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August 26, 2010

By Hand Delivery

Ms. Ann Cole, Director
Commission Clerk and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

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COMMISSION
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Re: Docket 100385 - **EU**
Petition for Determination of Need for Expansion of an Existing Renewable Energy
Electrical Power Plant in Palm Beach County by Solid Waste Authority of Palm Beach
County

Dear Ms. Cole:

Enclosed for filing in on behalf of the Solid Waste Authority of Palm Beach County
please find an original and 15 copies of the following:

1. Direct Testimony of Marc C. Bruner - 07140-10
2. Direct Testimony of Daniel J. Pellowitz and Exhibit DJP-1 - 07141-10
3. Direct Testimony of Frank Seidman and Exhibit FS-1 - 07142-10

Please acknowledge receipt of the enclosed documents by stamping the extra copy of this
letter "filed" and returning the copy to me.

Thank you for your assistance with this filing and please do not hesitate to contact me if
you have any questions.

Sincerely
Marsha E. Rule
Marsha E. Rule

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

MARC C. BRUNER

FOR

THE SOLID WASTE AUTHORITY OF PALM BEACH COUNTY

IN RE:

MODIFICATION TO DETERMINATION OF NEED

Q. Would you please state your name, occupation and business address?

A. My name is Marc C. Bruner. I am the Chief Administrative Officer of the Solid Waste Authority of Palm Beach County, with offices at 7501 North Jog Road, West Palm Beach, Florida 33412 (the "Authority").

Q. Briefly, what is your educational background and experience?

A. I have BA and MS degrees in Botany from the University of Wisconsin – Milwaukee, and a Ph.D. in Ecology from the University of Tennessee. I have been practicing as an environmental manager for over 25 years in both government and the private sector. I was the Director of Planning and Environmental Programs for the Authority for over 20 years. In that role I was responsible for environmental compliance - including the conditions of the Florida Electrical Power Plant Siting Certification applicable to our site - as well as the Authority's long range planning, including the additional waste-to-energy facility ("WTE") capacity that is the subject of this proceeding.

In my current capacity as Chief Administrative Officer I now have additional responsibilities for design and construction of new Authority facilities, including the additional WTE facilities. My responsibilities also include administration of the

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1 contracts for all Authority facilities where the operations have been privatized, including
2 recycling facilities and bio-solids processing facilities; maintenance of all Authority
3 facilities; risk management; and the Authority's safety programs.

4
5 **Q. On whose behalf are you presenting this testimony?**

6 **A.** I am presenting this testimony on behalf of my employer the Solid Waste Authority of
7 Palm Beach County, Florida.

8
9 **Q. What is the purpose of your testimony?**

10 **A.** I provide relevant background information and support the Authority's petition for
11 modification of its prior need determination (the "Petition"). My testimony focuses on
12 the Authority's important obligations and responsibilities as a creation of the Legislature,
13 a political subdivision of Palm Beach County, and as the sole governmental entity
14 empowered to manage, dispose of and recover energy from solid waste in Palm Beach
15 County. I also describe the importance of the Authority's request for a determination of
16 need. My testimony describes Authority operations, programs and ongoing activities
17 including expansion of electrical generating capacity at our site in Palm Beach County,
18 more details of which will be provided by Mr. Pellowitz.

19
20 **Q. Would you please describe the Authority and its purposes?**

21 **A.** The Authority is a local governmental entity that is a political subdivision of Palm Beach
22 County. More specifically, the Authority is a dependent special district created by the
23 Florida Legislature in 1975 by the Palm Beach County Solid Waste Act (the "Special
24 Act"). The Special Act was amended several times over the years, and was codified by

1 the Legislature in 2001 as Chapter 2001-331, Laws of Florida. A copy of the Special Act
2 is attached as Appendix A to the Petition.

3
4 The Special Act requires the Authority to adopt a comprehensive resource recovery and
5 waste management program to transport, store, separate, process, recover, recycle and
6 dispose of Palm Beach County's solid waste. Accordingly, by virtue of the Special Act,
7 the Authority provides municipal solid waste ("MSW") processing, disposal and
8 recycling services throughout all of the incorporated and unincorporated areas of Palm
9 Beach County, and also collects MSW in the unincorporated areas of the County. The
10 Authority is specifically required to engage in "recycling" and "resource recovery." As
11 defined in the Special Act in Section 5, paragraphs (17) and (18), these terms include the
12 use of solid waste as an energy source:

13 *"Recycling" means any process by which solid waste*
14 *materials are recovered and reused in manufacturing,*
15 *agricultural, power production, and other processes.;*

16 *and,*

17 *"Resource recovery" means the process by which materials in*
18 *solid waste retaining useful physical or chemical properties*
19 *are reused or recycled for the same or other purposes,*
20 *including use as an energy source. (emphasis added)*

21
22 The term "resource recovery", as used in the Special Act and in general use through the
23 1970's and 1980's, was replaced by the term "waste-to-energy" in the 1990's, and today is
24 encompassed by the broader term "renewable energy". When applied in the context of

1 MSW, these three terms all mean the same thing – the recovery from MSW of usable
2 byproducts including materials such as metals for their useful physical properties; and,
3 energy from the useful chemical properties.

4
5 The Special Act also vests the Authority with correspondingly broad powers and discretion
6 to enable it to carry out and fulfill its substantial resource recovery and waste management
7 responsibilities.

8
9 **Q. Would you please describe those broad powers of the Authority that you feel may be**
10 **particularly significant to this proceeding?**

11 A. Yes. The Special Act is quite broad, vesting the Authority with a wide range of both
12 powers and responsibilities. However, in Section 6 of the Special Act, the Legislature
13 vested the Authority with certain powers that I understand to be somewhat unique and of
14 which the Commission should be aware. I am referring to the Legislative grant of power
15 on page 5, subparagraph (8) authorizing the Authority to:

16 *“Acquire, construct, reconstruct, improve, maintain, equip, furnish,*
17 *and operate at its discretion such resource recovery and waste*
18 *management facilities as are required to carry out the purposes and*
19 *intent of this act and to meet the requirements of chapter 403, Florida*
20 *Statutes, and other applicable law.”; and,*

21 the Legislative grant of power on page 8, subparagraph (15) authorizing the Authority to:

22 *“Sell or otherwise dispose of any byproducts produced by the*
23 *operation of resource recovery or waste management facilities to any*

1 *governmental agency, individual, public or private corporation,*
2 *municipality, or any other person.”*

3 **Q. Would you explain the significance of the quoted provisions of the Special Act?**

4 A. Yes. In light of the substantial responsibilities imposed on the Authority to provide a
5 comprehensive, coordinated resource recovery and waste management program for all of
6 Palm Beach County, the Legislature vested the Authority with broad powers and
7 discretion in designing, implementing, maintaining and financially supporting such a
8 program. Importantly, the Special Act makes the Authority the sole determiner of what
9 facilities are required in meeting its waste management and resource recovery
10 obligations, and more importantly, authorizes the Authority to sell the byproducts of its
11 activities - such as electricity – to any person.

12 It is my understanding that these provisions of the Special Act, along with other facts and
13 circumstances applicable to the Authority, establish and define the Authority as a “proper
14 applicant” for a need determination under the Florida Electrical Power Plant Siting Act
15 (PPSA).

16 **Q. Would you please generally describe the Authority’s activities?**

17 A. From its inception in 1975 through the early 1980’s, the Authority primarily focused on
18 organizational matters and planning the integrated solid waste management system. The
19 original Solid Waste Management Plan of the Authority was based on two WTE
20 facilities, to manage the waste generated in the County. The Authority took over
21 operation of all County landfills in 1983, and later implemented other components of the

1 solid waste system as described in the plan. This included the construction of the first
2 WTE facility in 1989, and the construction of new landfills that became commercially
3 operational in 1990.

4
5 The solid waste system currently includes a nominal 62 megawatt WTE facility (the
6 “Existing Facility”), which has generated electricity at the Authority’s Palm Beach
7 County site since 1989. The Existing Facility produces electricity by combustion or
8 incineration of MSW, capturing the heat of combustion in the form of high pressure
9 steam that in turn is converted into electricity by a nominal 62.0 megawatt capacity
10 turbine-generator set.

11
12 The Authority is now in the process of expanding its WTE and electric generating
13 capacity by an additional amount of approximately 123 megawatts that will include
14 electric generation by both MSW and landfill gas (the “Expanded Facility”). The
15 Authority’s decision to undertake the Expanded Facility came after much analysis,
16 evaluation and debate. It is not simply a matter of the Authority wanting to add the
17 addition WTE capacity – it is an absolute necessity that we do so if we are to carry out
18 our mandate to provide solid waste disposal capacity for the County.

19
20 The County’s population, as estimated by the University of Florida Bureau of Economic
21 and Business Research, is roughly 1.3 million people and is projected to grow to 1.8
22 million by 2035. About one-half of the population lives in the unincorporated area of the
23 County, with the other one-half residing in the County’s 38 municipalities which include
24 Palm Beach, West Palm Beach, Boca Raton, Jupiter, Lake Worth and Belle Glade. In

1 Fiscal year 2009, the most recent full year for which data is available, the Authority
2 processed in the range of 1.8 million tons of MSW through its integrated solid waste
3 management system. The Expanded Facility is an essential element of the Authority's
4 plan for managing the increasing amounts of solid waste that will accompany the
5 County's population growth.

6
7 **Q. Does the Authority own the resource recovery, waste management and other**
8 **facilities located at the site?**

9 A. Yes. The Authority owns all of the facilities located at the site – including the Existing
10 Facility - which were financed by Authority-issued revenue bonds. The Authority will
11 similarly finance and own the Expanded Facility. The Authority reserves the right, on a
12 case-by-case basis, to privatize the operation and maintenance of some of its facilities
13 pursuant to long-term contracts – as is the case with the Existing facility and will be the
14 case with the Expanded Facility. However, to be clear, the Authority owns all of the
15 assets and infrastructure associated with its resource recovery, waste management and
16 disposal facilities and operations.

17
18 **Q. Why is the Authority seeking a determination of need from the Commission?**

19 A. The Existing Facility was certified under the PPSA in 1984 for a maximum capacity of
20 75 megawatts. Because the Existing Facility is now and has been operating at its
21 maximum MSW disposal capability for the past several years, considerable quantities of
22 MSW must be land-filled, thus shortening the useful life of the landfill and precluding the
23 most efficient recovery of energy from that waste. The Authority requires additional

1 WTE capability to carry out its MSW processing and disposal obligations. To that end,
2 in 2006 the Authority commenced an expansion of our processing, disposal and recycling
3 infrastructure, including plans for the Expanded Facility. The Expanded Facility, which
4 is a critical component of Authority's integrated waste management responsibilities and
5 operations, will produce a substantial amount of additional renewable electric generating
6 capacity when it begins commercial operation in 2015, as well as significantly extending
7 the life of the existing landfill.

8
9 Because the electrical generating capability of the Expanded Facility will exceed the 75
10 megawatt threshold of the PPSA, as well as the 75 megawatt maximum of the current site
11 certification, the Authority must request certification of the Expanded Facility from the
12 Florida Department of Environmental Protection (DEP). The Authority applied for a
13 modification to site certification on July 13, 2010, requesting the DEP to increase the
14 ultimate permitted electrical generating capacity at the site to 185 gross megawatts
15 maximum – an increase of 110 megawatts over the currently certified 75 megawatts. The
16 PPSA process, as administered by the DEP, requires an affirmation by the Commission
17 of the need for the increased electrical generating capacity of the Expanded Facility.

18
19 **Q. Would you please describe the importance of the WTE process to the Authority's**
20 **MSW disposal obligations?**

21 **A.** The Authority, as the sole entity responsible for MSW disposal in all of Palm Beach
22 County, copes with two basic realities: landfills are a limited and depletable resource;
23 and, increases in MSW landfill disposal deplete them faster. Landfill capacity and

1 landfill life are the driving factor behind our MSW disposal planning and decision
2 making. As Mr. Pellowitz describes in more detail, we perform yearly analyses of our
3 landfills and other operations that helps us identify potentially critical points in time by
4 which affirmative action on the part of the Authority is required. After recycling,
5 vegetation diversion and composting, and other means of reducing the MSW stream, the
6 remaining MSW is disposed of via the volume-reducing WTE facility, with residual ash
7 and any remaining non-recyclable materials disposed of at landfill. The large volume
8 reduction effect of WTE greatly increases scarce landfill life.

9
10 WTE facilities and landfills thus are complementary parts of an integrated system of
11 MSW disposal, each serving a unique and necessary purpose. As Mr. Pellowitz will
12 discuss in his testimony, the Authority's system is designed and operated based on the
13 principles of integrated solid waste management that are consistent with, indeed required
14 by, the policies and goals of the State of Florida and the United States Environmental
15 Protection Agency. WTE reduces the volume of the MSW stream ultimately disposed of
16 at one of the Authority's landfills by approximately 90%. Accordingly, processing MSW
17 by WTE prior to landfilling substantially extends landfill life.

18
19 **Q. Is WTE processing of MSW consistent with Florida's policy regarding resource**
20 **recovery and management?**

21 **A.** Yes. The State of Florida has a long-standing commitment to recovering energy from
22 solid waste. Section 377.709(1), Florida Statutes, contains a specific Legislative
23 declaration in favor of combustion of MSW by WTE facilities to increase the state's

1 supply of electricity. Basically the Florida Legislature declared the combustion of refuse
2 by solid waste facilities to supplement the electricity supply not only represents an
3 effective conservation effort but also represents an environmentally preferred alternative
4 to conventional solid waste disposal in this state.

5
6 Moreover, in the mid-1970's, the Florida Legislature required DEP (then known as the
7 Department of Environmental Regulation, or "DER") to adopt rules for a state resource
8 recovery and management program. The resulting program was developed in 1976, and
9 established a Resource Recovery Council which recommended that 13 of the State's 67
10 counties – including Palm Beach County – submit local resource recovery management
11 programs that would include WTE processing where feasible. Palm Beach County
12 (through the Authority) and other Florida counties subsequently constructed WTE
13 facilities. Currently, WTE facilities are found in 10 Florida counties.

14
15 In addition, the Florida Legislature specifically acknowledged the benefits of energy
16 production from MSW in the Energy, Climate Change and Economic Security Act of
17 2008 (codified as § 403.7032, Florida Statutes), finding that the failure to economically
18 recover energy from solid waste results in unnecessary waste and resource depletion.
19 The statute set an ambitious goal, to be accomplished by 2020, of reducing disposal of
20 recyclable materials by 75% and specifically counts the solid waste used to produce
21 electrical energy toward this recycling goal. In fact, the DEP's "75% Recycling Goal
22 Report to the Legislature" estimates that Florida's WTE facilities could account for a
23 hefty 12% of Florida's total 75% recycling goal.

1 Importantly, the Authority’s planning process for the Expanded Facility has been
2 conducted in a manner that encourages public input on the issues presented and the
3 alternatives considered for MSW processing and disposal in the region. For example, the
4 Authority advertised and held formal public hearings dedicated to MSW disposal on July
5 8, 2009 and June 22, 2010 where the public was invited and encouraged to specifically
6 address issues or concerns. In addition to those dedicated hearing, the Authority’s Board
7 has held numerous noticed public meeting and workshops where the issue was the major
8 focus – including meetings/workshops on Oct. 22, 2008; June 10, 2009; Aug. 26, 2009;
9 Nov. 18, 2009; Jan. 27, 2010; Feb.16, 2010; and May 18, 2010

10
11 **Q. Please provide a brief general description of the Authority’s MSW processing.**

12 **A.** Once at the site, MSW undergoes processing to separate recyclable materials (primarily
13 ferrous metal and aluminum) from non-recyclable materials. The remaining non-
14 recyclable materials are further processed into a material known as refuse-derived fuel,
15 which is fired in steam boilers to produce steam for use in a utility-class steam turbine-
16 generator with a nominal rating of 62 megawatts. The Authority’s Existing Facility
17 generates approximately 400,000 net megawatt-hours of electricity annually from MSW
18 that is delivered to and sold to FPL.

19
20 In addition to WTE, the Authority utilizes many other processes and operations in
21 fulfilling its obligation to provide “integrated” resource management throughout the
22 County. Speaking generally, we have initiated a project to utilize landfill gas as a
23 replacement for natural gas to treat and process wastewater treatment sludge at the site.

1 We also operate other facilities including residential and commercial materials recycling;
2 composting; landfills; ferrous metals processing; woody waste recycling; and, transfer
3 stations. Mr. Pellowitz's direct testimony provides greater detail regarding these
4 functions.

5
6 **Q. Does the Authority need the Expanded Facility in order to meet its MSW processing
7 and disposal obligations?**

8 **A.** Yes, definitely. The Expanded Facility is necessary to maintain the proper balance and
9 diversity of processing and disposal that is inherent in integrated solid waste programs.
10 Without the Expanded Facility, the Authority runs the very real risk of being unable –
11 within a relatively short time - to meet its MSW processing and disposal obligations to
12 the detriment of the Citizens of Palm Beach County and the State as a whole. As Mr.
13 Pellowitz discusses, the Expanded Facility will restore balance to the Authority's solid
14 waste program and in the process substantially increase the useful life span of the
15 Authority's depletable landfill space. The Expanded Facility is a crucial part of a
16 diversified and integrated program for the management of MSW and other solid wastes,
17 and will provide a proven, substantial and reliable supply of much needed renewable
18 energy produced from MSW, or a combination of MSW and landfill gas, thereby
19 displacing significant amounts of electricity that would otherwise be generated by utility
20 generating plants operating on natural gas or other fossil fuels.

21
22 **Q Has the Authority considered alternatives to the Expanded Facility?**

23 **A.** Yes, we have. As I mentioned earlier, the Authority conducts yearly in-depth analyses of
24 our landfills and associated operations that helps us identify potentially critical points in

1 time by which affirmative action on the part of the Authority is required. After recycling,
2 vegetation diversion and composting and other means of reducing the MSW stream, the
3 Authority has determined that the best available option or alternative for addressing
4 MSW processing and disposal deficiencies is to add the Expanded Facility. While Mr.
5 Pellowitz will describe the alternatives considered by the Authority in greater detail, I can
6 state that the Authority considered alternatives to the Expanded Facility including
7 increased recycling, increased landfill disposal, incineration without energy recovery and
8 exporting MSW to third parties. We determined that none of these alternatives were
9 viable, preferable or prudent when compared to the Expanded Facility.
10

11 **Q. Would delay in adding the Expanded Facility result in any adverse consequences?**

12 **A.** Yes, it would. Delaying the Expanded Facility would have significant adverse impacts
13 on the Authority's ability to dispose of MSW, to comply with its legal obligations to
14 dispose of MSW, to add a much-needed source of renewable energy to Florida's electric
15 utility fuel mix, and would deprive the local economy of hundreds of millions of dollars
16 of investment in plant and equipment and the hiring of hundreds of worker to construct
17 and operate the Expanded Facility. The Expanded Facility is a crucial component of the
18 Authority's integrated resource management program that is well planned, cost effective
19 and environmentally beneficial. Without the Expanded Facility, an excessive amount of
20 MSW will be diverted to landfills with negative environmental consequences.
21

22 In addition, the useful life of Authority's landfills will be substantially and unnecessarily
23 reduced to the detriment of the citizens of the County and the environment as a whole.

1 This is significant because solid waste disposal capacity is identified as a component of
2 infrastructure required for concurrency management by the Department of Community
3 Affairs in Rule 9J-5.005(4). If the Authority fails to provide adequate capacity for waste
4 disposal, it negatively impacts the concurrency status and comprehensive plans of all 38
5 municipalities and the county.

6
7 Further, if the Expanded Facility is delayed, the Authority and citizens of Palm Beach
8 County will be forced to site, finance and implement less reliable, less desirable and less
9 environmentally friendly means of MSW processing and disposal in contravention of the
10 State solid waste disposal policy and the specific responsibilities of the Authority. The
11 State and its citizens would be forced to accept the negative consequences of disposing of
12 MSW via landfill where it will consume valuable real estate, will decompose to release
13 methane gas – a significant green house gas – and potentially result in other negative
14 impacts. For example, the citizens within the area covered by the Authority will be
15 unnecessarily burdened with substantial additional collection costs that would otherwise
16 be reduced or mitigated by revenues from the sale or use of electricity produced by the
17 Expanded Facility. Mr. Pellowitz and Mr. Seidman will offer some further testimony on
18 the adverse consequences of delay.

19 **Q. Would you provide the projected major milestone dates including the start up and**
20 **commercial operation of the Expanded Facility?**

21 A. The Authority's current planning schedule is based on the timely achievement of the
22 following major milestones:

- 23 ● FPSC Order Determining Need 1st Quarter 2011

- 1 • Site Certification Issued 2nd Quarter 2011
- 2 • Begin Site Preparation 4th Quarter 2011
- 3 • Begin Facility Construction 2nd Quarter 2012
- 4 • Delivery of T/G 2nd Quarter 2013
- 5 • Mechanical Completion 2nd Quarter 2014
- 6 • Start Up and Testing 3rd Quarter 2014
- 7 • Acceptance Testing 4th Quarter 2014
- 8 • Commercial Operation 1st Quarter 2015

9

10 **Q. Does this conclude your direct testimony?**

11 **A.** Yes it does.