

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Appropriations Subcommittee on Agriculture, Environment, and General Government

BILL: SB 1764

INTRODUCER: Senator Albritton

SUBJECT: Municipal Solid Waste-to-Energy Program

DATE: February 15, 2022 REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	<u>Sharon</u>	<u>Imhof</u>	<u>RI</u>	<u>Favorable</u>
2.	<u>Blizzard</u>	<u>Betta</u>	<u>AEG</u>	<u>Pre-meeting</u>
3.	_____	_____	<u>AP</u>	_____

I. Summary:

SB 1764, creates section 377.814, Florida Statutes, to establish the Municipal Solid Waste-to-Energy Program, within the Department of Agriculture and Consumer Services (DACS), comprised of a financial assistance grant program and an incentive grant program.

The stated purpose of the program is to provide financial assistance grants and incentive grants to municipal solid waste-to-energy (MSWE) facilities in order to incentivize the production and sale of energy and reduce waste disposed of in landfills.

The bill appropriates \$100 million in recurring funds from the General Revenue Fund to the DACS for the 2022-2023 fiscal year. The DACS will incur additional workload associated with the administration of the program. See Section V. Fiscal Impact Statement.

The bill is effective July 1, 2022.

II. Present Situation:

Municipal Solid Waste-to-Energy

Energy recovery from waste is the conversion of non-recyclable waste materials into usable heat, electricity, or fuel through processes, including combustion, gasification, pyrolyzation, anaerobic digestion and landfill gas recovery.¹ This process is often called waste-to-energy (WTE).

¹ U.S. Environmental Protection Agency (EPA), *Energy Recovery from the Combustion of Municipal Solid Waste (MSW)*, <https://www.epa.gov/smm/energy-recovery-combustion-municipal-solid-waste-msw> (last visited Jan 24, 2022).

Municipal solid waste (MSW), simply garbage or trash, can be used to produce energy at WTE plants and landfills.² WTE plants burn MSW to produce steam in a boiler and generate electricity.³ MSW can contain:

- Biomass, or biogenic (plant or animal products) materials such as paper, cardboard, food waste, grass clippings, leaves, wood, and leather products;
- Nonbiomass combustible materials such as plastics and other synthetic materials made from petroleum; and
- Noncombustible materials such as glass and metals.⁴

In 2018, about 12 percent of the 292 million tons of MSW produced in the United States was burned in WTE plants.⁵ The remaining MSW was managed as follows:

- 50 percent was landfilled;
- 23.6 percent was recycled;
- 8.5 percent was composted; and
- 6.1 percent is listed as “other.”⁶

MSW is usually burned at WTE plants, using heat to make steam for generating electricity.⁷ In 2020, 65 United States power plants generated around 13.5 billion kilowatt-hours of electricity from 25 million tons of MSW.⁸

In addition to producing electricity, WTE is a waste management option, reducing the amount of material otherwise buried in landfills by about 87 percent.⁹ A WTE plant can reduce 2,000 pounds of MSW down to around 300 to 600 pounds of ash.¹⁰

Energy recovery from waste is important in the development of sustainable energy policies and is encouraged by the United States Environmental Protection Agency.¹¹ Recognized as a renewable energy source, WTE facilities produce relatively clean, renewable energy through the combustion of municipal solid waste in specially designed power plants equipped with pollution control equipment to clean emissions.

Municipal Solid Waste-to-Energy in Florida

For over 30 years, WTE has been an integral component of Florida’s solid waste management program.¹² In the 1993 revisions to the 1988 Solid Waste Management Act, the Legislature

² U.S. Energy Information Administration (EIA), *Biomass explained, Waste-to-energy (Municipal Solid Waste), Basics*, <https://www.eia.gov/energyexplained/biomass/waste-to-energy.php> (last visited Jan. 24, 2022).

³ U.S. EIA, *Biomass explained, Waste-to-energy (Municipal Solid Waste), In Depth, How waste-to-energy plants work*, <https://www.eia.gov/energyexplained/biomass/waste-to-energy-in-depth.php> (last visited Jan. 24, 2022).

⁴ U.S. EIA, *supra* note 2.

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.*

¹¹ U.S. EPA, *supra* note 1.

¹² *See* s. 403.7061(1), F.S.

recognized the need to use an integrated approach to municipal solid waste management by using waste reduction, recycling, WTE facilities, and landfills.¹³

Section 403.7061, F.S., relating to the requirements for review of new WTE facility capacity by the Department of Environmental Protection (DEP), defines the term “waste-to-energy facility” as:

[A] facility that uses an enclosed device using controlled combustion to thermally break down solid, liquid, or gaseous combustible solid waste to an ash residue that contains little or no combustible material and that produces electricity, steam, or other energy as a result. The term does not include facilities that primarily burn fuels other than solid waste even if such facilities also burn some solid waste as a fuel supplement. The term also does not include facilities that burn vegetative, agricultural, or silvicultural wastes, bagasse, clean dry wood, methane or other landfill gas, wood fuel derived from construction or demolition debris, or waste tires, alone or in combination with fossil fuels.

Florida has the largest MSW burn capacity in the country.¹⁴ The state went from having one small WTE plant in 1982 to having 12 operating facilities.¹⁵ The following counties have at least one facility:

- Bay;
- Broward;
- Miami-Dade;
- Hillsborough;
- Lake;
- Palm Beach;
- Pasco; and
- Pinellas.¹⁶

These counties are among Florida’s most populous, accounting for 48 percent of Florida’s population.¹⁷

Florida Public Service Commission

The Florida Public Service Commission (PSC) is an arm of the legislative branch of government.¹⁸ The role of the PSC is to ensure that Florida’s consumers receive utility services, including electric, natural gas, telephone, water, and wastewater, in a safe, reasonable, and

¹³ *Id.*

¹⁴ Florida Department of Environmental Protection (DEP), *Waste-to-Energy*, <https://floridadep.gov/waste/permitting-compliance-assistance/content/waste-energy> (last visited Jan. 24, 2022).

¹⁵ *Id.*

¹⁶ DEP, *Florida Waste-to-Energy Facilities*, https://floridadep.gov/sites/default/files/WTE_Contacts-2016.pdf (last visited Jan. 24, 2022).

¹⁷ Florida Waste-to-Energy Coalition, *Fact Sheet*, (on file with the Senate Committee on Regulated Industries).

¹⁸ Section 350.001, F.S.

reliable manner.¹⁹ In order to do so, the PSC exercises authority over public utilities in one or more of the following areas: (1) Rate or economic regulation; (2) Market competition oversight; and/or (3) Monitoring of safety, reliability, and service issues.²⁰

Public Utilities

A public utility includes any person or legal entity supplying electricity or gas, including natural, manufactured, or similar gaseous substance, to or for the public within the state.²¹ The term does not include municipal electric utilities and rural electric cooperatives.²² Therefore, the PSC does not regulate the rates of publicly owned municipal or cooperative electric utilities.²³

There are five investor-owned electric utility companies (IOU) in Florida: Florida Power & Light Company (FPL), Duke Energy Florida (Duke), Tampa Electric Company (TECO), Gulf Power Company (Gulf), and Florida Public Utilities Corporation.²⁴ IOU rates and revenues are regulated by the PSC.²⁵ These utilities must file periodic earnings reports, which allow the PSC to monitor earnings levels on an ongoing basis and adjust customer rates quickly if a company appears to be overearning.²⁶

Public Utility Regulatory Policies Act

In 1978, the federal government enacted the Public Utility Regulatory Policies Act (PURPA),²⁷ which required promotion of energy efficiency and use of renewables. The PURPA requires utilities to purchase power, at the utility's full avoided cost, from "qualifying facilities," (QF)²⁸ which fall into two categories: qualifying small power production facilities and qualifying cogeneration facilities.²⁹ The PURPA directed the Federal Energy Regulatory Commission to implement the provisions, which in turn directed the states to implement the provisions. In response, the Florida Legislature created s. 366.051, F.S.,³⁰ directing utilities to purchase power from cogenerators or small power producers.³¹

Full Avoided Costs

A utility's full avoided cost is the incremental costs of electric energy or capacity, which, but for the purchase from cogenerators or small power producers, the utility would have to generate

¹⁹ See Florida Public Service Commission (PSC), *The PSC's Role*, <http://www.psc.state.fl.us> (last visited Jan. 24, 2022).

²⁰ *Id.*

²¹ Section 366.02(1), F.S.

²² *Id.*

²³ See PSC, *Florida PSC 2020 Annual Report*, p. 13,

<http://www.psc.state.fl.us/Files/PDF/Publications/Reports/General/Annualreports/2020.pdf> (last visited Jan. 24, 2022).

²⁴ *Id.* Florida Power & Light (FPL) acquired Gulf Power (Gulf) in 2019 and merged as of January 3, 2022.

²⁵ Florida Department of Agriculture and Consumer Services, *Electric Utilities*, <https://www.fdacs.gov/Energy/Florida-Energy-Clearinghouse/Electric-Utilities> (last visited Jan. 24, 2022).

²⁶ PSC, *supra* note 23, at p. 6.

²⁷ 16 U.S.C. s. 2601 et seq.

²⁸ Federal Energy Regulatory Commission, *PURPA Qualifying Facilities*, <https://www.ferc.gov/qf> (last visited Jan. 24, 2022).

²⁹ *Id.*

³⁰ Chapter 89-292, s. 4, Laws of Fla.

³¹ Rule 25-17.082 of the Florida Administrative Code, is the PSC's rule on the utility's obligation to purchase.

itself or purchase from another source.³² Traditionally, the PSC has approved electric utility power purchase contracts that include provisions for payment, capacity, and energy based upon either the utility's cost to construct and operate its next planned generating unit or the cost of purchasing capacity and energy from generating units owned by other utilities in the interchange market.³³

Power Purchase Agreements

Standard Offer Contract

IOUs must annually establish and file with the PSC a standard offer contract³⁴ with terms, conditions, and payments based on projected costs for each fossil-fueled generating unit type identified in the IOU's 10-year site plan.³⁵ Payment terms and conditions for QFs are based on the projected cost to construct and operate the IOU's next planned generation unit.³⁶ Essentially, the next planned unit becomes an avoided unit and the basis for the avoided costs.

Negotiated Contracts

The standard offer contract provides a basis for developing negotiated contracts.³⁷ Rule 25-17.240 of the Florida Administrative Code encourages IOUs and generating facilities to negotiate contracts for firm capacity and energy to provide fuel diversity, fuel price stability, and energy security.

The PSC addresses petitions by IOUs for approval of cost recovery of negotiated contracts between the IOU and the QFs.³⁸ The PSC's review considers various matters including whether the contract is at or below the IOU's avoided cost and will be considered prudent if it can be reasonably expected to defer or avoid an additional generation unit.³⁹

As-available contract

"As-available" (AA) energy contracts are an option for QFs, including municipal solid waste-to-energy (MSWE) facilities.⁴⁰ These contracts are not subject to the PSC's approval but must be

³² Section 366.051, F.S.

³³ PSC, *States' Electric Restructuring Activities Update: Wholesale Sales*

<http://www.psc.state.fl.us/Publications/ElectricRestructuringDetails#4> (last visited Jan. 24, 2022).

³⁴ The following are the most recent PSC orders approving the standard offer contracts for the following investor owned electric utility companies (IOUs): FPL: <http://www.floridapsc.com/library/filings/2021/07682-2021/07682-2021.pdf>; Duke Energy Florida (Duke): <http://www.floridapsc.com/library/filings/2021/08111-2021/08111-2021.pdf>; Tampa Electric Company (TECO): <http://www.floridapsc.com/library/filings/2021/08419-2021/08419-2021.pdf>; and Gulf: <http://www.floridapsc.com/library/filings/2021/07681-2021/07681-2021.pdf> (last visited Jan. 24, 2022).

³⁵ Fla. Admin. Code R. 25-17.250. Each electric utility must submit a 10-year site plan to the PSC, estimating the utility's power generating needs and general locations for proposed power plant sites over a 10-year planning horizon.

Section 186.801, F.S.; PSC, *Review of The 2021 Ten-Year Site Plan of Florida's Electric Utilities*, p. 9, <http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2021/Review.pdf> (last visited Jan. 24, 2022).

³⁶ See PSC, *2022 Legislative Bill Analysis for SB 1764*, p. 1 (Jan. 20, 2022) (on file with the Senate Committee on Regulated Industries).

³⁷ *Id.*

³⁸ *Id.*

³⁹ Fla. Admin. Code R. 25-17.240; PSC, *supra* note 36, at p. 2.

⁴⁰ PSC, *supra* note 36, at p. 1.

filed with the PSC within ten working days of being signed.⁴¹ As-available energy is energy produced and sold on an hour-by-hour basis for which contractual commitments regarding the quantity and time of delivery are not required.⁴² As-available energy is purchased at a rate equal to the utility's hourly incremental system fuel cost, which reflects the highest fuel cost of generation each hour.⁴³

According to the PSC, the following four facilities receive as-available energy cost payments from FPL:

- Broward County Resource Recovery – South AA QF;
- Brevard County;
- Miami Dade Resource Recovery; and
- Lee County Solid Waste.

Firm Capacity Payments

If a QF can meet certain contractual provisions as to the quantity, time, and electricity delivery reliability, it is eligible for both capacity payments and energy payments under a firm contract.⁴⁴ Capacity is the maximum electric output, in megawatts, that an electricity generator can produce under ideal conditions.⁴⁵

To promote alternative and renewable energy generation, the PSC requires IOUs to offer multiple capacity payment options, including early payments or levelized payments.⁴⁶ The different payment options allow QFs flexibility to best meet their financial needs.⁴⁷ If an early capacity payment option is selected, then the QF will begin receiving capacity payments earlier than the in-service date of the avoided unit and payments will generally be lower in the later years of the contract.⁴⁸

According to the PSC, the following six facilities are operating under active firm contracts with their host IOU:

- Pinellas County Resource Recovery, with Duke, ending December 2024;
- Pasco County Resource Recovery, with Duke, ending December 2024;
- Broward County Resource Recovery – South QF, with FPL, ending December 2026;
- Palm Beach County Solid Waste Authority 1, with FPL, ending March 2034;
- Palm Beach County Solid Waste Authority 2, with FPL, ending March 2034; and
- Bay County/Engen LLC, with FPL/Gulf, ending July 2023.⁴⁹

⁴¹ Fla. Admin. Code R. 25-17.0825(1)(b); PSC, *supra* note 36, at p. 2.

⁴² Fla. Admin. Code R. 25-17.0825.

⁴³ Fla. Admin. Code R. 25-17.0825(2)(a); PSC, *supra* note 36, at p. 2.

⁴⁴ Fla. Admin. Code R. 25-17.0832(1); PSC, *supra* note 36, at p. 1.

⁴⁵ See U.S. EIA, *What is the difference between electricity generation capacity and electricity generation?*, <https://www.eia.gov/tools/faqs/faq.php?id=101&t=3> (last visited Jan. 24, 2022).

⁴⁶ PSC, *supra* note 36, at p. 1.

⁴⁷ *Id.*

⁴⁸ See Notice of Proposed Agency Action Order Approving Revised Standard Offer Contract, p. 2, <http://www.floridapsc.com/library/filings/2021/07682-2021/07682-2021.pdf> (last visited Jan. 24, 2022).

⁴⁹ PSC, *supra* n. 36, p. 2.

Commercial Retail Rate

Commercial retail rates vary across utilities. Each IOU has various rate levels pursuant to tariffs approved by the PSC. The retail rate depends on the kilowatt demand that a commercial customer places on an IOU’s system. Demand provides an indication of the customer’s load size. Demand is based on the highest usage over a specified time interval. Demand is intended to allow a utility to recover the fixed cost of maintaining its facilities, including generation, transmission, and distribution, which must be able to meet a customer’s highest electricity needs.⁵⁰

The following table, published in the PSC’s Comparative Rate Statistics,⁵¹ reflects the commercial retail rates among the IOUs, as of December 31, 2020, and how rates change for specific commercial customers based on demand, which is measured in kilowatts, and actual energy used, which is measured in kilowatt hours.⁵²

Investor-Owned Electric Utilities
Typical Electric Bill Comparisons * - Commercial / Industrial
 December 31, 2020

Utility	KW Demand						
		75	150	500	1,000	2,000	
	KWH						
	750	1,500	15,000	45,000	150,000	400,000	800,000
Florida Power & Light Company	\$76	\$142	\$1,553	\$3,766	\$13,025	\$30,077	\$59,498
Duke Energy Florida, LLC	\$106	\$199	\$1,847	\$4,692	\$15,606	\$37,938	\$75,862
Tampa Electric Company	\$83	\$148	\$1,588	\$3,816	\$12,650	\$29,740	\$59,450
Gulf Power Company	\$116	\$207	\$1,747	\$4,618	\$15,267	\$36,172	\$72,081
Florida Public Utilities Company							
Northwest	\$108	\$187	\$1,611	\$4,326	\$14,501	\$36,241	\$72,323
Northeast	\$108	\$187	\$1,611	\$4,326	\$14,501	\$36,241	\$72,323

* Excludes local taxes, franchise fees, and gross receipts taxes that are billed as a separate line item. Includes cost recovery clause factors effective December 2020.

III. Effect of Proposed Changes:

The bill provides a preamble stating:

- It is in the public interest to promote the development of renewable energy resources in Florida, under s. 366.91, F.S.;
- Municipal solid waste-to-energy (MSWE) facilities using biomass as fuel or an energy source are deemed to be producing renewable energy, under s. 366.91, F.S.;
- MSWE facilities provide a practical and sustainable solution to reducing landfill waste, reducing volume by about 87 percent;

⁵⁰ *Id.*

⁵¹ PSC, *Comparative Rate Statistics*, Dec. 31, 2020, A-4, <http://www.floridapsc.com/Files/PDF/Publications/Reports/General/Comparative/December%2031,%202020.pdf> (last visited Jan 24, 2022).

⁵² See PSC, *supra* note 36, at p. 3. Although Gulf merged with FPL, the retail rates for the Florida panhandle service area were not consolidated with FPL’s peninsula service area until 2022.

- The Legislature recognizes the benefits that MSWE facilities contribute to Florida and its local communities; and
- The Legislature intends to incentivize the production and sale of energy from MSWE facilities through grant programs.

Section 1 creates s. 377.814, F.S., establishing the MSWE Program, within the Department of Agriculture and Consumer Services (DACS), comprised of a financial assistance grant program and an incentive grant program.

The stated purpose of the program is to provide financial assistance grants and incentive grants to MSWE facilities in order to incentivize the production and sale of energy and reduce waste disposed of in landfills.

The bill defines the following terms as follows:

- “Department” to mean the DACS.
- “Municipal solid waste-to-energy facility” to mean publicly owned or government affiliate-owned facilities using an enclosed device with controlled combustion to thermally break down solid waste to an ash residue containing little or no combustible material, producing electricity, steam, or other energy. It does not include facilities primarily burning fuels other than solid waste; nor facilities primarily burning vegetative, agricultural, or silvicultural wastes, bagasse, clean dry wood, methane or other landfill gas, wood fuel derived from construction or demolition debris, or waste tires, alone or in combination with fossil fuels.

The Financial Assistance Grant will provide MSWE facilities funding at a rate of two cents per kilowatt-hour of electricity purchased by an electric utility during the preceding state fiscal year, not to exceed the difference between the electric utility’s avoided cost and the commercial retail rate. If funds are insufficient to cover every qualifying kilowatt-hour from all qualifying applicants, the DACS must prorate the available funds on an equitable basis, taking into consideration the commercial retail rate within the applicable service territory.

To qualify, the facility must have previously entered into a power purchase agreement with an electric utility that included capacity payments which the facility will no longer receive under the agreement. The facility owner must submit an application to the DACS, including the MSWE facility’s name and the amount of energy purchased from the facility by an electric utility during the preceding state fiscal year.

The bill requires the DACS to establish a process in coordination with the Public Service Commission (PSC) to verify eligibility and the amount of energy purchased from the facility.

The incentive grant will provide facilities with matching funds on a dollar-for-dollar basis to assist with planning and design for constructing, upgrading, or expanding MSWE facilities, including necessary legal or administrative expenses.

To qualify, the facility owner must apply to the DACS and demonstrate that the project is cost-effective, permissible, and implementable and complies with s. 403.7061, F.S., which establishes the requirements for review of new waste-to-energy (WTE) facility capacity by the Department of Environmental Protection (DEP).

The bill requires the DEP to assist the DACS with determining eligibility and with establishing requirements to ensure long-term and efficient operation and maintenance of such facilities.

The DACS must perform adequate overview of applications and awards, including technical review, regular inspections, disbursement approvals, and auditing. If the DACS determines that program requirements are not being met, the bill requires termination or repayment of incentive grant funds.

The bill requires appropriated funds to be used first for financial assistance grants and then remaining funds may be used for incentive grants.

The bill requires the DACS to adopt rules to implement and administer the program. The rules must:

- Establish an application processes for both grant types;
- Include application deadlines; and
- Establish supporting documentation to be provided to the DACS.

Rules for the financial assistance grant program must be developed by the DACS in consultation with the PSC. Rules for the incentive grant program must be developed by the DACS in consultation with the DEP.

Section 2 appropriates \$100 million in recurring funds from the General Revenue Fund to the DACS for the 2022-2023 fiscal year to implement the provisions in the bill.

Section 3 provides that the bill is effective July 1, 2022.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:**A. Tax/Fee Issues:**

None.

B. Private Sector Impact:

The bill may result in a positive impact to private companies that own a government affiliated waste-to-energy facility and qualify for a grant.

C. Government Sector Impact:

The bill may result in a positive impact to county's which own a municipal solid waste-to-energy facility that qualify for funds under the grant program.

The bill appropriates \$100 million in recurring general revenue to the Department of Agriculture and Consumer Services (DACS) to administer the Municipal Solid Waste-to-Energy Grant Program. Per the DACS, two positions and expenses totaling \$159,816 from the General Revenue Fund will be necessary to carry out the provisions of the bill.⁵³

The Public Service Commission (PSC) is required to assist the DACS to aid in the verification of grant eligibility and award amounts. The PSC anticipates any additional workload can be handled by existing staff.⁵⁴

The bill requires the Department of Environmental Protection (DEP) to assist the DACS with determining eligibility and establishing requirements to ensure long-term and efficient operation and maintenance of the waste-to-energy facilities. The DEP has indicated this assistance can be absorbed within existing resources.

VI. Technical Deficiencies:

None.

VII. Related Issues:

According to the Public Service Commission (PSC), the bill is unclear regarding the determination of a utility's avoided cost. While the investor-owned electric utility company's (IOU's) payments to municipal solid waste facilities are reported to the PSC, the IOU's avoided costs are not revisited during the term of a contract after it has been approved.

The bill is unclear regarding the applicable commercial retail rate. There is more than one commercial retail rate approved for each IOU.⁵⁵

⁵³ Department of Agriculture and Consumer Services, *Bill Analysis of SB 1764* (Jan. 24, 2022) (on file with the Senate Appropriations Subcommittee on Agriculture, Environment, and General Government).

⁵⁴ PSC, *supra* note 36, at p. 4.

⁵⁵ PSC, *supra* note 36 at p. 5.

VIII. Statutes Affected:

This bill creates section 377.814 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Changes:

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.

This Senate Bill Analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.
