TESTIMONY AND EXHIBITS OF FRANK SEIDMAN BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION REGARDING THE RULES FOR MARGIN RESERVE AND IMPUTATION OF CIAC ON MARGIN RESERVE ON BEHALF OF THE FLORIDA WATERWORKS ASSOCIATION

DOCKET NO. 960258-WS

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TESTIMONY OF FRANK SEIDMAN

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ON BEHALF OF THE FLORIDA WATERWORKS ASSOCIATION

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Q. Please state your name, profession and address.

A. My name is Frank Seidman. I am President of Management and Regulatory Consultants, Inc., consultants in the utility regulatory field. My mailing address is P.O. Box 13427, Tallahassee, FL 32317-3427.

Q. State briefly your educational background and experience.

A. I am a graduate of the University of Miami. I hold the degree of Bachelor of Science in Electrical Engineering. I have also completed several graduate level courses in economics, including public utility economics. I am a Professional Engineer, registered to practice in the state of Florida. I have over 30 years experience in utility regulation, management and consulting. This experience includes nine years

as a staff member of the Florida Public Service Commission (the Commission) , two years as a planning engineer for a Florida telephone company, four years as Manager of Rates and Research for a water and sewer holding company with operations in six states, and three years as Director of Technical Affairs for a national association of industrial users of electricity. I have either supervised or prepared rate cases, rates studies, certificate applications and original cost studies or testified as an expert witness with regard to water and wastewater utilities in Florida, California, Indiana, Michigan, Missouri, North Carolina and Ohio.

I have participated in the development and revision of the rules of this Commission for electric, telephone and water and wastewater utilities as a staff member and as a consultant.

Q. What is the purpose of your testimony?

A. There are several purposes. The first is to present the position of the Florida Waterworks

Association (FWWA) regarding the proposed rule. The second is to provide what the FWWA believes should be the Commission's basis for margin reserve and imputation policy. The third purpose is to present alternative rule language.

POSITION OF FWWA

Q. What is the position of the FWWA regarding the proposed rules?

A. It is the position of the FWWA that the proposed rule codifies policies that 1) are inconsistent with statutory mandates and with the rules of the Florida Department of Environmental Protection (FDEP); 2) are inconsistent with the reasonable and proper operation of utilities in the public interest; 3) unfairly discriminate in their application to water and wastewater utilities; and 4) discourage the development of utility systems in an economic manner and encourage choices that have a long-term detrimental impact on utility customers.

BASIS FOR MARGIN RESERVE POLICY

Q. What should be the basis for the Commission's policy on margin reserve and imputation?

A. The primary basis for the Commission's policy should be the requirements of Chapter 367, Florida Statutes, the Water and Wastewater System Regulatory Law. That law empowers the Commission to regulate the rates and service of water and wastewater utilities so as to protect the public health, safety and welfare. Sec. 367.011(3), Fla. Stat. (1995). It requires that the Commission, in setting rates, shall consider the cost of providing service, including the utility's investment in property used and useful in the public service. Sec. 367.081(2)(a), Fla. Stat. (1995). And it also places a "readiness to serve" obligation on the utility. The state provides water and wastewater utilities with a monopoly status in its service area, in turn for which the utility is obligated to serve and obligated to be prepared to serve, within a reasonable time, all applicants for service in its service area. Sec. 367.111(1), Fla. Stat. (1995).

The basis for Commission policy should also recognize that the law obligates the utility to provide service that is safe, efficient and sufficient and to provide service that is consistent with the engineering design of the system and the reasonable and proper operation of the utility in the public interest. Sec. 367.111(2), Fla. Stat. (1995). In order for the utility to meet those statutory design and operation requirements, the Commission's policy must also be consistent with FDEP statutory and regulatory requirements for safety, adequacy and planning.

Finally, Commission policy should recognize that in order for a utility to be able to meet its statutory obligations in an economic manner, the Commission must fix rates that are just, reasonable, compensatory and not unfairly discriminatory.

Q. Does the current policy, as exemplified by the proposed rule, conform to the basis which you have outlined?

A. In my opinion, no. Current policy results in rates that are not and cannot be compensatory for the investment the utility must make to meet its statutory obligations in an economical manner. Primarily as a result of the Commission's policy to impute unrealized CIAC against current investment in margin reserve, a utility never has the opportunity to earn a fair return on its actual investment in plant serving the public. In addition, the Commission's policy drives the utility to make decisions that will maximize its return in the short term at the expense of investment that will maximize customer welfare in the long term. Commission policy, as reflected in the proposed rule, defines and establishes a margin reserve that is inadequate to support long term economic choices. Further, the policy erodes the allowed margin reserve by imputing future CIAC against the current investment in margin reserve.

FWWA ALTERNATIVE RULE PROPOSAL

Q. Does the FWWA have an alternative to the rule proposed by the Commission?

A. Yes. Exhibit ____ (FS-1) shows the FWWA's alternative to the proposed rule. It is presented in legislative format with additions underlined and deletions struck through. In addition, all additions and deletions are shaded. This alternative rule proposal would, if adopted, allow utilities to meet their statutory obligations in a more economic manner than under current policy.

THE MARGIN RESERVE AND USED AND USEFUL

Q. Would you please provide some background on the concept of Margin Reserve as it has evolved in Florida?

A. MARGIN RESERVE is a term of art unique to the regulation of the water and wastewater industry in Florida. As consistently recognized by this Commission, it is a necessary component of used and useful plant.[1] To fully understand the part

[1]See, for example, Order Nos. 20434, 12/8/88 [88 FPSC 12:95]; 22843, 4/23/90 [90 FPSC 4:361]; 22844, 4/23/90 [90 FPSC 4:449]; 25092, 9/23/91 [91 FPSC 9:341]; PSC-92-0594-FOF-SU, 7/1/92 [92 FPSC 7:15]; PSC-93-0301-FOF-WS, 2/25/93 [93 FPSC 2:783]; PSC-93-0423-FOF-WS, 3/23/93 [93 FPSC 3:522].

Margin Reserve plays in ratemaking, we must first examine the concept of USED and USEFUL plant.

Since 1959, when privately owned water and wastewater utilities in various counties became subject to rate regulation by the Florida Public Service Commission, the empowering statute has always required the Commission to consider the investment of the utility in property "used and useful" in serving the public.[2]

Q. Is the concept of Used and Useful unique to water and wastewater utilities?

A. No. Chapter 366, F.S., regulating electric and gas utilities requires the Commission "... to investigate and determine the actual legitimate costs of the property of each utility company, actually used and useful in the public service..." For ratemaking purposes the net investment in such property is "... the money honestly and prudently

[2]Florida Laws 59-372; 67-496; 71-278. The 1959 law referred to "a fair return on the fair value of the property of the public utility used and useful in the public service." The 1967 revision referred to "the money honestly and prudently invested by the public utility in property used and useful in serving the public." The 1971 version, which has been amended considerably, still retains the language "the utility's investment in property used and useful in the public service."

invested by the public utility company in such property used and useful in serving the public..."[3]

Q. Is the term USED AND USEFUL defined in the Florida statutes?

A. No, the term is not defined. But even without definition, people seem to grasp the basic concept that used and useful property is property employed in a beneficial manner to provide a service to the public.

A cogent explanation of the concept was given by the Commission itself in a 1977 order:

> The concept of "used and useful in the public service" basically an engineering concept, is one of the most valuable tools in regulation and ratemaking. It is basically a measuring rod or test used to determine the portion or amount of the utility's assets which are to

[3] This happens to be the same language as in Florida Laws 67-496, the 1967 water and sewer law.

be included in its rate base and upon which the utility has an opportunity to earn a return.

Basically a two step determination, the first step is to establish the physical existence and cost of the assets which the utility alleges are in its operations...

Once the existence and cost of a utility's assets has been established, the second step in defining used and useful is to determine which identified assets are really used and useful in performing the utility's service obligation. The asset must be reasonably necessary to furnish adequate service to the utility's customers during the course of the prudent operation of the utility's business.

> Generally, any asset which is required to perform a function which is a necessary step in furnishing service to the public is considered used and useful.
>
> In addition, good engineering design will give a growing utility a sufficient capacity over and above actual demand to act as a cushion for maximum daily flow requirements and normal growth over a reasonable period of time.[4]
> [Emphasis added]

Although margin reserve was not specifically mentioned in the Commission's explanation, one can see the seeds for it. The Commission's concept of used and useful recognizes that a utility must have capacity "over and above actual demand" and that it must have capacity adequate not only for the present, but during the course of the prudent

[4]In re: Petition of Deltona Utilities, a Division of the Deltona Corporation, to increase its water and sewer rates in Volusia County, Florida, Order No. 7684, Docket No. R-750626-WS, 3/14/77 (hereinafter referred to as the "**1977 Deltona decision**").

operation of the utility's business. It is the portion of capacity necessary to provide these functions with which margin reserve has come to be identified.

Q. When did the term MARGIN RESERVE come into use?

A. The term "margin reserve" came into use sometime during the 1970's. Initially, it was not fully developed. It simply appeared to have been a means to recognize only that portion of used and useful plant necessary to allow a utility to meet normal growth over a reasonable period of time.

The term was given formal recognition by the Commission staff as a part of used and useful plant in a 1978 staff memorandum:

> The term Margin Reserve will be used to identify that part of a plant and/or system that represents the capacity reserved to serve additional customers for a designated period subsequent to the end of a test year.

.....

> ... the "margin reserve" is computed and made a part of the total allowable used and useful determination.[5]

Still, the definition in the 1978 staff memorandum was quite limited as compared to the more encompassing concept of adequate capacity described in the 1977 Deltona decision. The Deltona decision recognized a need for a cushion for current demand changes as well as for growth, and the necessity for capacity adequate to provide service to the utility's customers during the course of the prudent operation of the utility's business. The 1978 memorandum addressed only the ability to serve additional customers for short periods of time. And short periods of time generally meant 12 to 18 months.

[5]Memorandum, 5/2/78, from James O. Collier, Jr., Supervisor, Water & Sewer Section to Engineers, Water & Sewer Section, Engineering Dept. re Used & Useful Determination

Q. Has the Commission ever expanded the definition of margin reserve to recognize any of its purposes other than meeting short term growth?

A. No it hasn't. In some rate cases the Commission has approved margin reserve allowances longer than 18 months, implicitly recognizing economic considerations, but the definition upon which it bases its decisions is still limited to providing capacity for short term growth only. A more complete definition is necessary to fully capture the concept of used and useful as described in the 1977 Deltona decision.

A DEFINITION OF MARGIN RESERVE FOR THE RULE

Q. How does the proposed rule define margin reserve?

A. Proposed Rule 25-30.431(1), F.A.C. continues to limit the purpose of margin reserve to meeting the needs of customer growth. It ignores its purpose of meeting changing demands of current customers, maintaining the integrity of the system for those customers and of allowing the utility to serve in an economic manner.

Q. Does the FWWA have a proposed definition that recognizes these other purposes?

A. Yes. The FWWA proposes Margin Reserve be defined as "... the investment needed to meet the changing demands of existing customers and the demand of potential customers in a reasonable time and in an economic manner."

Q. Why do you support this definition?

A. We support this definition because, consistent with the 1977 Deltona decision, it recognizes that a margin reserve represents capacity that has several functions. It represents the capacity necessary to protect existing customers and the capacity necessary to be ready to serve future customers. In addition, by recognizing that economics must be considered in how a utility meets its obligations, the definition addresses that capacity necessary to furnish adequate service during the course of the prudent operation of the utility's business.

Q. Is it important that the proposed rule recognize that margin reserve serves all customers, not just potential customers?

A. It is extremely important. Even though the Commission has consistently ruled that margin reserve is part of used and useful plant, the Office of Public Counsel (OPC) has continually argued that investment to serve current demand is for existing customers but investment in margin reserve is only for future customers and therefore the cost for margin reserve should not be included in rates.

Q. Is there merit to that argument?

A. No. Margin reserve is most definitely necessary to serve existing customers.[6]

Q. Please explain further.

A. Without margin reserve, a utility would not have any capacity available to serve any increase in

[6] The initial definitions of margin reserve, developed in the early 1970's, did not address the part played by margin reserve in serving existing customers. And even though the 1977 Deltona decision did address this function and fully recognize it, it was not a concept that was readily understood or accepted. Only recently, has the Commission formally recognized in its orders that margin reserve benefits existing customers. See Order No. PSC-93-0423-FOF-WS, 3/23/93 [93 FPSC 3:522].

the demand of existing customers. And increases in existing customer demand is a common occurrence. An existing residential customer can increase water and wastewater demand in many ways, such as adding a bathroom or a jacuzzi, or adding a waste disposal unit, a dishwasher or washing machine, or even a sprinkler system or swimming pool. Existing commercial customers can expand their businesses, or businesses, and their associated flows, can change at the same location. These types of demands can and do occur even without any increase in total customers. Any one of these changes in demand may seem inconsequential, but the cumulative effect can place additional demands on a system that the utility must be ready to and capable of serving.

Q. How has the Commission reacted to the argument that margin reserve is only for future customers?

A. Although this argument has not caused the Commission to disallow margin reserve, it has given it cause to pause and consider whether margin reserve does indeed serve existing customers.

Such concerns were made evident in the Commission's consideration of a rate application in 1984.[7] The Commissioners expressed concern that through margin reserve [for water and wastewater utilities] they were asking existing customers to pay for the growth of the utility (Tr. 5). They were told by staff that the margin reserve protects the individual existing customers, that it preserved and protected the integrity of the system to serve them and did not subsidize future customers (Tr. 5). This statement by staff was consistent with the Commission's findings in the 1977 Deltona decision.

Q. Were the Commissioners concerned with consistency in the recognition of margin reserve as part of used and useful?

A. I believe they were. In their discussion of the St. Lucie case, the Commissioners asked Staff if other utilities have a margin reserve. Staff told them they had talked with other department directors, looked at other rulings and determined

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[7] Transcript of Agenda Conference, 8/21/84, page 3, Item #29, Docket No. 830421-WS, In re: Application of General Development Utilities, Inc., Port St. Lucie Division, for an increase in water and sewer rates in St. Lucie county, hereinafter referred to as "**the St. Lucie case.**"

that there is recognition of growth in electric and other utilities consistent with that for water and wastewater utilities (Tr. 7).

Although the explanation by staff confirmed that reserves for electric utilities and water and wastewater utilities served the same purposes - a margin to protect current customers and provide capacity for future customers - it did not satisfy all Commissioners that reserves for water and wastewater utilities were for anything other than speculative growth. Commissioner Leisner made an observation that differentiated, in her mind, water and wastewater utilities from electric and gas utilities. It was her conception that for electric utilities the Commission is up front and knows whether they are building the plant the right size to meet capacity because the Commission held certificate of need hearings. On the other hand she believed that in the case of water and wastewater utilities, the "developer" puts in capacity, to serve his development, and not to serve customers. (Tr. 7,8)

I believe these observations by Commissioner Leisner point out a serious misconception. First, it equates developer related utilities with developers. Second, it implies that for electric utilities, margin reserve is the necessary result of sound engineering and planning, while for water and wastewater utilities, it is a reward to developers for building capacity to sell houses.

The unfortunate result of this misconception is that Commission policy rewards electric utilities for good engineering by allowing substantial reserves when economically justified and punishes water and wastewater utilities by restricting allowed reserves below the level that is economically justified.

Q. Does it matter whether a utility is a developer related or independent in defining and determining margin reserve?

A. No. Regardless of these relationships, the utility's obligations and responsibilities are the same. The utility must provide service and be ready to provide service as required by law. The utility must have adequate capacity to serve in an

economical manner. That is the point of the whole used and useful process - to recognize only the investment necessary to serve the public and meet obligations under the law.

When it comes to determining used and useful property, the criteria applied to developer related and independent utilities should be the same. If they are, then it doesn't matter who owns them or runs them. As discussed in the 1977 Deltona order, the criteria are:

A) The assets are necessary to furnish adequate service during the course of the prudent operation of the utility.

B) In keeping with good engineering design, capacity is sufficient to provide a cushion over maximum daily flows and to serve normal growth over a reasonable period of time.

If margin reserve is properly defined and the definition is applicable to all utilities, then a margin reserve allowance will protect customers, existing and potential, by assuring that capacity is adequate but not excessive, regardless of

whether the utility is or is not developer related.

Q. Why is it important to recognize economics in the definition of margin reserve?

A. Because a simple measurement of capacity requirements, without consideration of cost, can lead to uneconomic decisions regarding the means of providing necessary capacity. The Commission is much more attuned to the relationship between capacity requirements and economics in its regulation of electric utilities. Its guiding principle in assessing the plans of electric utilities has been, "what alternative results in the lowest long run cost?"

Q. Is it fair and logical to compare reserve requirements of water and wastewater utilities with those of electric utilities.

A. Yes it is. The purposes of the reserve requirements are similar and the Commission should treat them similarly, but is has not. This has been primarily because the Commission has viewed the reserves for these respective utilities from different perspectives. The Commission views

reserves for electric utilities as providing reliability for existing customers, but no capacity for growth. And it views reserves for water and wastewater utilities as providing capacity for future growth but no degree of reliability for existing customers. In fact, both perceptions are incorrect. Reserves for electric, water and wastewater utilities, as previously observed by staff, serve both purposes. Reserves provide reliability for existing customers and capacity for future growth.

Q. What has been the result of the Commission having different views regarding reserves for electric utilities versus reserves for water and wastewater utilities?

A. The result has been that for electric utilities, the Commission has expected, even required, a minimum reserve level to be maintained and has included as used and useful, capacity resulting in reserves above the minimum, if it is reasonable, prudent and economical in the long run. But for water and wastewater utilities, except for a few limited cases, the Commission has set a maximum reserve, and has not included capacity resulting

in reserves above the maximum as used and useful, even if it is reasonable, prudent and economical in the long run.

The meaning of and treatment of margin reserve for water and wastewater utilities should parallel that for reserve margin for electric utilities. That is, if capacity is reasonable, prudent and economical in the long run, it should be treated as used and useful for ratemaking purposes.

THE MARGIN RESERVE PERIOD

Q. The proposed rule includes a definition for a "Margin Reserve Period." What is the purpose of a margin reserve period?

A. The purpose of a margin reserve period is to provide a measure of the margin reserve. The margin reserve can be visualized as an amount of capacity over and above current capacity necessary to allow the utility to continue to serve existing customers until capacity can be economically expanded. The amount of capacity necessary for that purpose depends on the period of time that will elapse between the present and when an

incremental addition can be added. That period of time is the "margin reserve period."

Q. Does the proposed rule define a "Margin Reserve Period?"

A. Yes it does, in proposed Rule 25-30.431(2), F.A.C. The proposed definition of Margin Reserve Period is "...the time period needed to install the next economically feasible increment of plant capacity that will preclude a deterioration in the quality of service."

Q. Does the FWWA agree with this proposed definition?

A. No. The definition is too limiting. It recognizes only the period necessary to "install" the next increment of capacity and ignores the period necessary to plan, design and obtain land and permits for that capacity and the economic time span between additions. A utility must maintain adequate capacity during all of that time, not just while additions are being installed. If the definition is limited as proposed, then a portion of capacity economically sized, and needed by the utility to meets its obligations, will be excluded from used and useful plant and therefore from the

rate base upon which it will be allowed the opportunity to earn a return.

Q. What definition does the FWWA propose?

A. The FWWA proposes that Margin Reserve Period be defined as "the period during which current capacity is required to be available until the next economic capacity addition can be placed in service without causing a deterioration in the quality of service." This definition captures the entire period during which capacity will be required, until the next economic addition.

Q. You have indicated that reserves for water and wastewater utilities should be treated consistently with electric utilities. Why is that?

A. The treatment should be consistent because the purposes or end results are consistent. The means of expressing the measurement of reserve may be different, and the names of the reserve may be different, but the reserves are equivalent in

purpose.[8] The difference in expressing the reserve reflects the different engineering approaches to how capacity requirements are determined.

Regardless of how we get there, the result is the same. With regard to electric utilities, the capacity necessary to maintain reliability at a minimum level and on a continuing and economic basis is determined. The resulting capacity requirement, based on an economic analysis, is expressed as a percent of current peak demand. But that capacity, relative to demand, is adequate for some period of time - some number of years at the projected rate of growth. The length of time into the future that capacity will serve is equivalent to margin reserve, in water and wastewater utility terms.

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[8] A capacity reserve, to assure a utility's ability to provide reliable service and meet statutory requirements, is a necessity long recognized by the PSC for water, wastewater and electric utilities. Although the purpose of the reserve is similar for these types of utilities, they have different names and are measured in different ways. The investment in capacity reserve for water and wastewater utilities is called a margin reserve and has historically been expressed in terms of equivalent annual growth. The investment in capacity reserve for electric utilities is called a reserve margin and has historically been expressed as a percentage of annual peak load demand. However, either reserve can be expressed in terms of percentage of peak load demand or equivalent annual growth.

With regard to water and wastewater, the capacity necessary to meet test year demand plus demand for a period until the next increment can be economically added is determined. The amount of capacity required during the margin reserve period, if expressed as a percent of the current demand instead of period of time, is equivalent to the reserve margin, in electric utility terms.

Q. In discussing the measurement of margin reserve you have referred to peak demand as the basis of measurement. If the Commission allows a utility sufficient capacity to meet peak demand, is a margin reserve still necessary?

A. Yes. Obviously, if a utility has sufficient capacity to meet its peak demand, it will have some reserve available during non-peak periods. But without a margin reserve it will have zero capacity to meet demands in excess of the historic peak, to meet any increased demand from existing customers, to meet historic peak demand if any major component of the system becomes unavailable at the peak, or to serve even one new customer in a timely manner without effecting the service of existing customers. This reasoning is consistent

with that for electric utilities. As previously discussed, the percent reserve margin for electric utilities is expressed as the difference between available capacity and the annual peak day demand. Further, in my opinion, some reserve is always needed, even for a no growth utility, in order to have some capability to meet fluctuations in historic demand, regardless of cause.

THE DEFAULT MARGIN RESERVE PERIOD

Q. Does the proposed rule include a default margin reserve period?

A. Yes. Proposed Rule 25-30.431(4), F.A.C. sets margin reserve periods that would be applied by the Commission, unless otherwise justified. The margin reserve period is set at 18 months for water source and treatment facilities and wastewater treatment and effluent disposal facilities. It also sets a margin reserve period at 12 months for water distribution and transmission lines and the wastewater collection system.

Q. Does FWWA agree with the periods set out in the proposed rule?

A. No. These periods are far too short to allow a utility to plan and construct capacity additions in an economical manner or, in some cases, to operate in compliance with FDEP regulations.

Q. What time spans does FWWA recommend for the margin reserve periods?

A. The FWWA recommends that for water source and treatment facilities and wastewater treatment and effluent disposal facilities, the margin reserve period be set at five years. I will address the margin reserve for water distribution and transmission lines and the wastewater collection portions of the system later in my testimony.

Q. What are the reasons for selecting five years for source, treatment and disposal related facilities?

A. There are several reasons. First, there are practical considerations. In today's environmentally conscious society, it can take several months to several years to go through the process of acquiring a site or readying an existing site for use. Whether new or existing, a

utility must perform the required tests on the site, obtain permits for its use, work out buffer requirements, obtain the necessary consumptive use permits, and gain approval for disposal of effluent. Obtaining a consumptive use permit alone may well take four years. A utility must maintain a level of capacity sufficient to adequately serve its customers during this planning and permitting process.

Another reason for selecting the five year margin reserve period is because it is compatible with the planning regulations for wastewater facilities set out by FDEP in Rule 62-600.405, F.A.C. That rule requires a utility to initiate planning and design for capacity expansion if the currently permitted capacity will be equalled or exceeded within the next five years. Therefore, regardless of whether this Commission recognizes the investment the utility must make to maintain capacity during that five year period, the utility is obligated to move ahead with a capacity expansion.

Q. Does the FDEP have similar rules applicable to water systems?

A. Not as yet. However, the FDEP is considering adopting planning rules for water systems and has already indicated that they will closely parallel the requirements of the planning rules for wastewater systems and will include the requirement to initiate planning and design for capacity expansion if the currently permitted capacity will be equalled or exceeded within the next five years.

Q. Are there any other reasons to select a five year margin reserve period?

A. Yes. There is a third and most compelling reason and that is when a utility is limited to building capacity that is adequate only for short periods - periods less than five years - it cannot take advantage of the economies of scale in system design and equipment sizing that will provide long run economic benefits. For water and wastewater facilities, there are still significant economies of scale in building larger units and five years provides a minimum incentive. The staff of FDEP has both acknowledged and recommended that water

and wastewater systems should be planned for periods of ten years or longer.[9] Yet there is no incentive to consider the long run and build larger, lower unit cost facilities if a portion of the investment cannot be earned on because it results in capacity in excess of that allowed through an 18 month margin reserve period.

Q. Can the FWWA provide the Commissioners with any evidence that economies of scale do exist and their impact on long run costs?

A. Yes. The FWWA has had an analysis performed by Milian, Swain & Associates for that purpose. Their analysis supports the conclusion that economies of scale exist. They will be discussing the results of their analysis in this proceeding.

Q. Is setting a five year margin reserve period the only means by which the Commission should recognize economies of scale?

A. No. As previously discussed, a five year period is really a minimum period necessary to encourage a

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[9] See June 29, 1995 Letter to John Williams from FDEP Director of Division of Water Facilities Richard M. Harvey. Also see statement of Van Hoofnagle, FDEP Drinking Water Section, Tr.40-42, FPSC Used and Useful Workshop, 7/12/95.

utility to take advantage of economies of scale that will provide long run benefits. A five year margin reserve period signals the utility that it can plan for the longer term and anticipate recovery of the associated costs. But, in addition, the Commission can further encourage economies of scale through other means. For example, similar to its treatment of electric utilities, if the Commission determines that capacity additions result in a margin reserve period greater than the five year default, but finds that they are reasonable, prudent and economical in the long run, it can include the cost of the expansion in used and useful plant. Also, the Commission may consider using an economies of scale factor as has been suggested at the margin reserve workshop and in a recent rate case before this Commission. The theory behind the economies of scale factor, as developed by Mr. John Guastella, is, in recognition of economies of scale, to consider, as a rule-of-thumb, 20% of all plant investment as 100% used and useful, and apply used and useful adjustments to only the remaining 80% of plant investment. These are two ways that the Commission can continue to encourage

economies of scale in addition to providing the basic five year margin reserve period.

Q. Would you please address the approach to margin reserve for water transmission and distribution lines and the wastewater collection system?

A. These facilities are added to or expanded on the basis of system configuration, not strictly on the basis of the capacity of the mains. Margin reserve should not be a consideration for water transmission mains and off-site wastewater force and gravity collector mains and pumping stations, which are designed for relatively long periods of time, even for total buildout. It is expensive and impractical to lay parallel mains or change out small mains for larger ones in order to track annual growth patterns when these facilities are usually buried beneath paved roads and running through built up areas. This is also true for pump station structures. If these facilities are prudently constructed, they should be considered 100% used and useful, regardless of how many years of growth they can accommodate, and margin reserve should not be a factor.

However, a margin reserve period is appropriate for on-site distribution and collection lines and laterals. We recommend that the default margin reserve period for these facilities be increased from 12 months to two years. This would help to recognize that on-site mains must go where the customers go and as a result, a utility, in order to maintain continuity of flow, often must have more lines in the ground than a customer count would indicate. Water cannot flow through unconnected sections of line. Two customers on a street with ten lots, but not located on contiguous lots, will require more than 2/10ths of the line to serve them. Increasing the margin reserve period to the equivalent of two years of growth is a fair means of partially compensating the utility for the cost of meeting its obligation to serve under this most common of conditions, while, at the same time, responding to Commission concerns that developers bear the risk of, and not be rewarded for running lines to every lot.

Q. Is a five year margin reserve period compatible with the reserve periods that result from the reserve margins that the Commission has accepted for electric utilities?

A. A five year margin is compatible, but in general, is on the low side of the range. I have reviewed the planning documents of the three privately owned generating electric utilities serving peninsular Florida to compare the number of years of growth that can be accommodated by their planned reserve margins as filed with this Commission in their most recent Ten-Year Site Plans. The results are shown on Exhibit ____ (FS-2). The planned reserves for Florida Power & Light Company, Florida Power Corporation and Tampa Electric Company for the next ten years, provide capacity that is the equivalent of 6.5 years of growth on the low side to 24.3 years of growth on the high side. This compares to the currently allowed margin reserve period for water and wastewater utilities of 1.5 years and the FWWA proposal of 5 years.

Q. You stated that your comparison is based on the planned reserves of these utilities. Are the planned reserves in excess of the minimum that the Commission requires to be maintained?

A. Yes.

Q. How would the results compare if the reserves were kept at the minimum level?

A. A comparison at the minimum level is shown on Exhibit ____ (FS-3). Even at the minimum level, the reserves provide capacity that is the equivalent of 4 years of growth on the low side and 17 years of growth on the high side.

Q. Why do these electric utility plans include reserves in excess of the minimum required?

A. Generally, because the combination of capacity additions that result in those higher level of reserves represent the best economic choice of alternatives for serving the growing demand over the long run.

Q. If the Commission applied the same rate treatment to the reserves of electric utilities as it does to water and wastewater utilities, what would be the consequence?

A. The reserves in excess of the minimum would be considered non-used & useful plant and be excluded from rate base. For the three electric utilities, that would amount to about 1,500 MW of capacity, the cost of which, although economically justified, would not be recoverable through customer rates, on an ongoing basis.

Q. What is your conclusion regarding the proper margin reserve period for water and wastewater utilities?

A. If the Commission is to be consistent, and non discriminatory, in its policies regarding used and useful, it needs to define the margin reserve period in a way that results in used and useful being that plant adequate to meet the changing demands of existing customers until the next economic increment of plant can be placed in service. We believe that, at a minimum, that period should be set at five years for source, treatment and disposal related plant and two years

for on-site distribution and collection plant. Prudently constructed off-site transmission and collector mains and pumping stations should be considered as 100% used and useful.

Our proposal provides utilities with the opportunity to earn on the full cost of plant that is necessary to provide safe, efficient and sufficient service in a reasonable time as required by law. If our proposal is adopted, utilities will be in a position to make decisions that have long term economic benefits for utility customers.

STUDIES AND FACILITIES FOR REUSE OF RECLAIMED WATER

Q. **The proposed rule does not specifically address policy regarding reuse feasibility studies and facilities for the reuse of reclaimed water. Should these studies and facilities be subjected to the same margin reserve policies as other effluent disposal facilities?**

A. No. Reuse feasibility studies and facilities for the reuse of reclaimed water need to be separately addressed because the statutory requirement for

recovering their costs are set out in Section 403.064, F.S., Reuse of Reclaimed Water.

Section 403.064(10) requires the Commission to allow entities under its jurisdiction "to recover the full, prudently incurred cost of such studies and facilities through their rate structure." This is not permissive. If the studies or facilities meet the requirements of Section 403.064, F.S., then the Commission must allow full recovery of their prudently incurred costs through the utility's rate structure.

The FWWA proposes that the following language be included in the rule: In determining rates for water and wastewater utilities under its jurisdiction, the prudently incurred cost of studies and facilities for the purpose of reusing reclaimed water, that meet the requirements of Section 403.064, Florida Statutes shall be considered 100% used and useful.

IMPUTATION OF CIAC AGAINST MARGIN RESERVE

Q. Proposed Rule 25-30.431(7) requires the imputation of CIAC when a margin reserve is authorized. Do you agree with this proposed rule?

A. No. The imputation of CIAC is an illogical practice that not only defeats the purpose of margin reserve, but also is confiscatory in that it denies a utility the ability to ever earn a return on its investment in plant used and useful in the public interest.

Q. The Commission has often justified imputation of CIAC as a policy of matching CIAC against the investment in margin reserve for the same period. Is that a proper justification?

A. No. It is improper because the assumption upon which it is based is incorrect and illogical. The imputed CIAC and the investment in margin reserve are not from the same period. The margin reserve is an investment already made in the current period. Imputed CIAC is CIAC yet to be contributed by future customers sometime after the current period. If imputed CIAC was from the same period as the investment in margin reserve, it would not be necessary to "impute" it.

Q. Please explain further.

A. When the Commission considers rate base in a rate application, it does so for a test year. The investment in margin reserve is an investment in plant already in service, for test year customers, during the test year.

Then, the Commission imputes the service availability charges for customers in the years subsequent to the test year, against test year investment.

This is clearly a mismatch that violates the concept of the test year. It is a mismatch which the Commission does not even consider for any other revenue or cost category. For example, the Commission does not impute into the test year, the revenues or expenses, not yet incurred, but associated with future customers beyond the test year. That also would be an illogical mismatch.

If the Commission insists on imputing future CIAC against current investment in margin reserve, then it is logical to also impute the investment in margin reserve that will be necessary to serve

those imputed future customers, because, after all, the need for margin reserve in a growing utility is a continuing one.[10] And that of course, is the point. That is why the imputation policy is an illogical mismatching of period investment with out-of-period contributions that denies a utility the ability to earn on its investment in margin reserve.

Q. Hasn't a court ruled that it is within the authority of the Commission to impute CIAC to margin reserve?

A. Yes, the First District Court of Appeal made such a ruling. Rolling Oaks Utilities, Inc. v Florida Public Service Commission, 533 So. 2d 770 (Fla. 1988). But to do so, the court interpreted the evidence in a specific case to mean that the margin reserve was an investment in "plant capacity which the utility has readily available, but not currently in use." We believe that was an

[10] Each existing customer has a margin reserve requirement associated with it that protects its quality of service as other customers are added to the system and assures that the utility has sufficient capacity to meet any additional demands that it may place on the system. As each new customer joins the system, it utilizes existing margin reserve, and that margin reserve must be replaced. Therefore, the utility must maintain a continuing investment in margin reserve in order to maintain the status quo as new customers become existing customers.

incorrect interpretation. In this rulemaking proceeding, and in cases before the Commission subsequent to Rolling Oaks, the evidence is that margin reserve is plant capacity that is not only available, but is currently in use to protect the service quality of existing customers and to provide capacity to meet the changing demands of existing customers as they improve their life styles and add or upgrade water consuming devices. The evidence is also clear that this has always been the case. Margin reserve is and always has been used and useful plant. To repeat the statements of staff to the Commissioners in their consideration of the St. Lucie (1984) case, "...margin of reserve protects the individual existing customers... and preserves and protects their (sic) integrity of the system to serve them".

Q. You indicated that the imputation policy defeats the purpose of margin reserve. Would you please explain how that occurs?

A. The margin reserve should not only protect the operational integrity of the system for its customers but also encourage the utility to take

advantage of long run economics in its planning and construction. As encouragement toward that end, FWWA proposes that used and useful plant include the cost associated with facilities necessary to provide serve between increments capable of serving at least five years. However, if the cost of the investment in margin reserve in-place during the test year continues to be offset by the imputation of out-of-period, future CIAC, the earnings the utility would have received, and would have had available for reinvestment, are diluted, and an increase in the margin reserve period becomes a meaningless gesture. If CIAC is derived from service availability charges set at the 75% Commission guideline,[11] then the incentive to invest is diluted by approximately 75%.

[11] Rule 25-30.580, F.A.C., Guidelines for Designing Service Availability Policy, defines the minimum and maximum amounts of CIAC for which a utility should design its service availability policy. The guideline maximum for CIAC net of amortization is no more than 75% of net plant when facilities are at design capacity. Current Commission policy encourages utilities to design toward the maximum guideline rather than the minimum.

Q. If the Commission were to adopt a five year margin reserve period, but then offset it with five years worth of CIAC, would the utility industry be any better off than it is today with an 18 month margin reserve period?

A. No. If the Commission merely extends the margin reserve period, but continues to net imputed CIAC against all of it, nothing is gained. In fact, with a five year margin and five year imputation, a utility would be in a worse financial position.

Q. Why is that?

A. Assume a utility actually builds for a five year cycle, rather than an 18 month cycle, in order to take advantage of a 25% economies of scale. Also assume that all of the cost of the margin reserve is allowed in rate base as used and useful plant, but is offset by CIAC equal to 75% of the margin reserve investment for the same period. Under these circumstances, as shown on my Exhibit ____ (FS-4), even though the margin reserve period is longer, the utility ends up investing 2.5 times as much in used plant that it cannot earn on as it would have under an 18 month cycle. Imputing CIAC for a period equal to the margin reserve period is

an obvious disincentive against building more economical plant. The Milian, Swain analysis supports this conclusion.

Q. What does all of this mean in terms of financial impact on the utility?

A. Very simply, if CIAC is derived from service availability charges set at the 75% Commission guideline, a utility that is allowed a 10% return on rate base will earn a 2.5% return on its actual investment in margin reserve, when CIAC is imputed for the same number of years as the margin reserve period. This is shown on my Exhibit ____ (FS-4). In addition, the disincentive, in dollars of investment lost, is greater if the margin reserve period is increased and then imputed away in its entirety.

Q. Has the FWWA prepared a detailed analyses of the impact of the Commission's imputation policy?

A. Yes. As part of their analysis of economies of scale and long run costs, Milian, Swain & Associates, Inc. studied the impact of the imputation policy on the long run costs to consumers and on the financial condition of the

utility. The results of their analysis, which they will present in this proceeding, clearly show the detrimental effect of that policy.

The fact is, that when CIAC is imputed, a growing utility never gets the opportunity to earn on the total investment it is required to make to serve the public.

Q. Doesn't AFPI [Allowance for Funds Prudently Invested] provide the opportunity for the utility to recover from future customers, the earnings not recovered from current customers?

A. No. Although the Commission may have intended that to be the purpose of AFPI, and has assumed that to be the result, it just doesn't work. AFPI, as determined using PSC Rule 25-30.434, F.A.C., accumulates certain fixed costs associated with non-used and useful plant. These costs are to be recovered from future customers at the time of hookup, along with the Service Availability Charge. But the investment in margin reserve is used and useful plant, and the portion offset by imputed CIAC that is not earned on in rate base is

not recoverable through the AFPI charge.[12] As the Milian Swain analysis proves, as long as CIAC is imputed, the utility is never made whole. If the Commission comes away from this rulemaking with nothing else, it must come away with the understanding that the imputation policy is clearly confiscatory, since it does not provide an opportunity to earn a fair return on the utility's investment in used and useful plant serving the public in either the short or long term. Revising the margin reserve period without abandoning the imputation of CIAC is not a satisfactory solution.

Q. Does that conclude your direct testimony?

A. Yes, it does.

[12] Margin Reserve is included in rate base as used and useful plant. The portion of margin reserve offset by imputed CIAC, even though no longer earned on in rate base, is still used and useful plant and not assignable to AFPI for recovery from future customers. The basis for the AFPI calculation is non-used and useful plant. See Rule 25-30.434(3)(f), F.A.C.

Docket No. 960258-WS
Frank Seidman
Exhibit ____ (FS-1)
Consisting of 7 pages

Florida Waterworks Association

Alternative Rule Proposal

FWWA Changes to Rule Proposed in Order No. PSC-96-0966-NOR-WS	Explanation for Changes
25-30.431 Margin Reserve	
(1) "Margin reserve" is defined as the ~~amount of plant capacity~~ investment needed to meet the changing demands of existing customers and the demand of potential customers in a reasonable time and in an economic manner ~~expected demand due to customer growth~~.	More completely captures the factors recognized by the Commission [Order No. 7684] in defining used and useful, including the purposes of margin reserve. [Seidman Test. p.14-23]
(2) "Margin reserve period" is defined as the ~~time~~ period during which current capacity is required to be available until the next economic capacity addition can be placed in service without causing ~~needed to install the next economically feasible increment of plant capacity that will preclude~~ a deterioration in the quality of service.	Recognizes, in addition to time needed to install, the time needed for planning & engineering. Current capacity must be adequate during all of that time period; not just installation period. [Seidman Test. p.23-28]
(3) Margin reserve is an acknowledged component of the used and useful rate base determination. ~~that~~ An allowance for	

CODING: Words underlined are additions to Commission Proposed Rule; words in ~~struck through~~ type are deletions from Commission Proposed Rule.

FWWA Changes to Rule Proposed in Order No. PSC-96-0966-NOR-WS	Explanation for Changes
margin reserve shall be in included in rate base when requested ~~and justified shall be included~~ in rate cases filed pursuant to section 367.081, Florida Statutes.	Commission policy already justifies margin reserve as a component of used & useful to be included in rate base. Only the amount is at issue & that is established by this rule. [Seidman Test. p.7-14]
(4)(a) Unless otherwise justified, the margin reserve period for water source and treatment facilities and wastewater treatment and effluent disposal facilities, other than reuse facilities subject to (6) below will be 60 ~~10~~ months.	Provides for addressing, in a separate paragraph, reuse facilities covered by Section 403.064, F.S. [Seidman Test. p.39-40]
(b) Unless otherwise justified, the margin reserve period for on-site water ~~transmission and~~ distribution lines and services and ~~the~~ on-site wastewater collection lines and laterals ~~system~~ will be 24 ~~12~~ months. Prudently constructed water transmission and off-site distribution mains and off-site wastewater force and gravity collectors and pump	Since this proposal addresses margin reserve for line as well as source, treatment & disposal facilities, this recognizes that on-site and off-site lines are designed differently & must be treated differently. [Seidman Test. p.28-39]

CODING: Words underlined are additions to Commission Proposed Rule; words in ~~struck through~~ type are deletions from Commission Proposed Rule.

stations are considered 100% used and useful.

(c) In determining whether another margin reserve period is justified, the Commission shall consider the rate of growth in the number of equivalent residential connections (ERCs); the time needed to meet the guidelines of the Department of Environmental Protection (DEP) for planning, designing, and construction of plant expansion; and the technical and economic options available for sizing increments of plant expansion.

(5)(a) Margin reserve for water source and treatment facilities and wastewater treatment and effluent disposal facilities shall be calculated as follows:

EG x MP x D = MR

where:

EG = Equivalent Annual Growth in

ERCs determined pursuant to (c) or (d) below

MP = Margin Reserve Period determined pursuant to subsection (4)

D = Demand per ERC (customer demand applied in the used and useful calculations for water and wastewater facilities)

MR = Margin reserve expressed in gallons per day (GPD)

(b) Margin reserve for on-site water ~~transmission and~~ distribution lines and services and ~~the~~ on-site wastewater collection lines and laterals ~~system~~ shall be calculated as follows:

EG x MP = MR

where:

EG = Equivalent Annual Growth in

Makes the treatment of on-site and off-site lines compatible with proposed Rule 25-30.431(4)(b). [Seidman Test. p.28-39]

ERCs determined pursuant to (c) or (d) below

MP = Margin Reserve Period determined pursuant to subsection (4)

MR = Margin reserve expressed in ERCs

(c) The equivalent annual growth in ERCs (EG) is measured in terms of the projected annual growth and shall be calculated in Schedules F-9 and F-10 of Form PSC/WAW 19 for Class A utilities and Form PSC/WAW 20 for Class B utilities, incorporated by reference in Rule 25-30.437.

(d) The utility shall also submit a linear regression analysis using average ERCs for the last five years. The utility may submit other information that will affect growth in ERCs.

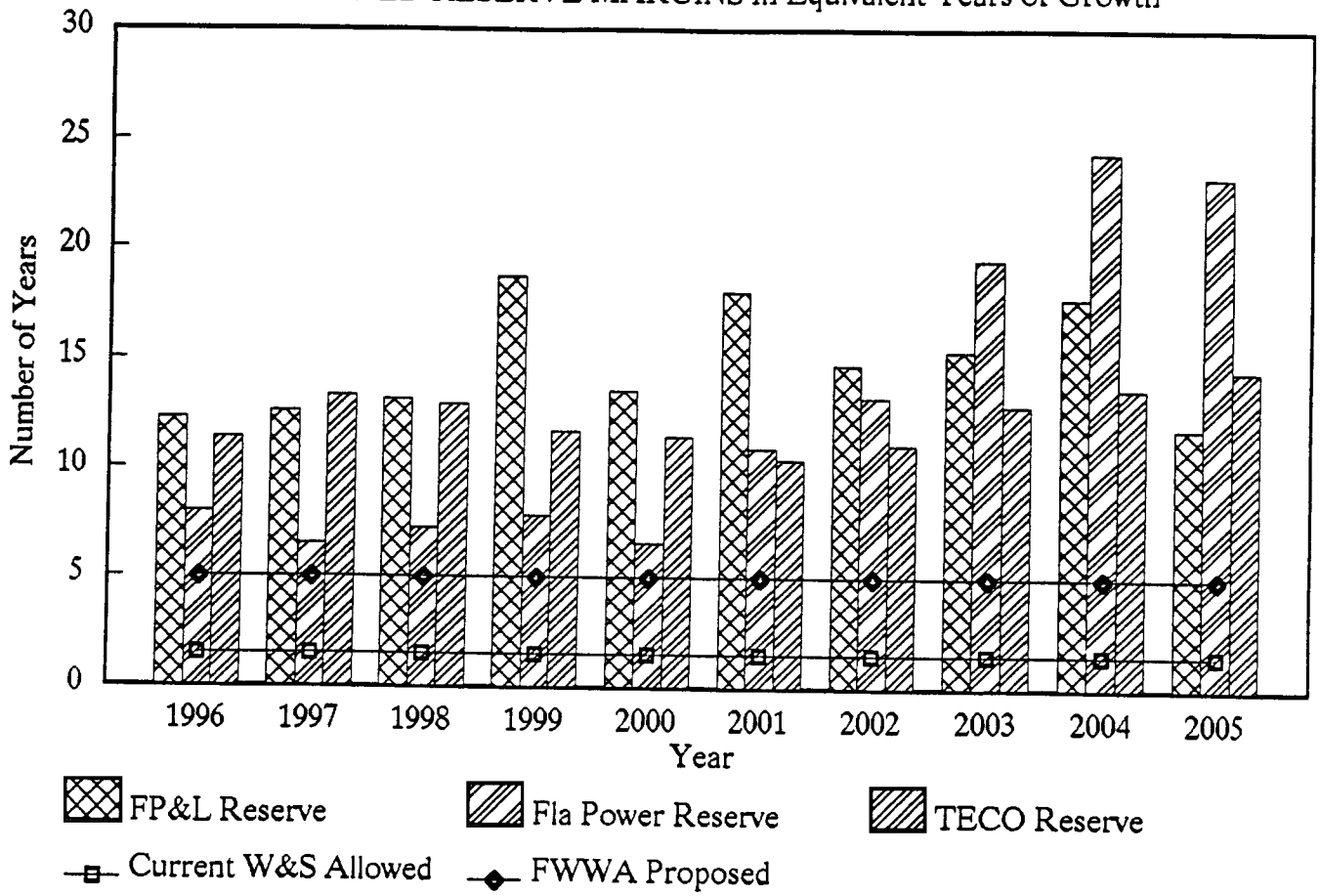
FWWA Changes to Rule Proposed in Order No. PSC-96-0966-NOR-WS	Explanation for Changes
(6) In determining rates for water and wastewater utilities under its jurisdiction, the prudently incurred cost of studies and facilities for the purpose of reusing reclaimed water, that meet the requirements of section 403.064, Florida Statutes, shall be considered 100% used and useful.	Implements the ratemaking requirements of Section 403.064, F.S. [Seidman Test. p.39-40]
(~~7~~ 6) As part of its application filed pursuant to Rule 25-30.437, the utility shall submit its most recent wastewater capacity analysis report, if any, filed with DEP.	
(7) Contributions-in-aid-of-construction (CIAC) shall not be imputed when a margin reserve is authorized. ~~The amount of imputed CIAC shall be determined based on the number of ERCs included in the margin reserve period and the projected CIAC that will be collected from~~	Codifies proposed policy that CIAC not be imputed against margin reserve. [Seidman Test. p. 41-46]

~~those ERCs. However, the imputed CIAC shall not exceed the rate base component associated with margin reserve.~~

Docket No. 960258-WS
Frank Seidman
Exhibit ____ (FS-2)

MARGIN RESERVE PERIODS

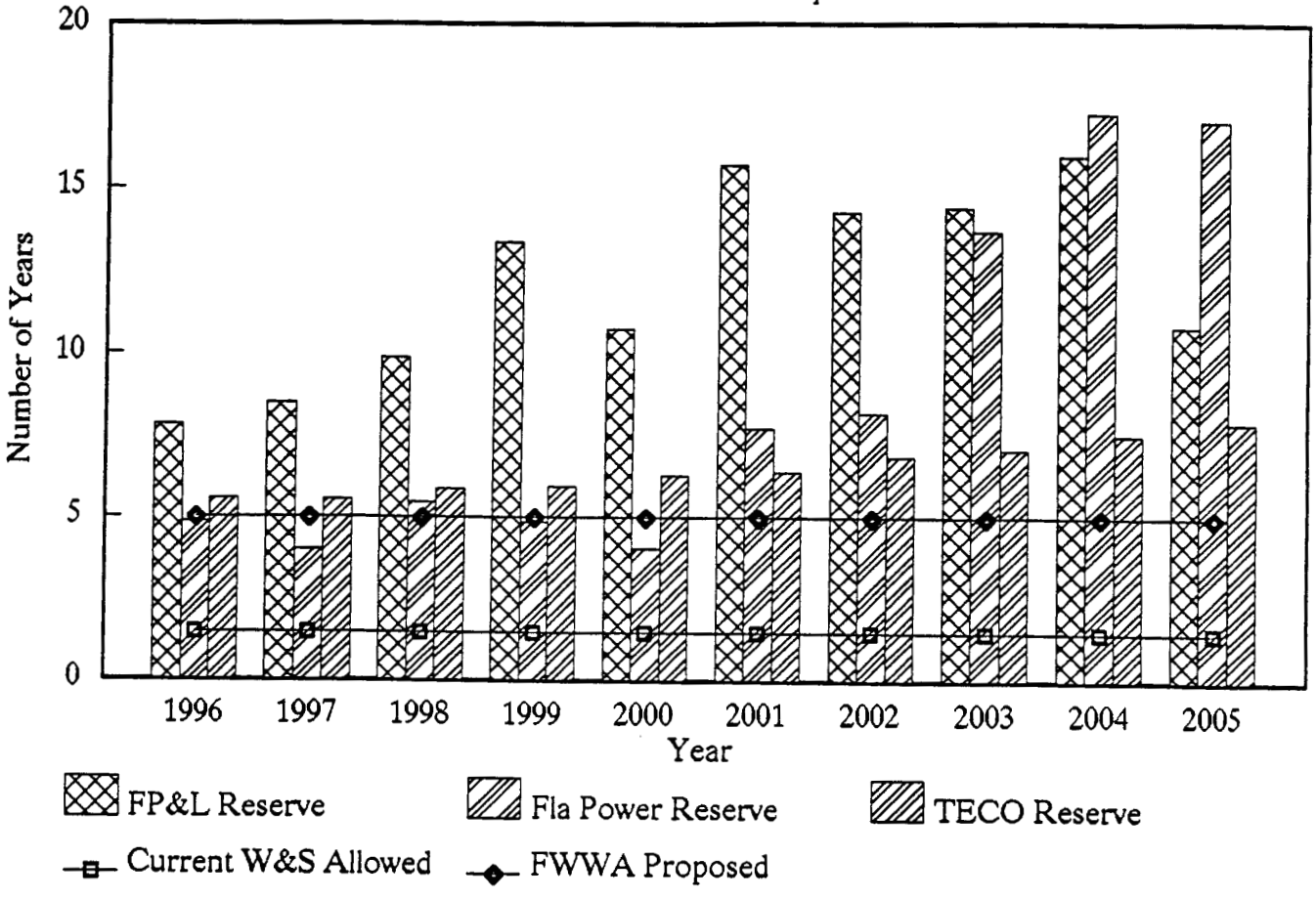
PLANNED RESERVE MARGINS In Equivalent Years of Growth



Docket No. 960258-WS
Frank Seidman
Exhibit ____ (FS-3)

MARGIN RESERVE PERIODS

MINIMUM RESERVE MARGINS In Equivalent Years of Growth



Docket No. 960258-WS
Frank Seidman
Exhibit ____ (FS-4)

IMPACT OF IMPUTED CIAC ON RATE OF RETURN

Line No.	Assumptions	(1) Base	(2) Alt.
1	$/GPD Cost	$4.00	$3.00
2	GPD/ERC	350	350
3	Cost per ERC [line 1x2]	$1,400	$1,050
4	Economy of Scale [1-col.2/col.1]	Base Cost	0.25
5	ERC/ YR Growth	100	100
6	Margin Reserve Period, Yrs	1.5	5
	Margin Reserve Investment		
7	Year 1 [line 3x5]	140,000	105,000
8	Year 1.5 [.5 x line 3x5]	70,000	
9	Year 2		105,000
10	Year 3		105,000
11	Year 4		105,000
12	Year 5		105,000
13	MR Investment, $	210,000	525,000
	Imputed CIAC @ .75 x line 13		
13	[Used plant not earned on]	157,500	393,750
15	Additional used plant not earned on	Base	236,250
16	Increase in used plant not earned on [x Base]		2.5
17	Margin Reserve Investment, $	210,000	525,000
18	Imputed CIAC @ .75		
19	[Used plant not earned on]	157,500	393,750
20	Margin Reserve in Rate Base	52,500	131,250
21	Allowed R/R on RB @ 10%	5,250	13,125
22	Internal R/R on Investment [l.21/l.17]	2.50%	2.50%

LOST.WK3