BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Proposed Amendments to Rule 25-17.0832, FAC, Firm Capacity And Energy Contracts.	Docket No. 060555-EI Filed: November 3, 2006

DIRECT TESTIMONY

OF

MICHAEL D. BEDLEY

FOR

CITY OF TAMPA,

SOLID WASTE AUTHORITY OF PALM BEACH COUNTY,

FLORIDA INDUSTRIAL COGENERATION ASSOCIATION,

AND

COVANTA ENERGY CORPORATION

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Q. Please state your name and occupation.

A. My name is Michael D. Bedley. I am a principal in APEX Power Services Corporation. Our offices are located at 4611 S. University Drive, Suite #170, Davie, Florida.

Q. Briefly describe your educational background and experience.

A. I am a 1986 graduate of the Georgia Institute of Technology with a Bachelor of Science in Mechanical Engineering (BSME). In 1992, I graduated from NOVA Southern University with a Master of Business Administration (MBA) degree. Since 1986 I have been involved in the electric utility business and energy business in general. My professional experience includes ten years as an employee of a major electric utility serving in various engineering, managerial

and financial positions. For the past ten years, as a principal of APEX Power Services Corporation (APEX) – a consulting firm – I have provided energy and financial consulting services to renewable energy producers and other non-utility generators across the United States.

Q. On whose behalf are you presenting this testimony?

A. I am presenting this testimony and appearing on behalf of the City of Tampa, the Solid Waste Authority of Palm Beach County, the Florida Industrial Cogeneration Association and the Covanta Energy Corporation who I will refer to jointly as the "Renewables Group".

Q. What is the purpose of your testimony?

A. The purpose of my testimony is twofold. **First**, I have been asked to review and compare the Commission's proposed rule to the rule proposed by the Renewables Group. **Second**, I have been asked to comment on certain aspects of the Commission's proposed rule which reflect a presumption that there are certain inherent risks associated with renewable energy facilities.

Q. On what basis will you compare the two proposals?

A. I will compare the proposals primarily from the perspective of the ability of a project sponsor to obtain satisfactory project financing as well as the ability of

the project to operate and maintain financial viability given the terms, conditions and pricing resulting from the proposed rules.

Q. What will be the basis for your comments on the assumptions reflected in the Commission's proposed rule?

A. My experience in the industry with respect to risk identification, quantification and management as well as my familiarity with the types of risks associated with both renewable energy and utility generating facilities.

Q. Have you advised or assisted clients in matters relating to financing renewable energy facilities and other non-utility generating facilities?

A. Yes, I have assisted many clients in this regard, including work with lenders, private equity, and other entities interested in investing in, or underwriting investments in, these types of projects.

Q. Are you familiar with the typical financial requirements of non-utility generators such as renewable energy producers?

A. Yes, I am. My education in the engineering and business administration disciplines, along with my work experience, has provided me with a first-hand understanding of the financial demands of the lenders and of the renewable energy projects sponsors. I am currently providing consulting services in

connection with a significant number of renewable energy projects in diverse stages of development and located in various states across the country.

Q. Are you familiar with Section 366.91 of the Florida Statutes and the Public Service Commission's rules regarding standard offer contracts?

A. Yes, I am. Although not trained as an attorney, I have reviewed the materials you referred to and have a basic sense of the Commission's rules and standard offer contracts as a result of my involvement with various projects in Florida.

Q. Have you reviewed the Commission's proposed rules regarding standard contracts for renewable energy that are the subject of there hearings?

A. Yes I have.

Q. Have your reviewed the proposed rules of the Renewables Group which are an attachment to the testimony of Mr. Frank Seidman?

A. Yes I have.

Q. Would you please proceed with your testimony?

A. Yes, I would like to begin by making a general observation regarding project financing, the requirements of the finance community, and the needs of project sponsors or developers. As this Commission is aware, the credit rating and resulting cost of capital to a utility is related to the likelihood that the utility

will be able to generate sufficient income to earn a profit and meet its bond coverage ratios and other financial targets. If the financial community views it unlikely that the utility will earn sufficient income to meet those targets, a "risk" premium will be added to the cost of capital for that utility – resulting in an increase in the utility's revenue requirement and, directly or indirectly, an increase in the price of electricity to the consumer.

As the Commission is also aware, the financial community's perception of risk is influenced most directly by the legal and regulatory regime under which the utility operates. Florida's investor owned utilities enjoy favorable ratings from the credit agencies because Florida laws provide for the accelerated recovery of various costs – e.g. fuel, power purchases, environmental, etc – and are regulated by a Commission that is reasonable in its demands and favorable in its policies regarding cost recovery. The Commission understands that favorable credit ratings can equate to lower cost electricity for the consumer.

I am providing this background to highlight the fact that just like the utility industry, the renewable energy industry also requires a low risk financial environment if it is to germinate and flourish. The law provides that utilities must be afforded the opportunity to earn a fair return on investment after all fixed and variable costs have been taken into account. The Commission should strive – through it rules and policies – to provide the same favorable financial environment for the renewable energy industry.

Q. You indicated that a favorable financial environment is important to the renewable energy industry. Would you please give us some specifics?

A. I would say there are at least three factors that will determine the financial viability of a renewable energy project.

First and foremost, based on a "conservative" financial pro-forma, the project must generate sufficient cash flow for adequate debt coverage over the term of the financing, as well as provide for all other fixed and variable costs and funding of reserves. I will refer to this first factor as "Coverage".

Second, payments received for electricity sold by the renewable energy facility must be reasonably predictable and assured over the term of the debt financing – another measure of the likelihood that the expected income will actually materialize. I would point out that in this "post- ENRON" era, it is generally no longer acceptable to predict future revenues by use of a long-term forecast of energy payments based on fuels with price volatility such as natural gas. Except in certain unique cases, a significant, fixed "capacity" payment is essential to obtaining financing. I will refer to this second factor as "Predictability".

Third, the terms and conditions of the contract under which electricity is sold must be reasonable and not equipped with "trip-wires" that would unreasonably trigger defaults, reduce payments, terminate the agreement or otherwise create an unduly risky contractual relationship. I will refer to this third factor as "Fairness".

Q. Would you please elaborate on these three factors?

A. Yes. The **first** factor – Coverage – is something that is probably familiar to most of us. Whenever we make a large purchase - a house for example - on credit we need to "qualify" for the loan. Whether or not we "qualify" is a direct measure of our ability to repay the loan in periodic installments. The same principle applies to project financing. The **second** factor – Predictability - is probably also familiar. To use the house purchase analogy again, credit history, longevity at our current job, extraordinary debt obligations, whether or not both spouses work, etc. are measures of the likelihood that payments can be made over the term of the loan. The **third** factor – Fairness - may be less familiar but nonetheless critical. Referring again to the house purchase analogy, if the purchaser were to default on the loan, the lender would typically take possession and sell the house to recoup the outstanding loan amount - because in most cases a house is fairly liquid and there are established markets. However, because a renewable energy facility will not likely be viewed by the lender as liquid, it will be critical that the project sponsor be able to continue to operate the facility and sell electricity over the term of the financing without the threat of being defaulted, terminated or otherwise unreasonably interfered with due to onerous contract terms and conditions. This will be critical to the financing of a renewable energy project.

Q. Considering the three factors you identified, do the Commission's proposed rules cause you concern relative to the ability of a renewable energy facility to obtain financing?

A. Yes. Generally speaking, I would say there is little doubt – considering those three very important factors -- that financing for renewable energy facilities will be much less likely under the rules proposed by the Commission as compared to the rules proposed by the Renewables Group. The Commission's rules have a number of shortcomings in this regard.

Q. Please elaborate.

A. With respect to the Coverage factor, the Commission's proposal uses a pricing formula for determining capacity payments that back-end loads capacity payments to the renewable energy facility. This is in contrast to the fact that the great bulk of the costs and expenses in developing a renewable energy project are front-end loaded. The Renewables Group's proposal on the other hand uses a pricing formula for determining capacity payments that would front-end load the payments, thus matching the timing of the renewable energy facility's actual cost incurrence and cash flow requirements.

With respect to the Predictability factor, the Commission's proposal uses a "fossil-fuel" portfolio for selecting the avoided unit, which poses another set of financing problems – revenues will be too speculative or too far in the future or

both to support reasonable financing. For example, pricing based on combustion turbine or combined cycle units – which have relatively low capital costs per KW -- would result in a majority of project revenues deriving from volatile and unpredictable natural gas-based energy prices with only a minor portion deriving from predictable, fixed capacity payments. Projections of revenues from such an arrangement over the long-term would be viewed as speculative by the finance community making financing difficult or unreasonably expensive. If pricing is based on a "portfolio" coal plant – which has a relatively high capital costs per KW -- it would tend to provide a more stable, predictable revenue stream because a majority of revenues would derive from the fixed capacity payments and a minor portion from coal-based energy prices – that would be much more predictable than natural gas-based prices. One may erroneously conclude that pricing based on a "portfolio" coal plant would be a substantial improvement over prices based on combustion turbine or combined cycle units -- except for the fact that under the Commission's proposed rule any coal plant in the "portfolio" would by definition be many years out in the future, as would any real capacity payments. This adds a significant timing mismatch to the already significant revenue mismatch – the combination of which will certainly have a negative affect on project feasibility from a financing standpoint. The Renewables Group's proposal solves both of these problems by basing all pricing on a "proxy" plant – a

statewide coal unit - that is deemed to enter service on the date the renewable energy facility elects to begin delivering capacity to the utility.

Q. Please explain what you mean by proxy plant.

A. As I understand it, the Florida Legislature has determined that renewable energy facilities must be used to diversify the fuel mix and reduce reliance on natural gas for the production of electricity. So if you ask yourself, "what type of plant would I build to diversify fuel mix and reduce reliance on natural gas?" - certainly it wouldn't be a natural gas fired plant nor, given the current situation in the middle-east, would I think they would be oil fired plants. That would leave coal or nuclear – either one of which could serve as a proxy. I understand that the Renewables Group chose the coal plant because since no nuclear plants have been built for so long a period of time it may be impossible to determine a reasonably accurate avoided cost. The capital, fixed and variable costs of coal plants however, are easily ascertained. My use of the term "proxy" reflects the fact that we are not looking to avoid utility planned capacity designed to serve load growth and/or maintain reserve margins. Rather we are looking to establish pricing based on the type of generating plant that would best allow us to meet the fuel diversity and natural gas reduction objectives of the Florida law – a statewide avoided coal plant.

Q. Would you continue with your comparison of rules proposed by the Commission and those proposed by the Renewables Group?

A. With respect to the Fairness factor, the Commission's proposal would allow the utility to determine the length of the contract with the renewable energy facility subject to the proviso that it be no less than ten years nor more than the useful life of the avoided unit. It is unreasonable to allow the utility to dictate contract length. To my knowledge, there are no utility-class generating plants with a useful life as short as ten years – unless the utility chose to completely disregard maintenance and repairs. Similarly, the equipment comprising renewable energy facilities – with few exceptions – is typically utility-class with useful lives in the range of twenty five years – which is also a reasonable period therefore over which to finance such a facility. Allowing the utility to arbitrarily determine the length of the contract with the renewable energy facility will undermine the ability of the project sponsor to obtain the best available financing and thus affect the long-term viability of the project. Furthermore, the Commission's proposed rules are essentially silent on the commercial terms and conditions of the standard offer which can undermine even the most favorable pricing rules. It is absolutely crucial that the terms and conditions of the contract under which renewable energy is sold must be fair and equitable, and not equipped with "trip-wires" designed to trigger defaults, reduce payments, terminate the agreement or otherwise create an unduly risky contractual relationship.

The rules proposed by the Renewable Group contain provisions that I fully support, that in my view are essential for an accommodating renewable energy policy, and that will result in fair and equitable terms and conditions. Those provisions include procedures for developing a "standardized" standard offer which would be identical for all of the investor-owned utilities, and the identification of specific requirements/provisions that must be included in the standard offer, as well as those that may not be included in the standard offer. I refer you to the testimony and exhibit presented by Mr. Seidman who is the primary witness on the details of the Renewables Group's proposed rule provisions.

Q. Please explain your reference to a "standardized" standard offer.

A. By standardized standard offer I mean a uniform standard offer that is the "standard" regardless of the utility. Although I anticipate some differences in the standard offers of the utilities – such as line loss factors, and perhaps a few other utility-specific items – they will be minor considerations. Just as the statewide avoided unit will provide uniform price signals to all renewable energy facilities regardless of the utility's service area in which they are located, the standardized standard offer will assure uniform commercial terms and conditions – which are equally as important as fair and equitable pricing. In my opinion, both the a standardized standard offer and the statewide avoided unit are critical to the State's efforts to encourage renewable energy.

Q. In response to a previous question, you mentioned "exceptions" to the twenty five year range of useful life. What are those exceptions?

A. What I had in mind with that comment – specifically thinking in terms of technologies available in Florida - are landfill gas operations. Except for very large, productive landfills, this type of operation typically uses megawatt sized reciprocating engine-generator sets that can be moved relatively easily from one location to another. The life of a landfill gas facility is dependent on the gas production capacity, the rate of off-take and various other factors. Depending on the specifics of any given project, some landfill gas generating facilities could have useful lives significantly less than twenty five years. Other technologies not available to Florida – geothermal, for example – could similarly have relatively shorter useful (predictable) lives.

Q. Thank you. Do you have any further comment relative to your rule comparison?

A. Rather than be repetitive, at this point it is most efficient to refer to Mr. Seidman's testimony with respect to a comparison of the provisions of the Commission's and the Renewables Group's respective rules. I will, however, reiterate my opinion that financing will be much more difficult under the rules proposed by the Commission as compared to the rules proposed by the Renewables Group.

Q. You haven't mentioned federal income tax incentives that are available to renewable energy producers. Wouldn't those tend to significantly improve cash flows and make financing relatively east to obtain?

A. There are federal income tax credits of various types available to renewable energy producers, but keep in mind that the Federal law definition of renewable energy for tax purposes is not the same as the Florida law definition. Also, it is important to understand that credits are not available to all renewable energy producers, nor are the ones that are available applied equally to all technology types. For example, wind energy facilities tend to enjoy the greater credits in terms of accelerated depreciation rates and significant production credits per kWh compared to other technologies. Moreover credits can be speculative in that they are typically enacted for relatively short periods of time and applicable to facilities that fall within limited windows of opportunity. So although tax credits can enhance the ability of a facility to secure favorable financing, I find that such situations are the exception rather than the norm. This would be especially true in a state like Florida that is limited in the number of renewable technologies that can be used.

Q. Would you please comment on the assumptions that are reflected in the rules proposed by the Commission?

A. Yes. Let me clarify that my comments will be based on both the published rule proposed by the Commission, and on the September 21, 2006 FPSC Staff

recommendation that accompanied the proposed rule considered at the Commission's October 3, 2006 Agenda Conference. Renewable energy facilities of the type operated by the Renewables Group have demonstrated a very high degree of performance and reliability over an extended period of time. In spite of this, the Commission's proposed rule, and the Staff recommendation commending that rule to the Commission, is based on presumptions of the so-called "risks" of renewable energy – risks, so Staff argues, from which the utilities customers must be protected. I find this intriguing, because the history of non-utility generators including renewable energy producers in Florida is a very good one. The Florida non-utility generating industry has performed efficiently, reliably and safely with less risk to utility customers than those imposed by some utility plants.

Q. Please elaborate on your statement that renewable energy facilities pose much less risk to utility customers than do utility plants.

A. Under the Commission's rules - and please understand that the Renewables Group is not suggesting that this be changed - once the renewable energy facility and the utility enter into a contract, the renewable energy facility must meet certain performance requirements or be financially penalized. In contrast, when a utility builds a plant, if it doesn't perform as planned the cost of the decreased performance is borne by the utility customers, or the cost to "fix" the problem is borne by the customers. Either way the risk is borne by

the utility customer when a utility builds a generating plant, but borne by the renewable energy facility when the utility enters into a firm capacity contract. Other cases-in-point are the thousands of megawatts of natural gas fired generation that were proposed by the utilities, approved by this Commission, and were built or are being built by the utilities. The economics of these thousands of megawatts, when compared to coal-fired generation or other alternatives, were based on natural gas fuel price projections that – as it turns out – were terribly understated. Those risks of erroneous fuel price forecasts and the drastic increases in the price of natural gas translated directly into substantial increases in the price of electricity. These risk and excessive costs were fully borne by the utilities' customers because Florida utilities are immune to and insulated from fuel prices – they are "passed through" directly to the customer on the electric bill.

I see no logical explanation, nor basis in fact, for the Commission to overlook or accept the tremendous financial risks imposed on the customer by the utility's fuel choice decisions, while attempting to identify every type of speculative, hypothetical risk that might be associated with a renewable energy facility and take unreasonable steps to totally insulate the customer from each and everyone of those hypothetical and speculative risks.

Q. Do you have any suggestions or closing comments for the Commissioners?

A. As Mr. Seidman will testify, the current rules were adopted at a time when the renewable energy or "non-utility generating" industry was in its infancy with little or no history of performance or reliability. As a result, the Commission adopted rules and a philosophy designed to address its concerns at that time about the long-term reliability and viability of the fledgling industry. As it turns out, the renewable energy industry – especially those segments using waste-to-energy and waste heat – has demonstrated a high degree of reliability over both the short and long term. As Mr. Seidman will recommend, now is the time for this Commission to acknowledge that reliability by substantially changing the rules and their underlying philosophy in order to better reflect the realities of renewable energy producers as reliable, long-term contributors to Florida's energy needs.

The rules proposed by the Renewables Group, which are contained as an Exhibit to Mr. Seidman's testimony, identifies more specific terms, conditions and provisions that must be included in the standard offer and those that may not be included. Although the lists are not exhaustive, they highlight the many provisions that have been added to the standard offer contracts over the years, which are contrary to a policy of encouraging renewable energy.

Q. Does this conclude your direct testimony?

A. Yes it does.