have the other

witnesses for the EDUs in these ESP cases. There are differences in the implementation of this approach among the witnesses— one-tailed vs. two-tailed tests, for instance – but I am not concerned with these differences. Rather, I am focusing on the basic methodology, with which I disagree.

Their basic methodology is to use earned returns on equity of the peer group (or groups) to form a confidence interval. If the earned return of the EDU falls within that confidence interval, it is considered to be the result of normal chance deviations. If it falls outside the confidence interval (and is greater than the average of the comparable group, of course) it is considered to be "excessive." The boundaries of the confidence interval demark the "significance" in the statistical definition of the word.

17. Q. In what respects do you disagree with this methodology?

A. In three respects. First, the level of "significance" to demonstrate "significantly excessive" is itself excessive. Second, and independent of the first criticism, the very test to determine "significance" has been constructed in a way counter to that required by S.B. 221. Third, I do not think that the statistical definition of "significant" provides a useful or satisfactory interpretation of the legislative language.

I will explain these three criticisms later. But before I can explain these disagreements, I need to flesh out and unpack certain foundational aspects of the

statistical analysis presented by company witness Makhija and the other EDU witnesses. I am not trying to either characterize or mischaracterize his position or testimony. I am merely trying to provide a conceptual foundation, and I would be willing to accept any useful clarification or correction. I will attempt to use legal analogies to make the matter clearer. In doing so, I am in no way claiming legal expertise.

To approach the matter from a statistical perspective, we must begin with a theoretical structure. Numbers, by themselves, say nothing. Therefore, step 1: define "excessive" ROE as an observed ROE greater than that of the peer group and *not* attributable to ordinary chance variations. Define "not excessive" ROE as an observed ROE which does not meet the criteria of "excessive." This may seem like a pedantic exercise, but I think it is useful to point out how far away from ordinary human discourse we begin, not only for the word "significant," but also for the word "excessive." For it is not clear, in ordinary language, why a quantity cannot be both the result of a random chance process and be considered excessive. There is an implicit theory at work here.

18. Q. What is Step 2?

A. This step is to set up the statistical test. I am not claiming to be an expert in statistics or statistical analysis. What I am discussing here are basics of elementary statistics. Statistical analysis – at least, the type before us – involves testing of hypotheses. Can a claim be considered to be true? A claim must be

"demonstrated" to be true, and the demonstration must meet certain standards. In the language of statistical analysis, the statement which must be demonstrated is called "the alternative hypothesis."

It is alternative to the "null hypothesis," which is the default explanation. For example, in our legal system, the principle of "innocent unless proven guilty" exists in criminal cases, and, in civil cases, a demonstration of fault must be made by the plaintiff. The party bringing the case (prosecutor or plaintiff) is presenting the alternative hypothesis and must provide sufficient evidence for it to be accepted. Otherwise, the null hypothesis (not guilty or not at fault) is maintained.

In the analysis done by all three witnesses for the EDUs, the test is whether the observed ROE for the EDU exceeds the average of the comparable group for reasons other than chance, with the "null" or default hypothesis being that the differences are due to chance. Dr. Makhija states this clearly on page 24 of his testimony: "I am interested in testing the hypothesis that a given observed ROE (for AEP, OPCo, or CSPCo) is significantly different from the mean for all other comparable firms..." The hypothesis he is testing is that the ROE really is different, not that it really is the same. This is hypothesis testing. Since the confidence interval is based on the mean of the comparable group, the null hypothesis is that the EDU's observed difference from that mean is due to random chance.

19. Q. Is there a step 3?

A. Yes. With the test set up as null and alternative hypotheses, the test statistic is examined against the data to see if the alternative hypothesis can be sufficiently supported. If not, the null hypothesis is maintained. Actually, the language of statistics does not talk of supporting or demonstrating the alternative hypothesis. The issue is whether the null hypothesis is rejected. In ordinary language, it is often easier to talk about it the other way: "the accused was found guilty," rather than "the accused was not found not guilty." It must be noted that, if alternative hypothesis is not accepted, the only conclusion is that there is not enough evidence to reject the null hypothesis. This is <u>not</u> the same as evidence in favor of the null hypothesis. Lack of evidence against a hypothesis is not evidence for it. Failure to prove guilt does not mean that the accused is actually innocent.

With these preliminaries out of the way, I want to point out the obvious fact that the outcome of a statistical analysis not only depends upon the evidence, but also upon the standard of proof – the level of significance – required in the evaluation of the evidence.

20. Q. There are different standards of proof in statistical analysis?

A. Certainly, and these are critical in specifying the meaning of the term "significant" as used by the company witnesses in these cases. Dr. Makhija is performing a two-tailed test with a 95% confidence interval. Thus, there is only 2.5% in the upper tail. FirstEnergy's Dr. Vilbert performed a one-tailed test with

a 90% confidence interval, which would result in 10% in the tail. Using a legal analogy, the confidence interval used by AEP might compare to "Beyond a Reasonable Doubt," while FirstEnergy is content with "Clear and Convincing Evidence." No one, it seems, is satisfied with a mere "Preponderance of the Evidence," which might be akin to a confidence interval of one standard deviation, around 67%., or even a confidence interval of 51%.

21. Q. What are the considerations regarding the appropriate standard to use?

A. Certainly, the nature of the data would be one consideration. One can see less restrictive standards of proof in fields for which concepts are less precise, measurement problems are greater, and replicability or control is difficult. Physics would insist on higher levels of statistical demonstration for any assertion than would sociology. Also important are the consequences of making a mistake. Of particular concern to the companies would be the consequence of a Type 1 error, or false positive.

22. Q. What is a false positive?

A. No statistical or probabilistic analysis can be free from the possibility of an error. A Type I error, or false positive, that of rejecting the null hypothesis when it is actually true, e.g., a verdict of guilty for a man who is actually innocent. A Type II error, or false negative, is that of failing to reject the null hypothesis when the alternative hypothesis is, in fact, true – *e.g.*, letting a guilty criminal off. It is impossible to eliminate both types of error. Setting standards of proof high will

reduce the chance of a false positive, but will increase the chance of a false negative.

If the result of a finding of "significantly excessive earnings" was severe, a high standard of proof might be indicated. For instance if a finding of significantly excessive earnings were sufficient proof of monopoly power and would result in strong anti-trust action, then perhaps a high standard of proof would be warranted. But according to S.B. 221, the result is, possibly (and not necessarily), simply to refund that part of earnings above the "significantly excessive level." The EDU can keep the earnings of the reasonable level established by the peer group and even keep the earnings that are "in excess of" this level, but are not "excessive." Supposed, for example, that the peer group average was 13%, "significantly excessive was 16%, and the earned return was 17%. The possible refund would be only 1%, and the EDU would keep 75% of the earnings that were above the average of the peer group. Should this determination be subject to standards of proof so much higher than that used in the bulk of civil cases?

23. Q. Are you recommending that a lower standard of proof be used in annual "significantly excessive earnings" tests?

A. Actually, no. I merely wanted to point out that, despite the appearance of scientific precision in these matters, the results are not "found" but are "made." Not precision, just decision. Besides, given my second criticism of the

methodology put forward by all of the EDUs, I think that the EDUs themselves will be arguing for as low a standard of proof as possible.

24. Q. You stated above that your second criticism was that "the very test to determine "significance" has been constructed in a way counter to that required by S.B. 221." Please explain.

A. Each of the company witnesses has proposed a test to determine if significantly excessive earnings *have* occurred. The test itself, as constructed, implicitly puts the burden of proof on anyone claiming that the EDU has an excessive return on equity. However, S.B. 211 specifically and clearly states the opposite: "The burden of proof for demonstrating that significantly excessive earnings did not occur shall be on the electric distribution utility." If one is to perform a test with the burden of proof upon the EDU, then the default hypothesis must be that the ROE is excessive and the alternative hypothesis – the one that must be demonstrated -- is that the ROE is not excessive. The reversed methodology proposed by each of the EDUs, combined with the rather high proposed standards of "significance," go quite far, in effect, to eliminate the EDUs' requirements regarding the burden of proof.

A counter argument has been made that reversing the null and alternative hypotheses would be an impossible test. According to this argument, it would be necessary to first find a sample of companies whose earnings are deemed to be

"excessive," and then to test where the EDU's earnings fell within the distribution. I suspect that this argument is merely an improper extension of the implicit theory hidden in this analysis. But I would point out that if it were indeed impossible to reverse the test in such a way as to put the burden of proof upon the EDU, then this fact would be sufficient argument against the use of the statistical definition of the word "significant" in S.B. 221. What I had in mind was simply reversing the percentages in the test. For instance, a "clear and compelling" 90% one-tailed test would have 90% in the tail instead of 10% in the tail.

25. Q. To use your legal analogy, wouldn't this be akin to "Guilty until proven innocent."

A. Consider a more germane analogy, the approval process for drugs or pesticides by government agencies such as the FDA or the EPA. It is not the responsibility of the agency or interveners to demonstrate that a chemical is dangerous. It is the responsibility of the manufacturer to demonstrate that the product is *not* dangerous. The methodology proposed by the EDUs would be equivalent to requiring the FDA to grant approval unless it could prove the drug was harmful.

I do not view the requirement that the EDU has the burden of proof to show "not excessive" as being accidental or unfair. I view the requirement as being logically necessary.

26. Q. Why is this requirement necessary?

A. The situation is similar to a rate case. The utility "owns" all the information. Thus, only the EDU is in a position to support a burden of proof. Others can only react to a case made by the EDU. Without a certain amount of detailed information presented, it is impossible to even frame adequate discovery questions.

27. Q. Dr. Makhiija has shown how his proposed methodologies would work if 2007 data was used. Have you made any calculations showing levels of "significantly excessive" if the alternative and null hypotheses are structured as you have argued?

A. No, I have not. I would be curious to see the results, if others would perform these calculations, but I have not done so because my third objection to the methodology proposed by the EDUs is that I do not think that the concept of "significant" as used in statistics is really useful or relevant to making decisions regarding the word "significantly" in SB 221.

28. Q. Why is that?

A. First of all, this definition of "significant" produces a certain amount of internal confusion if applied to S.B. 221. At the beginning of this testimony, I discussed the words "excessive" and "significantly" Shortening the language of S.B. 221 for convenience, the annual test is to see if there are "excessive earnings as measured by whether" the ROE of the EDU is "significantly in excess" of the ROEs of a comparable group. In this, the statistical definition of "significant" can

make sense, and it is this test that is the subject of the analysis of Dr. Makhija . The level of "significance" defines the boundary between two ranges: those ROEs that are "in excess of" but are not "excessive" and those ROEs that are both "in excess of" and "excessive." The words "significantly in excess of" can have statistical meaning.

But what of the words "significantly excessive," which are used three times in the remainder of the paragraph? If an ROE is already deemed to be statistically "excessive," what statistical test of significance would establish it as "significantly excessive?" The words "significantly in excess of" and "significantly excessive" can have a common meaning with other, non-statistical, definitions of the word "significant," but not with the statistical definition. The use of a statistical definition as the criterion for applying the annual test causes the statute to have internal incoherencies.

29. Q. Are there additional reasons to reject the statistical definition?

A. Yes. The statistical approach uses two parameters from the peer group sample: the mean and the variance (or standard deviation.) From these two pieces of information, the benchmark level of ROE and the level of "excess" are derived. One approach would be to simply look at the official, published ROE for the distribution utility, as provided by FERC or SEC forms. If this level of ROE exceeded the "significant" level, then excess earnings exist. But if this mechanical approach is followed, where is the scope of any burden of proof for

the EDU to show that significantly excessive earnings did not occur. Except for the "consideration" of "capital requirements of future committed investments" in Ohio, significantly excessive earnings either occurred or they did not. If we establish the methodology in this proceeding, then what's to discuss next year? Why have a burden of proof? It is simply arithmetic.

30. Q. What are the implications of not simply and mechanically taking the EDU's ROE from its reported earnings?

A. If certain items should be included and certain items excluded from the calculations of earnings and of capitalization, this creates some major problems with using the peer group in a statistical analysis. I personally do not have a great deal of discomfort with using the mean as a benchmark. The "theoretically appropriate" mean might change, but, personally, I do not think it would change by much, and, given the normal uncertainties that underlie any rate of return analysis, the issue of the mean is minor. But not the issue of the variance.

31. Q. Why not?

A. No matter what else is excluded, the one core area of activity that will definitely not be excluded relates to the provision of the Standard Service Offer under the ESP. Looking at the riders and other provisions that have been proposed in the ESPs, it seems that stability of earnings has been an important consideration in these proposals. Frankly, I would think that the variance shown by the sample statistics of the peer group grossly overstates the variance inherent the ESPs that

have been submitted. To the extent that the ESPs are an important component of the earnings used in the annual earnings test, the peer group variance is an overstatement.

32. Q. If the statistical approach is not useful, then how do you view the "significantly excessive earnings" issue?

A. I see this as a "fairness" issue. It is a familiar issue that the Commission over all of its history, that of balancing the interests of the customers and the utility. The word "excessive" is the key, and the word "significant," rather than having some esoteric statistical meaning, simply means "large" or "important." "Excessive" usually refers to undesirable qualities. How often have you heard of someone being excessively healthy, or excessively attractive, or even excessively wealthy? No corporation is going to issue an annual report stating that its earnings were excessive, even (and especially) if its earnings were significantly in excess of those of its competitors or peer group. The only logical context for using the word "excessive" is in relation to the customers, which is the fairness issue.

33. Q. How would you quantify the concept of "significantly excessive" if it is a fairness issue rather than a statistical issue?

A. There is no way to objectively determine the meaning of "significantly excessive," but, as we have seen the statistical approach is not free from subjectivity, either. However, I could suggest certain considerations that might frame a zone of reasonableness. One of these has already been made by other

parties in this case. Dr. King on behalf of the Ohio Energy Group and Dr. Woolridge on behalf of the Ohio Consumer's Counsel have both referred to return on equity adders offered by the FERC to encourage risky investment, and I think that the 200 basis point adder represents a reasonable lower bound with respect to the concept of "significantly excessive."

34. Q. Do you have an opinion regarding a reasonable upper bound?

A. Yes, I do. As a "sanity check" in any determination of "significantly excessive," one should examine the implications in the opposite direction, as the concept of "significant" should work both ways. Utilizing this perspective, I asked myself what could be considered significant in terms of a deficient earned return on equity. In cost of capital analysis, an absolute boundary on the low side is the yield of a company's own bonds. The bondholders face the same business risks as the stockholders and are subject to the same macroeconomic environment and expectations of inflation, but they are higher in the food chain, and so have less risk, therefore there is a "risk premium" associated with equity over bonds. In my experience, the difference between authorized returns on equity and a company's bond yields, not only at the PUCO but among regulatory commissions in general, tends to be in the area of 350 to 400 basis points. I have not done a formal study of this matter, and I am not trying to be precise. And, theoretically, the size of this premium would be different for companies with different credit ratings, or at different levels of inflation, etc. But it seems to be that if a company's earned return on common equity is *less* than the yields of its debt, then this is

"significant" and represents earnings that are "significantly deficient," and if 400 basis points is "significant" in one direction, it should also be "significant" in the other. I think that 400 basis points is a reasonable upper bound in the specification of "significantly excessive" earnings in these proceedings.

I would also point out that I have applied this "sanity check" method in looking at AEP's proposal. Applying his preferred method to 2007 data, company witness Makhija stated: "To be earning significantly excessive earnings would require ROE values higher than the upper bound, an ROE greater than 27.33 percent. Neither OPCo nor CSPCo have ROE values greater than 27.33 percent in 2007, and would not be considered to have had excessive earnings by this test, if it had been applied to them in 2007." The comparable group average of this particular 2007 sample was 13.91%, a full 1342 basis points below the minimum level of earnings that would be considered as "significantly" excessive. Applying the "sanity check" in the opposite direction, the level of statistical significance is 0.49%. An ROE of ½% would not be deemed to be significantly deficient! I can imagine the reaction of stockholders and Wall Street analysts to an AEP press release which stated, "Although we were disappointed that our earnings this year were only one half of one percent, we wish to point out that this is not significant."

While I recognize that my recommendation regarding the determination of where "excessive" earnings begin is open to the criticism of being subjective, I think that

it can be seen that there is no way to avoid subjectivity in this matter. To have a computer spit out the answer to the question of "How much is too much?" may give an impression of objectivity, but beneath the analytical surface of spurious precision lies a large amount of subjectivity in the specification of the test, the level of proof demanded, and, indeed, the unstated and underlying theoretical basis behind the use of a statistical test in the first place. I suggest that looking at the risk premium on the negative side of the issue provides an intuitive sense of the issue in a way superior to one, two, or 1.28 standard deviations. For the purposes of determining "significantly excessive returns on equity" in the annual earnings test, I recommend that the Commission consider an amount over the average of the comparable group of 200 to 400 basis points.

35. Q. Isn't this a rather wide range?

A. No and certainly not compared to the range of recommendations currently before the Commission in the ESP cases.

36. Q. Are there any specific considerations that could guide the Commission in choosing an amount in this range?

A. Yes. Speaking broadly, and not just in terms of this case, there are features that serve to reduce risk or volatility. I mentioned these before. For instance, riders which track costs serve this purpose. Deferrals stabilize earnings. Unavoidable charges, such as POLR charges, also reduce risk. The presence of such features tends to argue for a lower threshold.

37. Q. Are there arguments for a higher threshold?

A. Yes. It has been argued that, the annual earnings test contains asymmetric risk, in which the company faces a situation of "Heads you lose, tails you break even." I agree that this argues for a higher threshold. However, in the discussions regarding ESPs, I have heard suggestions that the test be applied on a cumulative basis, so that credit for "less than excessive" earnings in one year can be carried over to balance higher earnings in another. If such a system is allowed, it would serve to mitigate the asymmetric risk. Also, for AEP, asymmetric risk could also be mitigated if the earnings of both jurisdictional operating companies could be taken into account. I cannot speak to the issue of whether such a practice would be permitted under S.B. 221 in terms of any actual calculation of significantly excess earnings. However, the law allows for considerations beyond the actual calculation, such as future committed investment. Since there is a commonality between operating companies in terms of both operations and planning, the application of an earnings test might be able to incorporate this fact into any resultant action in a way as to mitigate asymmetric risk. I would view this approach as consistent with the concept of "significantly" as a fairness issue and not merely a statistical exercise.

38. Q. Do you have any view as to how the earned return on common equity of the electric distribution utility should be calculated and how the annual earnings test should be applied?

A. I am aware that there are disagreements regarding possible adjustments to the earned return. A clear example of this is the idea that off-system sales should be excluded. Of course, if the revenues were to be excluded from the numerator, are there not adjustments to be made to the denominator? And how should these be valued? Even in this seemingly simple example, it seems to me that it would be an absolute quagmire to try to make such determinations in advance, in general, or in principle. Nor do I think it necessary. Logically, a very simple process suggests itself.

39. Q. What do you mean?

A. It seems to me that the following process would be consistent with the requirements of S.B. 221. I am not suggesting this as an actual administrative or legal process, but rather as the kind of logical process exemplified on a decision tree or a flow chart. The current proceeding should establish the methodology for constructing the "comparable group" and also specify the number of basis points which will be used to separate "significantly excessive" from merely "in excess of." At the end of the first year of the ESP, the average return on equity of the comparable group is calculated by the company. This number is compared to the return on equity number contained in the EDU's 10-K or FERC-1. If the EDU's ROE is less than that of the sum of comparable group plus the "significantly" adder, the demonstration that significantly excessive earnings did not occur will be presumed to have been made, and any party wishing to challenge this presumption will have to make an appropriate demonstration. If the EDU's

earned ROE is greater than the average of the comparable group plus the adder, then, the EDU must demonstrate that significantly excessive earnings did not occur and the EDU must justify any adjustments to the financial statements that it thinks should be made in calculating its ROE for the purposes of S.B. 221.

40. Q. You are aware that there are efforts in all ESP cases to see if an agreement can be reached among the parties. If any such agreement contained a way of determining "significantly excessive earnings" that is different from the way you are recommending, what influence should this have in other proceedings?

A. None. It would be a totally invalid comparison and have no precedential value. As I have tried to show, the ultimate purpose of the entire "significantly excessive earnings" test is to condition outcomes to considerations of fairness. The process used depends upon an unknown future in terms of the earnings of a comparable group. If parties are willing to avoid the uncertainties of future conditions and specify a criterion of fairness at the present time, then this achieves the same result, but in a qualitatively different fashion.

41. Q. Earlier, you stated that you would later explain why you were optimistic that there could be agreement on the methodology for evaluating comparable group earnings. Would you do so now?

A. Certainly. Depending upon the methodology chosen, there will be some differences in terms of the average return of the group. Looking backward at historical data, this can be seen, but it is not necessarily clear which methodology

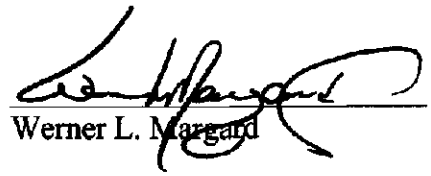
will produce higher or lower averages in the future. Also, differences in the averages are quantitatively not that large. But, depending upon methodology selected, the differences in the variances can be quite large. If a statistical test for "significantly excessive" is used, then the variance matters, and agreement among parties would be difficult. However, my testimony is directed to the point that a statistical test is not appropriate. Therefore, it should be easier to resolve methodological differences on a technical basis.

42. Q. Does this conclude your testimony?

A. Yes, it does, although I reserve the right to supplement my testimony as new information becomes available.

PROOF OF SERVICE

I hereby certify that true copy of the foregoing Testimony submitted on behalf of the Staff of the Public Utilities Commission of Ohio, was served by regular U.S. mail, postage prepaid, hand-delivered, and/or delivered via electronic mail, upon the following parties of record, this 7th day of November, 2008.



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