

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 Committee on Rules

BILL: CS/CS/SB 896

INTRODUCER: Rules Committee; Regulated Industries Committee; and Senators Brodeur and Hutson

SUBJECT: Renewable Energy

DATE: April 21, 2021

REVISED: _____

| | ANALYST | STAFF DIRECTOR | REFERENCE | ACTION |
|----|-----------------|----------------|-----------|------------------|
| 1. | <u>Sharon</u> | <u>Imhof</u> | <u>RI</u> | Fav/CS |
| 2. | <u>Anderson</u> | <u>Rogers</u> | <u>EN</u> | Favorable |
| 3. | <u>Sharon</u> | <u>Phelps</u> | <u>RC</u> | Fav/CS |

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/CS/SB 896 creates s. 163.3205, F.S., relating to the solar facility approval process. The bill defines a “solar facility,” as a production facility for electric power, which uses photovoltaic modules¹ to convert solar energy to electricity that may be stored on site, delivered to a transmission system, and consumed primarily offsite. It further provides the components of a solar facility.

The bill requires solar facilities to be a permitted use in all agricultural land use categories in a local government’s comprehensive plan, all agricultural zoning districts within an unincorporated area.

The bill requires facilities to comply with setback and landscaped buffer area criteria for similar uses in the agricultural district and allows a county to adopt ordinances specifying buffer and landscaping requirements for facilities. Such requirements may not exceed those of similar uses involving construction of other facilities permitted in agricultural land use categories and zoning districts.

The bill amends s. 366.91, F.S., by adding the terms “biogas” and “renewable natural gas,” and expanding the term “renewable energy.”

¹ “Photovoltaic modules” colloquially referred to as are solar panels. They are units comprised of several photovoltaic cells, intended to generate direct current power under un-concentrated sunlight. See Open Energy Information, *Definition: PV module*, <https://openei.org/wiki/Information> (last visited Apr. 21, 2021).

The term “biogas” means a mixture of gases, largely comprised of carbon dioxide, hydrocarbons, and methane gas, that is produced by the biological decomposition of organic materials.

The term “renewable natural gas” (RNG) means anaerobically generated biogas, landfill gas, or wastewater treatment gas, which is refined to a methane content of 90 percent or more, that may be used as transportation fuel, for electric generation, or is of a quality capable of being injected into a natural gas pipeline.

The term “renewable energy,” is expanded to mean electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced *or resulting* from energy sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power.

The bill provides that the Public Service Commission (PSC) may approve cost recovery by a gas public utility for RNG purchase contracts, in which the pricing provisions exceed the current market price of natural gas, but which are otherwise deemed reasonable and prudent by the PSC.

The bill is effective on July 1, 2021.

II. Present Situation:

Renewable Natural Gas and Biogas

Natural gas is a fossil energy source which forms beneath the earth’s surface.² Natural gas contains many different compounds, the largest of which is methane.³ Conventional natural gas is primarily extracted from subsurface porous rock reservoirs via gas and oil well drilling and hydraulic fracturing, commonly referred to as “fracking.” The term renewable natural gas (RNG) refers to biogas that has been refined to use in place of conventional natural gas.⁴

Biogas used to produce RNG comes from various sources, including municipal solid waste landfills, digesters at water resource recovery facilities, livestock farms, food production facilities, and organic waste management operations.⁵ Raw biogas has a methane content between 45 and 65 percent.⁶ Once biogas is captured, it is treated in a process called conditioning or upgrading, which involves the removal of water, carbon dioxide, hydrogen sulfide, and other trace elements.⁷ After this process, the nitrogen and oxygen content is reduced and the RNG has

² U.S. Energy Information Administration, *Natural gas explained*, <https://www.eia.gov/energyexplained/natural-gas/> (last visited Apr. 21, 2021).

³ U.S. Environmental Protection Agency (EPA), *An Overview of Renewable Natural Gas from Biogas* (July 2020), available at https://www.epa.gov/sites/production/files/2020-07/documents/lmop_rng_document.pdf (last visited Apr. 21, 2021).

⁴ EPA, *Landfill Methane Outreach Program (LMOP): Renewable Natural Gas*, <https://www.epa.gov/lmop/renewable-natural-gas> (last visited Apr. 21, 2021).

⁵ *Id.*

⁶ *Id.*

⁷ Florida Department of Agriculture and Consumer Services (DACCS), *Bill Analysis for SB 896* (Feb. 15, 2021) (on file with the Senate Committee on Environment and Natural Resources).

a methane content of 90 percent or more.⁸ RNG prepared for injection into a natural gas pipeline typically has a methane content between 96 and 98 percent.⁹

The expansion of RNG offers an opportunity to decarbonize traditional gas end uses such as transportation and heating.¹⁰ RNG qualifies as an advanced biofuel under the Federal Renewable Fuel Standard Program.¹¹ This program was enacted by Congress in order to reduce greenhouse gas emissions by reducing reliance on imported oil and expanding the nation's renewable fuels sector.¹²

Nationally, there were 157 total confirmed operational RNG projects as of December 2020.¹³ While there were at least two RNG projects reportedly under construction in Florida at the end of 2020, it is not confirmed whether any operational production has been achieved in the state.¹⁴

Florida Public Service Commission

Chapter 366, F.S., provides for the regulation of electric utilities by the Florida Public Service Commission (PSC). The PSC is an arm of the legislative branch of government and has rate-setting jurisdiction over electric and natural gas public utilities.¹⁵ 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, affordable, and reliable manner.¹⁶ 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.¹⁷ The PSC monitors the safety and reliability of the electric power grid¹⁸ and may order the addition or repair of infrastructure as necessary.¹⁹ Further, the PSC reviews applications to determine the need for certain new electrical power plants²⁰ and certain large transmission lines as part of the Department of Environmental Protection's siting process.²¹

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.²² Notably, courts have ruled that the sale of electricity to even a single customer makes the provider a "public utility," subjecting them to the PSC's regulatory jurisdiction, under s. 366.02(1), F.S.²³

⁸ EPA, LMOP: Renewable Natural Gas, *supra* at n. 4.

⁹ *Id.*

¹⁰ DACS, *Bill Analysis*, *supra* at n. 7.

¹¹ *Id.*

¹² EPA, *Renewable Fuel Standard Program*, <https://www.epa.gov/renewable-fuel-standard-program> (last visited Apr. 21, 2021).

¹³ DACS, *Bill Analysis*, *supra* at n. 7.

¹⁴ *Id.*

¹⁵ *See* ss. 350.001, 366.02, and 366.05, F.S.

¹⁶ *See* Florida Public Service Commission (PSC), *The PSC's Role*, <http://www.psc.state.fl.us> (last visited Apr. 21, 2021).

¹⁷ *Id.*

¹⁸ Sections 366.04(5) and (6), F.S.

¹⁹ Sections 366.05(1) and (8), F.S.

²⁰ Section 403.519, F.S.

²¹ Section 403.537, F.S.

²² Section 366.02(1), F.S.

²³ *Florida Public Service Com'n v. Bryson*, 569 So. 2d 1253, 1255 (Fla. 1990) (finding that even a property management company is a public utility within the PSC's regulatory jurisdiction); *PW Ventures, Inc. v. Nichols*, 533 So. 2d 281, 284 (Fla.

The PSC’s jurisdiction over public utilities is exclusive and superior to all other boards, agencies, political subdivisions, municipalities, towns, villages, or counties, and in cases of conflict, the PSC is to prevail.²⁴

Investor-Owned Electric Utilities Companies

There are five investor-owned electric utility companies in Florida: Florida Power & Light Company, Duke Energy Florida, Tampa Electric Company, Gulf Power Company, and Florida Public Utilities Corporation.²⁵ Investor-owned electric utility rates and revenues are regulated by the PSC.²⁶ These utilities must file periodic earnings reports, either monthly, quarterly, or semi-annually, depending upon each company’s size. These more frequent company filings allow the PSC to monitor earnings levels on an ongoing basis and adjust customer rates quickly if a company appears to be overearning.²⁷

Municipally-Owned Electric Utilities

A municipal electric utility is an electric utility system owned or operated by a municipality engaged in serving residential, commercial or industrial customers, usually within the boundaries of the municipality.²⁸ Municipally-owned utility rates and revenues are regulated by the applicable city commission.²⁹ As noted above, the PSC has limited jurisdiction over municipally-owned electric utilities.³⁰ There are 34 municipal electric companies in Florida.³¹ Most municipal electric utilities are represented by the Florida Municipal Electric Association, which serves over three million Floridians.³²

Natural Gas Utilities

Florida’s natural gas network is comprised of four interstate pipelines and two intrastate pipelines.³³ These pipelines supply natural gas to five investor-owned natural gas utilities, 27 municipal natural gas utilities, and four special gas districts.³⁴ The PSC has regulatory authority over: investor-owned natural gas utilities in all aspects of operations, including safety; municipally-owned natural gas utilities, limited to safety and territorial boundary disputes; and special gas districts, limited to safety and territorial boundary disputes.³⁵

1988) (finding that “to the public,” as used in ch. 366, F.S., means “to any member of the public,” rather than “to the general public”).

²⁴ Section 366.04(1), F.S.

²⁵ DACS, *Electric Utilities*, <https://www.fdacs.gov/Energy/Florida-Energy-Clearinghouse/Electric-Utilities> (last visited Apr. 21, 2021).

²⁶ *Id.*

²⁷ Florida Public Service Commission, 2020 FPSC Annual Report, available at <http://www.psc.state.fl.us/Files/PDF/Publications/Reports/General/Annualreports/2020.pdf> (last visited Apr. 21, 2021).

²⁸ DACS, *Electric Utilities*, *supra* at n. 25.

²⁹ *Id.*

³⁰ PSC, *2020 Annual Report*, *supra* at n. 27.

³¹ DACS, *Electric Utilities*, *supra* at n. 25.

³² Florida Municipal Electric Association, *About FMEA*, <https://www.publicpower.com/about-us> (last visited Apr. 21, 2021).

³³ DACS, *Natural Gas Utilities*, <https://www.fdacs.gov/Energy/Florida-Energy-Clearinghouse/Natural-Gas-Utilities> (last visited Apr. 21, 2021).

³⁴ *Id.*

³⁵ Chapter 366, F.S. *See also*, FPSC, *2020 Annual Report*, *supra* at n. 27.

Public Utility Regulatory Policies Act

In 1978, the federal government enacted the Public Utility Regulatory Policies Act (PURPA).³⁶ The PURPA requires promotion of energy efficiency and use of renewable energy.³⁷ Primarily, the PURPA was enacted to encourage:

- The conservation of electric energy;
- Increased efficiency in the use of facilities and resources by electric utilities;
- Equitable retail rates for electric consumers;
- Expedient development of hydroelectric potential at existing small dams;
- Conservation of natural gas while ensuring that rates to natural gas consumers are equitable.³⁸

The PURPA requires utilities to interconnect with and purchase power from “qualifying facilities,” which fall into two categories: (1) qualifying small power production facilities and (2) qualifying cogeneration facilities.³⁹ Qualifying small power production facilities must produce less than 80 megawatts and use biomass, waste, renewable resources, geothermal resources, or any combination thereof, of which 75 percent or more of the total energy input must be from these sources.⁴⁰ Qualifying cogeneration facilities are entities that generate electricity as a byproduct of an industrial process, which is not intended fundamentally for sale to an electric utility.⁴¹

The PURPA directed the Federal Energy Regulatory Commission (FERC) to implement its provisions, which in turn, directed the states to implement these provisions. In response, the Legislature created s. 366.051, F.S., directing utilities to purchase power from cogenerators and small power producers and defining “full avoided costs.”⁴² “A utility’s ‘full avoided costs’ are the incremental costs to the utility of the electric energy or capacity, or both, which, but for the purchase from cogenerators or small power producers, such utility would generate itself or purchase from another source.”⁴³ Traditionally, the FERC has approved electric utilities 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.⁴⁴

³⁶ Public L. No. 95-617 (HR 4018)(1978).

³⁷ *Id.*

³⁸ Federal Energy Regulatory Commission, *PURPA Qualifying Facilities*, <https://www.ferc.gov/qf> (last visited Apr. 21, 2021).

³⁹ *Id.*

⁴⁰ 18 C.F.R. 292.204.

⁴¹ 18 C.F.R. 292.205.

⁴² Ch. 89-292, Laws of Fla.

⁴³ Section 366.051(3) and (4), F.S.

⁴⁴ PSC, *States’ Electric Restructuring Activities Update: Wholesale Sales* <http://www.psc.state.fl.us/Publications/ElectricRestructuringDetails#4> (last visited Apr. 21, 2021); PSC, *States’ Electric Restructuring Activities Update: Federal Legislation - Public Utilities Regulatory Policy Act* <http://www.psc.state.fl.us/Publications/ElectricRestructuringDetails#5> (last visited Apr. 21, 2021).

Renewable Energy

In 2005, the Legislature created s. 366.91, F.S., to address renewable energy.⁴⁵ This section requires utilities to continuously offer a purchase contract to renewable energy producers for a minimum of 10 years and contains payment provisions for energy and capacity based upon the utility's full avoided costs.⁴⁶ It also includes municipal electric utilities and rural electric cooperatives whose annual sales exceed 2,000 gigawatt hours.⁴⁷ The term "renewable energy" means electrical energy produced from:

- Hydrogen produced from sources other than fossil fuels;⁴⁸
- Biomass,
- Solar energy,
- Geothermal energy,
- Wind energy,
- Ocean energy,
- Hydroelectric power, and
- The alternative energy resource, waste heat, from sulfuric acid manufacturing operations and electrical energy produced using pipeline-quality synthetic gas produced from waste petroleum coke with carbon capture and sequestration.⁴⁹

Land Use Implications of Different Forms of Energy Production

A utility-scale solar generation system requires larger quantities of land per unit of power produced than traditional power plants.⁵⁰ Solar generation facilities require "at least [ten] times as much land per unit of power produced than coal or natural gas-fired power plants."⁵¹ As a result of the large scale nature of such projects and the fact that they must be located in a place where the natural resource is most available, such as less industrially-developed areas, siting such facilities can be challenging and viewed as unpopular by those that do not want these large projects near their homes.⁵²

In Archer, Florida, a proposed solar power farm was opposed by Alachua County commissioners.⁵³ In evaluating the project, the commissioners took into consideration health,

⁴⁵ Ch. 2005-259, Laws of Fla.

⁴⁶ Section 366.91(3), F.S.

⁴⁷ Section 366.91(4), F.S.

⁴⁸ Section 366.91(2)(d), F.S. "Traditional fuel sources" is assumed to be limited to fossil fuels and fuels derived from fossil fuels. See U.S. Energy Information Administration, *What is energy? Sources of energy: Most of Our Energy is Nonrenewable*, <https://www.eia.gov/energyexplained/what-is-energy/sources-of-energy.php> (last visited Apr. 21, 2021) (listing petroleum, hydrocarbon gas liquids, natural gas, coal, and nuclear energy as the most common energy sources, in the U.S. and abroad).

⁴⁹ Section 366.91(2)(d), F.S.

⁵⁰ Samantha Gross, *Renewables, land use, and local opposition in the United States*, <https://www.brookings.edu/research/renewables-land-use-and-local-opposition-in-the-united-states/> (last visited Apr. 21, 2021).

⁵¹ *Id.*

⁵² *Id.*

⁵³ Melissa Hernandez, *County says no to proposed solar power farm near Archer*, <https://www.gainesville.com/story/news/local/2020/10/07/alachua-county-says-no-solar-power-farm-proposed-near-archer/5897167002/> (last visited Apr. 21, 2021).

environmental, and property value concerns to the historically black community.⁵⁴ As a result of the land's classification for agricultural land use, the county commissioners would have needed to approve a zoning variance.⁵⁵

Local Land Development Regulations and Comprehensive Plans

The Community Planning Act (act) directs the manner in which local governments create and adopt their local comprehensive plans.⁵⁶ The act prescribes certain principles, guidelines, standards, and strategies to allow for an orderly and balanced future land development.⁵⁷ Section 163.3177, F.S., outlines the required and optional elements of a comprehensive plan and includes provisions which govern agricultural lands and practices.⁵⁸ The act does not specifically address how agricultural lands with solar electric generation facilities should be considered for purposes of local government comprehensive plans.

III. Effect of Proposed Changes:

CS/CS/SB 896 creates s. 163.3205, F.S., relating to the solar facility approval process. The bill defines a "solar facility," as a production facility for electric power, which uses photovoltaic modules to convert solar energy to electricity that may be stored on site, delivered to a transmission system, and consumed primarily offsite. The facility must principally consist of photovoltaic modules, a mounting or racking system, power inverters, transformers, collection systems, battery systems, fire suppression equipment, and associated components. The facility may include accessory administration or maintenance buildings, electric transmission lines, substations, energy storage equipment, and related accessory uses and structures.

The bill requires solar facilities to be a permitted use in all agricultural land use categories in a local government's comprehensive plan, all agricultural zoning districts within an unincorporated area.

The bill requires facilities to comply with setback and landscaped buffer area criteria for similar uses in the agricultural district and allows a county to adopt ordinances specifying buffer and landscaping requirements for facilities. Such requirements may not exceed those for similar uses involving construction of other facilities permitted in agricultural land use categories and zoning districts.

The bill amends s. 366.91, F.S., by adding the terms "biogas" and "renewable natural gas," and expanding the term "renewable energy."

The term "biogas" means a mixture of gases, largely comprised of carbon dioxide, hydrocarbons, and methane gas, that is produced by the biological decomposition of organic materials.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ Section 163.3167(2), F.S.

⁵⁷ *Id.*

⁵⁸ Section 163.3162, F.S.

The term “renewable natural gas” means anaerobically generated biogas, landfill gas, or wastewater treatment gas, which is refined to a methane content of 90 percent or more, that may be used as transportation fuel, for electric generation, or is of a quality capable of being injected into a natural gas pipeline.

The term “renewable energy,” is expanded to mean electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced *or resulting* from energy sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power.

The bill provides that the Public Service Commission may approve cost recovery by a gas public utility for renewable natural gas purchase contracts, in which the pricing provisions exceed the current market price of natural gas, but which are otherwise deemed reasonable and prudent by the PSC.

The bill includes conforming changes in ss. 366.92, 373.236, and 403.973, F.S., to reflect the revised definition of “renewable energy.”

The bill reenacts s. 288.9606(7), F.S., without modification, to incorporate the changes made to s. 366.91, F.S.

The bill is effective July 1, 2021.

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:

Indeterminate.

C. Government Sector Impact:

Indeterminate.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill substantially amends the following sections of the Florida Statutes: 366.91, 366.92, 373.236, 403.973, and 288.9606.

IX. Additional Information:**A. Committee Substitute – Statement of Changes:**

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

CS/CS by Rules on April 20, 2021:

The committee substitute:

- Creates s. 163. 3205, F.S., relating to Solar facility approval process.
- Provides that the legislative intent is to encourage renewable solar electrical generation throughout the state; providing that it is essential for solar facilities and associated infrastructure to be constructed and maintained.
- Defines the term “solar facility” as a production facility for electric power which uses photovoltaic modules to convert solar energy to electricity that may be stored on site, delivered to a transmission system, and consumed primarily offsite; consisting principally of photovoltaic modules, a mounting or racking system, power inverters, transformers, collection systems, battery systems, fire suppression equipment, and associated components; and may include accessory administration or maintenance buildings, electric transmission lines, substations, energy storage equipment, and related accessory uses and structures.
- Provides that solar facilities must be a permitted use in all agricultural land use categories in a local government’s comprehensive plan, all agricultural zoning

districts within an unincorporated area, and must comply with setback and landscaped buffer area criteria for similar uses in the agricultural district.

- Allows a county to adopt ordinances specifying buffer and landscaping requirements for solar facilities, which may not exceed requirements for similar uses involving construction of other facilities permitted in agricultural land use categories and zoning districts.

CS by Regulated Industries on March 16, 2021:

The committee substitute:

- Redefines “renewable energy” in s. 366.91, F.S., to include hydrogen *resulting from* sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power;
- Deletes the provision that includes energy created to displace traditional fuel sources from the definition of “renewable energy;”
- Maintains the definition of “renewable natural gas;”
- Amends the definition of “renewable energy,” contained in s. 366.92, F.S., to include renewable natural gas;
- Authorizes the Florida Public Service Commission to approve cost recovery by a gas public utility for contracts for the purchase of renewable natural gas in which the pricing provisions exceed the current market price of natural gas, but are otherwise deemed reasonable and prudent by the commission.

B. Amendments:

None.