

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 1411 Floating Solar Facilities
SPONSOR(S): Avila
TIED BILLS: IDEN./SIM. BILLS: SB 1338

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Tourism, Infrastructure & Energy Subcommittee		Walsh	Keating
2) Local Administration & Veterans Affairs Subcommittee			
3) Commerce Committee			

SUMMARY ANALYSIS

Florida law declares that it is the intent of the Legislature to promote the development of renewable energy. Current law states that solar energy is one of the fuel or energy sources, from which energy can be produced, that qualifies as “renewable energy.”

The Community Planning Act (act) directs the manner in which local governments create and adopt their local comprehensive plans. Current law requires solar facilities to be a permitted use in all agricultural land use categories in a local government’s comprehensive plan and all agricultural zoning districts within an unincorporated area.

Floating solar, also known as floatovoltaics, is a relatively new concept that refers to any type of solar array that floats atop a body of water. Floating solar panels are affixed to a buoyant structure that keeps them above the surface of the water. In recent years, different entities around Florida have deployed floating solar facilities.

The bill promotes the use of floating solar facilities by requiring each local government to allow these facilities as a permitted use under certain conditions and amend its land development regulations to promote the use of floating solar. Under the bill, counties may adopt an ordinance specifying buffer and landscaping requirements for floating solar facilities, however, such requirements may not exceed the requirements for similar uses involving the construction of other solar facilities that are permitted uses in agricultural land use categories and zoning districts

The bill states that a floating solar facility may not be constructed in the Lake Belt Area or an Everglades Agricultural Area reservoir project if the local governments involved with the area or project determine that the facility will have a negative impact on that area or project.

Under the bill, the Office of Energy within the Department of Agriculture and Consumer Services is tasked with submitting recommendations to the Legislature to provide a regulatory framework to private and public sector entities that implement floating solar facilities.

The bill does not effect state or local government revenues or state government expenditures. The bill may have an insignificant fiscal impact on local government expenditures.

The bill provides an effective date of July 1, 2022.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Present Situation

Renewable Energy

Florida law declares that it is the intent of the Legislature to:

- Promote the development of renewable energy;
- Protect the economic viability of Florida's existing renewable energy facilities;
- Diversify the types of fuel used to generate electricity in Florida;
- Lessen Florida's dependence on natural gas and fuel oil for the production of electricity;
- Minimize the volatility of fuel costs;
- Encourage investment within the state;
- Improve environmental conditions; and
- Minimize the costs of power supply to electric utilities and their customers.¹

Current law defines "renewable energy" as electrical energy produced from a method that uses one or more of the following fuels or energy sources:

- Hydrogen produced from sources other than fossil fuels;
- Biomass;
- Solar energy;
- Geothermal energy;
- Wind Energy;
- Ocean energy; and
- Hydroelectric power.²

Solar Facilities

Florida law 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;
- Consists 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.³

A utility-scale solar generation system requires larger quantities of land per unit of power produced than traditional power plants.⁴ Solar generation facilities require "at least [ten] times as much land per unit of power produced than coal or natural gas-fired power plants."⁵ As a result of the large scale nature of such projects, siting solar facilities can be challenging and viewed as unpopular by those who do not want these large projects near their homes.⁶

Local Land Development and Comprehensive Plans

¹ S. 366.92, F.S. See also S. 377.601(2)(i), F.S.

² S. 366.91, F.S.

³ S. 163.3205(2), F.S.

⁴ 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 Jan. 21, 2022).

⁵ *Id.*

⁶ *Id.*

The Community Planning Act (act) directs the manner in which local governments create and adopt their local comprehensive plans.⁷ The act prescribes certain principles, guidelines, standards, and strategies to allow for orderly and balanced future land development.⁸ Current law outlines the required and optional elements of a comprehensive plan and includes provisions which govern agricultural lands and practices.⁹

Current law requires solar facilities to be a permitted use in all agricultural land use categories in a local government's comprehensive plan and all agricultural zoning districts within an unincorporated area.¹⁰ Solar facilities must 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.¹¹ Such requirements may not exceed those for similar uses involving construction of other facilities permitted in agricultural land use categories and zoning districts.¹²

Floating Solar Facilities

Floating solar, also known as floatovoltaics, is a relatively new concept that refers to any type of solar array that floats atop a body of water. Floating solar panels are affixed to a buoyant structure that keeps them above the surface of the water. Lakes, basins, and manmade bodies of water, such as reservoirs, are ideal for floating solar, because the waters are generally calm compared to the ocean. Since the technology was first patented in 2008, floating solar has predominately been installed in countries such as Japan, China, and the U.K.¹³

In recent years, floating solar panels have made a splash in Florida waters. For example, the Altamonte Electric Authority, which serves Altamonte Springs, Florida, unveiled a floating solar array that generates one megawatt of electricity, making it the largest in Florida and the third largest in the United States.¹⁴ Florida Power and Light Company partnered with Miami-Dade County to launch a 402-panel floating solar installation near Miami International Airport.¹⁵ Orlando International Airport recently unveiled its first floating solar array, which is a collection of 360 solar panels that can power about 14 homes.¹⁶

The Lake Belt and Everglades Agricultural Areas

The Lake Belt Area, located at the edge of the Miami-Dade County urban area, consists of 77.5 square miles of environmentally sensitive wetlands and lakes. This area offers the potential to act as a buffer to the Everglades from the negative impacts of nearby urban development.¹⁷ The Florida Legislature acknowledged the importance of this area and established the Lake Belt Mitigation Committee, which is tasked with developing a plan for the area.¹⁸

The South Florida Water Management District and the U.S. Army Corps of Engineers are working on

⁷ S. 163.3167(2), F.S.

⁸ *Id.*

⁹ Ss. 163.3162 and 163.3177, F.S.

¹⁰ S. 163.3205(3), F.S.

¹¹ S. 163.3205(3) and (4), F.S.

¹² S. 163.3205(4), F.S.

¹³ *Floating solar: what you need to know*, EnergySage, <https://news.energysage.com/floating-solar-what-you-need-to-know/> (last visited Jan. 21, 2022).

¹⁴ Altamonte Electric Utility, *The City of Altamonte Springs Invests In Renewable Energy to Power the Future*, p. 1, available at <http://www.altamonte.org/DocumentCenter/View/8800/AEU-Solar-Array-Info-Sheet> (last visited Jan. 21, 2022).

¹⁵ Victoria Lewis, *FPL launches nation's first floating solar array at Miami International Airport*, WPTV (Jan. 29, 2020), <https://www.wptv.com/news/state/fpl-launches-nations-first-floating-solar-array-at-miami-international-airport> (last visited Jan. 21, 2022).

¹⁶ Jessica Albert, *Orlando International Airport unveils its 1st floating solar array*, Fox 35 Orlando (Dec. 10, 2020), <https://www.fox35orlando.com/news/mco-debuts-floating-solar-array> (last visited Jan. 21, 2022).

¹⁷ *Lake Belt Mitigation Committee*, South Florida Water Management District, <https://www.sfwmd.gov/our-work/lake-belt-committee> (last visited Jan. 22, 2022).

¹⁸ S. 373.41492, F.S.

the Everglades Agricultural Area Reservoir Project. The project aims to construct a treatment wetland that will clean water and a reservoir that will store excess water from Lake Okeechobee.¹⁹

The Office of Energy

The Legislature created the Office of Energy within the Department of Agriculture and Consumer Services to act as the energy policy and program development office for the State of Florida. The Office of Energy evaluates energy-related studies, analyses and stakeholder input to recommend energy policies and programs that will move Florida toward a more diverse, stable, and reliable energy portfolio.²⁰

Effect of Proposed Changes

The bill promotes the use of floating solar facilities by requiring each local government to allow these facilities as a permitted use under certain conditions and amend its land development regulations to promote the use of floating solar.

The bill provides legislative findings that:

- Floating solar facilities can be effective tools in harnessing energy in manmade bodies of water;
- Siting floating solar facilities on wastewater treatment ponds, abandoned limerock mine areas, and other water storage reservoirs is a beneficial use of those areas for many reasons; and
- Siting floating solar facilities should be encouraged by local governments as appropriate uses of water and land areas.

The bill defines “floating solar facility” as a solar facility, as defined by current law in s. 163.3205(2), F.S., which is located on wastewater treatment ponds, abandoned limerock mine areas, or other manmade water storage reservoirs.

Under the bill, each local government must allow floating solar facilities as a permitted use in the appropriate land use categories in its comprehensive plan. Each local government must amend its land development regulations to promote the expanded use of floating solar facilities.

The bill allows counties to adopt an ordinance specifying buffer and landscaping requirements for floating solar facilities, however, such requirements may not exceed the requirements for similar uses involving the construction of other solar facilities that are permitted uses in agricultural land use categories and zoning districts.

Under the bill, a floating solar facility may not be constructed in the Lake Belt Area or an Everglades Agricultural Area reservoir project if the local governments involved with the area or project determine that the facility will have a negative impact on that area or project.

The bill tasks the Office of Energy within the Department of Agriculture and Consumer Services with submitting recommendations to the Legislature by December 31, 2022, to provide a regulatory framework to private and public sector entities that implement floating solar facilities.

¹⁹ *Progress Continues on the Everglades Agricultural Area Reservoir Project*, South Florida Water Management District, <https://www.sfwmd.gov/our-work/cerp-project-planning/ea-reservoir> (last visited Jan. 22, 2022).

²⁰ *Office of Energy*, Florida Department of Agriculture and Consumer Services, <https://www.fdacs.gov/Divisions-Offices/Energy> (last visited Jan. 22, 2022).

B. SECTION DIRECTORY:

Section 1: Creates 163.32051, F.S., relating to floating solar facilities.

Section 2: Provides an effective date of July 1, 2022.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

The bill may have an insignificant impact on local government expenditures due to the requirement for local governments to amend their land development regulations.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

None.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not applicable. This bill does not appear to require counties or municipalities to spend funds or take action requiring the expenditure of funds; reduce the authority that counties or municipalities have to raise revenues in the aggregate; or reduce the percentage of state tax shared with counties or municipalities.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

The bill does not require or authorize rulemaking.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE CHANGES

Not applicable.