

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

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RAD 22 7
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OPC 24
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1 additional WTE facilities. My responsibilities also include administration of the
2 contracts for all Authority facilities where the operations have been privatized, including
3 recycling facilities and bio-solids processing facilities; maintenance of all Authority
4 facilities; risk management; and the Authority's safety programs.

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

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

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

11 **A.** I provide relevant background information and support the Authority's petition for
12 modification of its prior need determination (the "Petition"). My testimony focuses on
13 the Authority's important obligations and responsibilities as a creation of the Legislature,
14 a political subdivision of Palm Beach County, and as the sole governmental entity
15 empowered to manage, dispose of and recover energy from solid waste in Palm Beach
16 County. Further, I describe the importance of the Authority's request for a determination
17 of need for the addition of approximately 105 megawatts of electric generation fueled by
18 municipal solid waste (the "Expanded Facility"). I also describe Authority operations,
19 programs and ongoing activities including expansion of electrical generating capacity at
20 our Palm Beach County site, more details of which are provided by Mr. Pellowitz.

21
22 **Q. Would you please describe the Authority and its purposes?**

23 **A.** The Authority is a local governmental entity that is a political subdivision of Palm Beach
24 County. More specifically, the Authority is a dependent special district created by the
25 Florida Legislature in 1975 by the Palm Beach County Solid Waste Act (the "Special

1 Act”). The Special Act was amended several times over the years, and was codified by
2 the Legislature in 2001 as Chapter 2001-331, Laws of Florida. A copy of the Special Act
3 is attached as Appendix A to the Petition.

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

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

17 and

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

22
23 The term “resource recovery”, as used in the Special Act and in general use through the
24 1970’s and 1980’s, was replaced by the term “waste-to-energy” in the 1990’s, and today is

1 encompassed by the broader term “renewable energy”. When applied in the context of
2 MSW, these three terms all mean the same thing – the recovery from MSW of usable
3 byproducts including materials such as metals for their useful physical properties; and,
4 energy from the useful chemical properties.

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

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

12 A. Yes. The Special Act is quite broad, vesting the Authority with a wide range of both
13 powers and responsibilities. However, in Section 6 of the Special Act, the Legislature
14 vested the Authority with certain powers that I understand to be somewhat unique and of
15 which the Commission should be aware. I am referring to the Legislative grant of power
16 on page 9, subparagraph (8) authorizing the Authority to:

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

22 and the Legislative grant of power on page 15, subparagraph (15) authorizing the
23 Authority to:

1 *“Sell or otherwise dispose of any byproducts produced by the*
2 *operation of resource recovery or waste management facilities to any*
3 *governmental agency, individual, public or private corporation,*
4 *municipality, or any other person.”*

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

6 A. Yes. In light of the substantial responsibilities imposed on the Authority to provide a
7 comprehensive, coordinated resource recovery and waste management program for all of
8 Palm Beach County, the Legislature vested the Authority with broad powers and
9 discretion in designing, implementing, maintaining and financially supporting such a
10 program. Importantly, the Special Act makes the Authority the sole determiner of what
11 facilities are required in meeting its waste management and resource recovery
12 obligations, and more importantly, authorizes the Authority to sell the byproducts of its
13 activities to any person. However, as stated in the Petition, the Authority is currently
14 negotiating with Florida Power & Light Company (“FPL”) for the sale and purchase of
15 the net electrical output of the Expanded Facility. It is my understanding that these
16 provisions of the Special Act, along with other facts and circumstances applicable to the
17 Authority, establish and define the Authority as a “proper applicant” for a need
18 determination under the Florida Electrical Power Plant Siting Act (PPSA).

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

20 A. From its inception in 1975 through the early 1980’s, the Authority primarily focused on
21 organizational matters and planning the integrated solid waste management system. The
22 original Solid Waste Management Plan of the Authority was based on two WTE
23 facilities, to manage the waste generated in the County. The Authority took over

1 operation of all County landfills in 1983, and later implemented other components of the
2 solid waste system as described in the plan. This included the construction of the first
3 WTE facility in 1989, and the construction of new landfills that became commercially
4 operational in 1990.

5
6 The solid waste system currently includes a nominal 63 megawatt WTE facility (the
7 “Existing Facility”), which has generated electricity at the Authority’s Palm Beach
8 County site since 1989. The Existing Facility produces electricity by combustion or
9 incineration of MSW, capturing the heat of combustion in the form of high pressure
10 steam that in turn is converted into electricity by a nominal 63 megawatt capacity turbine-
11 generator set the net electrical output of which is sold to FPL as firm energy and capacity
12 pursuant to a long-term agreement.

13
14 The Authority is now in the process of expanding its WTE and electric generating
15 capacity by an additional amount of approximately 105 megawatts of electric generation
16 by MSW through the Expanded Facility. The Authority and FPL are currently engaged
17 in negotiations for the sale and purchase of the net electrical output of the Expanded
18 Facility at a price no greater than avoided cost. The parties hope to finalize an agreement
19 in January, 2011, which would then be submitted to the Commission. The Authority’s
20 decision to undertake the Expanded Facility came after much analysis, evaluation and
21 debate. It is not simply a matter of the Authority wanting to add the addition WTE
22 capacity – it is an absolute necessity that we do so if we are to carry out our mandate to
23 provide solid waste disposal capacity for the County.

24

1 The County's population, as estimated by the University of Florida Bureau of Economic
2 and Business Research, is roughly 1.3 million people and is projected to grow to 1.8
3 million by 2035. About one-half of the population lives in the unincorporated area of the
4 County, with the other one-half residing in the County's 38 municipalities which include
5 Palm Beach, West Palm Beach, Boca Raton, Jupiter, Lake Worth and Belle Glade. In
6 fiscal year 2009, the most recent full year for which data is available, the Authority
7 processed in the range of 1.8 million tons of MSW through its integrated solid waste
8 management system. The Expanded Facility is an essential element of the Authority's
9 plan for managing the increasing amounts of solid waste that will accompany the
10 County's population growth.

11
12 **Q. Does the Authority own the resource recovery, waste management and other**
13 **facilities located at the site?**

14 **A.** Yes. The Authority owns all of the facilities located at the site – including the Existing
15 Facility – which were financed by Authority-issued revenue bonds. The Authority will
16 similarly finance and own the Expanded Facility. The Authority is in the process of
17 securing financing for the project by issuing roughly \$775 million dollars in debt in the
18 next few weeks or months. The Authority reserves the right, on a case-by-case basis, to
19 privatize the operation and maintenance of some of its facilities pursuant to long-term
20 contracts, as is the case with the Existing facility and will be the case with the Expanded
21 Facility. However, to be clear, the Authority owns all of the assets and infrastructure
22 associated with its resource recovery, waste management and disposal facilities and
23 operations.

24

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

2 **A.** The Existing Facility was certified under the PPSA in 1984 for a maximum capacity of
3 75 megawatts. Because the Existing Facility is now and has been operating at its
4 maximum MSW disposal capability for the past several years, considerable quantities of
5 MSW must be landfilled, thus shortening the useful life of the landfill and precluding the
6 most efficient recovery of energy from that waste. The Authority requires additional
7 WTE capability to carry out its MSW processing and disposal obligations. To that end,
8 in 2006 the Authority commenced an expansion of our processing, disposal and recycling
9 infrastructure, including plans for the Expanded Facility. The Expanded Facility, which
10 is a critical component of Authority's integrated waste management responsibilities and
11 operations, will produce a substantial amount of additional renewable electric generating
12 capacity when it begins commercial operation in 2015, as well as significantly extending
13 the life of the existing landfill.

14
15 Because the electrical generating capability of the Expanded Facility will exceed the 75
16 megawatt threshold of the PPSA, as well as the 75 megawatt maximum of the current site
17 certification, the Authority must request certification of the Expanded Facility from the
18 Florida Department of Environmental Protection (DEP). The Authority applied for a
19 modification to site certification on July 13, 2010, requesting the DEP to increase the
20 ultimate permitted electrical generating capacity at the site to 185 gross megawatts
21 maximum – an increase of 110 megawatts over the currently certified 75 megawatts. The
22 PPSA process, as administered by the DEP, requires an affirmation by the Commission
23 of the need for the increased electrical generating capacity of the Expanded Facility. As
24 noted in the Petition, the Authority has recently determined that at this juncture the

1 appropriate number for permitted electrical generating capacity at the site should be 168
2 gross megawatts rather than 185 megawatts. DEP has been advised of a reduction in
3 generating capacity by the Authority.

4
5 **Q. Would you please describe the importance of the WTE process to the Authority's**
6 **MSW disposal obligations?**

7 **A.** The Authority, as the sole entity responsible for MSW disposal in all of Palm Beach
8 County, copes with two basic realities: landfills are a limited and depletable resource, and
9 increases in MSW landfill disposal deplete them faster. Landfill capacity and landfill life
10 are the driving factor behind our MSW disposal planning and decision making. As Mr.
11 Pellowitz describes in more detail, we perform yearly analyses of our landfills and other
12 operations that helps us identify potentially critical points in time by which affirmative
13 action on the part of the Authority is required. After recycling, vegetation diversion and
14 composting, and other means of reducing the MSW stream, the remaining MSW is
15 disposed of via the volume-reducing WTE facility, with residual ash and any remaining
16 non-recyclable materials disposed of at landfill. The large volume reduction effect of
17 WTE greatly increases scarce landfill life.

18
19 WTE facilities and landfills thus are complementary parts of an integrated system of
20 MSW disposal, each serving a unique and necessary purpose. As Mr. Pellowitz will
21 discuss in his testimony, the Authority's system is designed and operated based on the
22 principles of integrated solid waste management that are consistent with, indeed required
23 by, the policies and goals of the State of Florida and the United States Environmental
24 Protection Agency. WTE reduces the volume of the MSW stream ultimately disposed of

1 at one of the Authority's landfills by approximately 90%. Accordingly, processing MSW
2 by WTE prior to landfilling substantially extends landfill life.

3
4 **Q. Is WTE processing of MSW consistent with Florida's policy regarding resource**
5 **recovery and management?**

6 **A.** Yes. The State of Florida has a long-standing commitment to recovering energy from
7 solid waste. Section 377.709(1), Florida Statutes, contains a specific Legislative
8 declaration in favor of combustion of MSW by WTE facilities to increase the state's
9 supply of electricity. Basically the Florida Legislature declared the combustion of refuse
10 by solid waste facilities to supplement the electricity supply not only represents an
11 effective conservation effort but also represents an environmentally preferred alternative
12 to conventional solid waste disposal in this state.

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

22
23 In addition, the Florida Legislature specifically acknowledged the benefits of energy
24 production from MSW in the Energy, Climate Change and Economic Security Act of

1 2008 (codified as § 403.7032, Florida Statutes), finding that the failure to economically
2 recover energy from solid waste results in unnecessary waste and resource depletion.
3 The statute set an ambitious goal, to be accomplished by 2020, of reducing disposal of
4 recyclable materials by 75% and specifically counts the solid waste used to produce
5 electrical energy toward this recycling goal. In fact, the DEP's "75% Recycling Goal
6 Report to the Legislature" estimates that Florida's WTE facilities could account for a
7 hefty 12% of Florida's total 75% recycling goal.

8
9 Importantly, the Authority's planning process for the Expanded Facility has been
10 conducted in a manner that encourages public input on the issues presented and the
11 alternatives considered for MSW processing and disposal in the region. For example, the
12 Authority advertised and held formal public hearings dedicated to MSW disposal on July
13 8, 2009 and June 22, 2010 where the public was invited and encouraged to specifically
14 address issues or concerns. In addition to those dedicated hearings, the Authority's
15 Board has held numerous noticed public meeting and workshops where the issue was the
16 major focus – including meetings/workshops on October 22, 2008; June 10, 2009; August
17 26, 2009; November 18, 2009; January 27, 2010; February 16, 2010; and May 18, 2010.

18
19 **Q. Please provide a brief general description of the Authority's MSW processing.**

20 **A.** Once at the site, MSW undergoes processing to separate recyclable materials (primarily
21 ferrous metal and aluminum) from non-recyclable materials. The remaining non-
22 recyclable materials are further processed into a material known as refuse-derived fuel,
23 which is fired in steam boilers to produce steam for use in a utility-class steam turbine-
24 generator with a nominal rating of 63 megawatts. The Authority's Existing Facility

1 generates approximately 400,000 net megawatt-hours of electricity annually from MSW
2 that is delivered to and sold to FPL.

3
4 In addition to WTE, the Authority utilizes many other processes and operations in
5 fulfilling its obligation to provide “integrated” resource management throughout the
6 County. Speaking generally, we have initiated a project to utilize landfill gas as a
7 replacement for natural gas to treat and process wastewater treatment sludge at the site.
8 We also operate other facilities including residential and commercial materials recycling,
9 composting, landfills, ferrous metals processing, woody waste recycling, and transfer
10 stations. Mr. Pellowitz’s direct testimony provides greater detail regarding these
11 functions.

12
13 **Q. Does the Authority need the Expanded Facility in order to meet its MSW processing
14 and disposal obligations?**

15 **A.** Yes, definitely. The Expanded Facility is necessary to maintain the proper balance and
16 diversity of processing and disposal that is inherent in integrated solid waste programs.
17 Without the Expanded Facility, the Authority runs the very real risk of being unable –
18 within a relatively short time – to meet its MSW processing and disposal obligations to
19 the detriment of the Citizens of Palm Beach County and the State as a whole. As Mr.
20 Pellowitz discusses, the Expanded Facility will restore balance to the Authority’s solid
21 waste program and in the process substantially increase the useful life span of the
22 Authority’s depletable landfill space. The Expanded Facility is a crucial part of a
23 diversified and integrated program for the management of MSW and other solid wastes,
24 and will provide a proven, substantial and reliable supply of much-needed renewable

1 energy produced from MSW, thereby displacing significant amounts of electricity that
2 would otherwise be generated by utility generating plants operating on natural gas or
3 other fossil fuels.

4
5 **Q Has the Authority considered alternatives to the Expanded Facility?**

6 **A.** Yes, we have. As I mentioned earlier, the Authority conducts yearly in-depth analyses of
7 our landfills and associated operations that helps us identify potentially critical points in
8 time by which affirmative action on the part of the Authority is required. After recycling,
9 vegetation diversion and composting and other means of reducing the MSW stream, the
10 Authority has determined that the best available option or alternative for addressing
11 MSW processing and disposal deficiencies is to add the Expanded Facility. While Mr.
12 Pellowitz will describe the alternatives considered by the Authority in greater detail, I can
13 state that the Authority considered alternatives to the Expanded Facility including
14 increased recycling, increased landfill disposal, incineration without energy recovery and
15 exporting MSW to third parties. We determined that none of these alternatives were
16 viable, preferable, prudent or in the best interest of the citizens of the County when
17 compared to the Expanded Facility.

18
19 **Q. Would delay in adding the Expanded Facility result in any adverse consequences?**

20 **A.** Yes, it would. Delaying the Expanded Facility would have significant adverse impacts
21 on the Authority's ability to dispose of MSW, to comply with its legal obligations to
22 dispose of MSW, to add a much-needed source of renewable energy to Florida's electric
23 utility fuel mix, and would deprive the local economy of hundreds of millions of dollars
24 of investment in plant and equipment and the hiring of hundreds of worker to construct

1 and operate the Expanded Facility. The Expanded Facility is a crucial component of the
2 Authority's integrated resource management program that is well planned, cost effective
3 and environmentally beneficial. Without the Expanded Facility, an excessive amount of
4 MSW will be diverted to landfills with negative environmental and cost consequences.

5
6 In addition, the useful life of Authority's landfills will be substantially and unnecessarily
7 reduced to the detriment of the citizens of the County and the environment as a whole.
8 This is significant because solid waste disposal capacity is identified as a component of
9 infrastructure required for concurrency management by the Department of Community
10 Affairs in Rule 9J-5.005(4). If the Authority fails to provide adequate capacity for waste
11 disposal, it negatively impacts the concurrency status and comprehensive plans of all 38
12 municipalities and the county.

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

1 Expanded Facility. Mr. Pellowitz and Mr. Hartman will offer some further testimony on
2 the adverse consequences of delay.

3
4 **Q. Would you provide the projected major milestone dates including the start up and**
5 **commercial operation of the Expanded Facility?**

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

- 8 • FPSC Order Determining Need April 30th, 2011
- 9 • Site Certification Issued 3rd Quarter 2011
- 10 • Begin Site Preparation 1st Quarter 2012
- 11 • Begin Facility Construction 3rd Quarter 2012
- 12 • Delivery of Turbine Generator 3rd Quarter 2013
- 13 • Mechanical Completion 3rd Quarter 2014
- 14 • Start Up and Testing 4th Quarter 2014
- 15 • Acceptance Testing 2nd Quarter 2015
- 16 • Commercial Operation 4th Quarter 2015

17
18 **Q. Does this conclude your direct testimony?**

19 A. Yes it does.