

2018 OFFICE OF ENERGY ANNUAL REPORT



Florida Department of Agriculture and Consumer Services
Adam H. Putnam, Commissioner



Dear Governor Scott, President Galvano and Speaker Oliva,

I am pleased to provide you with the 2018 Annual Report of the Florida Department of Agriculture and Consumer Services' Office of Energy. This report highlights the office's accomplishments during 2018 that help Floridians use electricity and fuel more efficiently and generate more renewable energy.

During the 2018 calendar year, the Office of Energy:

- Developed and released five new programs that help prepare Florida to meet the growing demand for energy in a diverse, reliable and sustainable manner.
- Provided 101 energy and water audits to agricultural producers and invested more than \$1.1 million to implement the resulting recommendations under the Florida Renewable Efficiency Demonstration.
- Awarded just over \$2 million in grants to 18 local government to make energy-efficient upgrades to indoor or outdoor lighting in publicly accessible, community-oriented facilities, such as libraries, museums, parks and community centers.
- Awarded three grants under the Renewable Energy and Energy Efficient Technologies Grant program. The grants were awarded to conduct research on a range of topics including algal biofuels, solar window technology, and landfill gas into drop-in fuel.
- Partnered with Drive Electric Orlando to provide consumers with the experience of driving an all-electric vehicle. In 2018, program participants drove nearly 37,000 electric miles.
- Approved 57 applications from local governments totaling \$449,616.25 for the conversion, purchase or lease of natural gas fleet vehicles registered in the state of Florida.
- Supported Hurricane Michael response efforts at the State Emergency Operations Center.

I am proud of our many accomplishments as we have supported Florida's businesses, consumers and education infrastructure. It's been an honor to work with you and I thank you for your continued support in serving our fellow Floridians.

Sincerely,

Adam H. Putnam
Commissioner of Agriculture

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1. Executive Summary

The Florida Department of Agriculture and Consumer Services' Office of Energy (FDACS OOE) is the legislatively designated state energy policy and program development office within Florida. The FDACS OOE evaluates energy related studies, analyses and stakeholder input in order to recommend to the Governor and Legislature energy policies and programs that will move Florida toward a more diversified, stable, reliable and resilient energy portfolio. Further, FDACS OOE uses available state and federal funds to develop and manage energy efficiency, renewable energy and energy education programs throughout the state.

This report reflects FDACS OOE activities during the 2018 calendar year and highlights programs that stimulate capital investment in the state and promote and enhance the statewide utilization of energy-efficient and renewable energy technologies. This report is submitted as required in Section 377.703(2)(f), Florida Statutes (F.S.).

In 2018, FDACS OOE offered programs in each of the following areas related to energy:

- Energy efficiency;
- Renewable energy;
- Transportation; and
- Energy education.

The FDACS OOE Annual Report also provides information on Florida's current energy landscape, as well as our participation with state and national organizations.

2. Florida's Energy Landscape

This section summarizes Florida's energy profile, including information on fuel diversity, electric generation, transportation fuels and renewable resources. In addition to providing a summary of Florida's energy landscape, this section provides an outlook on potential areas of opportunity for the state.

Overall Consumption of Energy

According to the United States Census, Florida is home to approximately 20.9 million people and is the third most populous state. With an increasing population, addressing Florida's energy needs is a top priority.

- Florida is typically third in the nation in electricity consumption, behind Texas and California. Florida consumes more energy than it produces, making it a net energy importer of natural gas, coal, uranium and petroleum products.
- Florida transportation and residential sectors drive energy consumption in the state which is heavily reliant on natural gas and petroleum (Figure 1).
- Natural gas has grown from being one of many sources of energy used in Florida, to being the dominant fuel source for electric generation. Numerous factors, including cost, availability and environmental concerns, have all led to natural gas being the dominate fuel type in the state.
- According to the United States Department of Energy (USDOE) Energy Information Administration (EIA), Florida ranks 46th in the nation for total energy consumption per capita, consuming 205 million BTUs¹ per person. Florida's lower per-capita energy consumption ranking, relative to the national average, is due to below-average industrial sector consumption (Figure 2).
- Florida's residential sector consumes the majority of energy in Florida. The Florida Public Service Commission (FPSC) stated in its *Review of the 2018 Ten-Year Site Plans of Florida's Electric Utilities* that Florida has 8,914,734 residential electric customers accounting for 53.2 percent of all electricity consumed in the state, with the remaining 46.8 percent of electricity being consumed by commercial and industrial users.

¹ British Thermal Unit (BTU) is a standard unit for measuring a quantity of heat. The unit is used to measure and compare the energy content of fuel.

Figure 1: Florida Energy Consumption by End-Use Sector

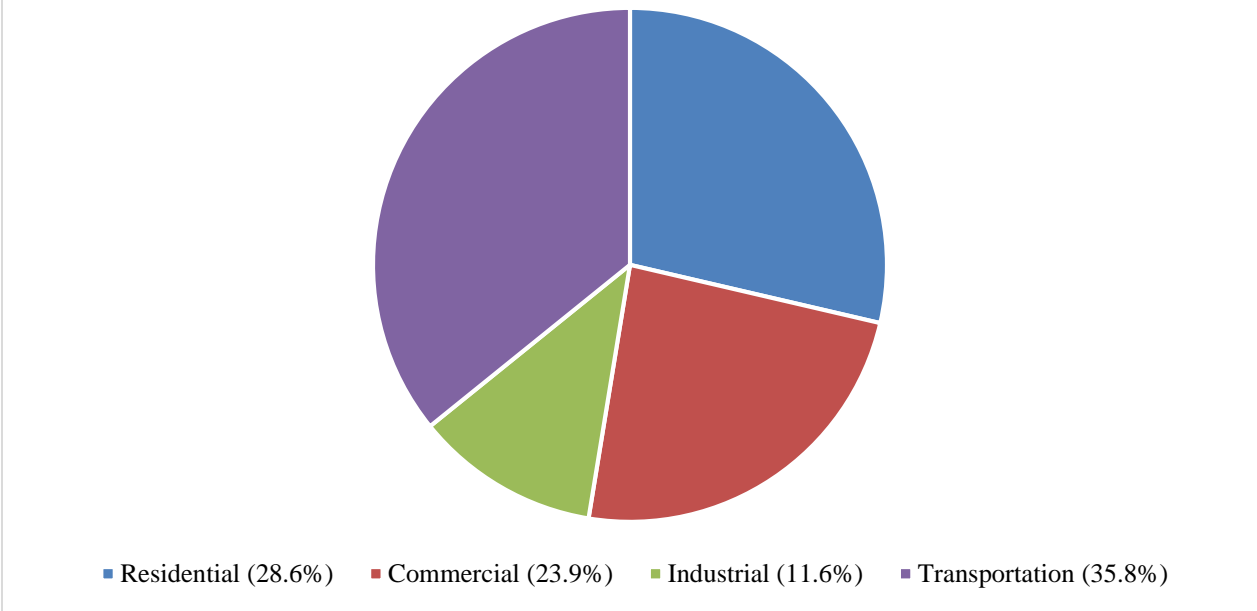
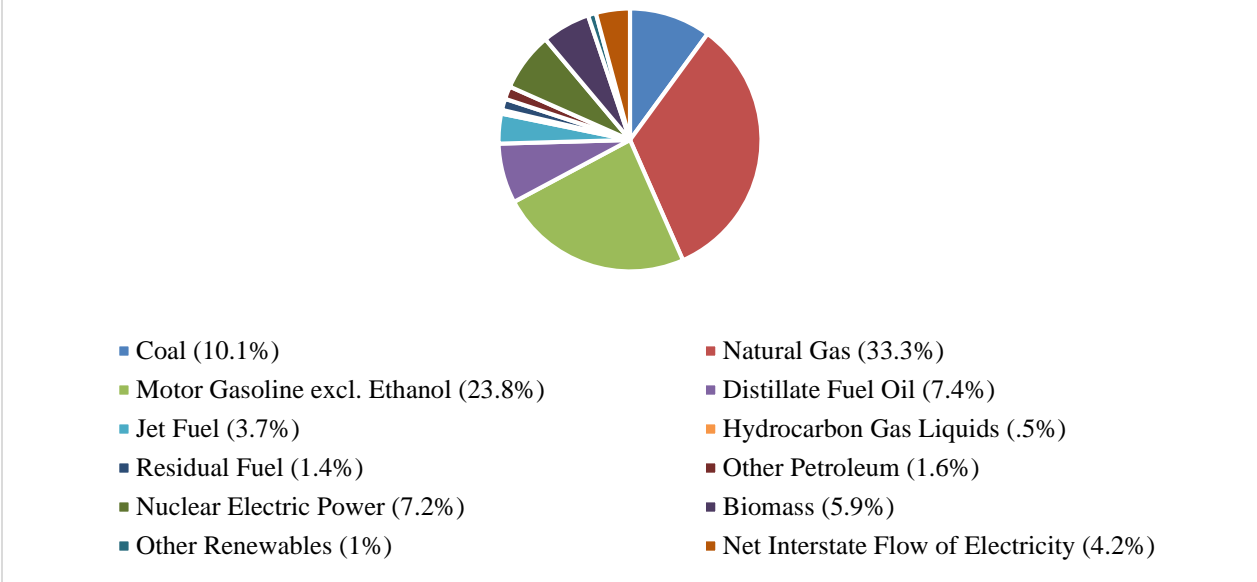


Figure 2: Florida Energy Consumption Estimates Trillion Btu



Source: EIA

Sources of Energy in the Power Sector

Florida is one of the largest producers of electricity in the nation, second only to Texas. Florida's power sector utilizes various fuel sources to address the state's electrical needs. Figure 3 shows the current mix of fuel sources Florida uses to generate electricity, while Figure 4 shows the projected fuel mix over the next 10 years.

- Florida currently has 59,939 megawatts (MW) of installed electric capacity. The electric capacity over the next 10 years is projected to increase 14.5 percent to 70,119 MW, which accounts for 6,056 MW of electric capacity that Florida's utilities plan to retire.
- According to the *Review of the 2018 Ten-Year Site Plans of Florida's Electric Utilities*, Florida's retail sales are anticipated to grow at a faster pace over the next decade than the last few years. Customers are expected to grow at an average annual rate of about 1.28 percent, while retail sales are expected to increase by about 0.81 percent annually. Florida's electric utilities are also projecting an increase in economic growth in the state, but at levels below those experienced before 2007.
- Natural gas continues to be the dominant fuel source for traditional electricity generation within the state, providing 63.29 percent of its total utility-scale electric generation. This majority fuel source will increase as another 7,401 MW of projected electric capacity is expected over the next 10 years.
- Florida receives the majority of its natural gas supplies from the Gulf Coast region via two interstate pipelines: the Florida Gas Transmission line and the Gulfstream pipeline. The Florida Gas Transmission line runs from Texas through the Florida Panhandle to Miami, and the Gulfstream pipeline is an underwater link from Mississippi and Alabama to Central Florida. The Jacksonville area also receives supplies from the liquefied natural gas import terminal at Elba Island, Georgia, via the Cypress Pipeline.
- Coal as a fuel source has traditionally accounted for the second highest amount of installed electric capacity in the state. However, renewable energy is projected to surpass coal generation in the next 10 years, becoming the second highest installed electric fuel source in the state.

Figure 3: Florida's Current Fuel Mix

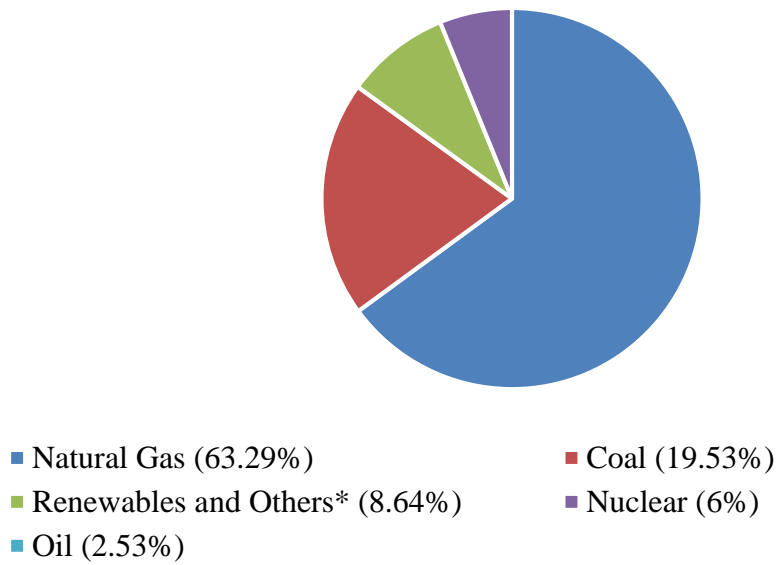
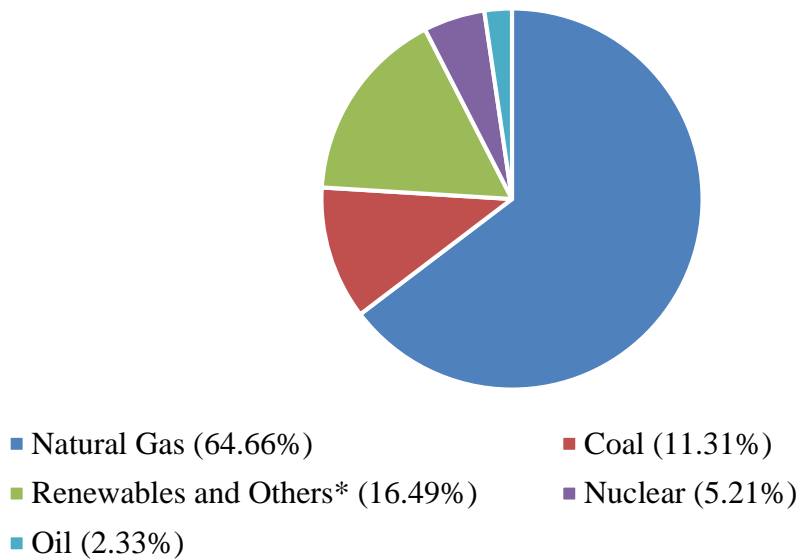


Figure 4: Florida's Projected Fuel Mix



Source: 2018 Florida Reliability Coordinating Council Load & Source Plan and FPSC Ten-Year Site Plan Utilities Data Responses

*Others include interchange and non-utility generation.

Renewable Energy

According to the FPSC's *Review of the 2018 Ten-Year Site Plans of Florida's Electric Utilities*, Florida's renewable energy facilities currently provide approximately 2,583 MW of generating capacity, representing 4.3 percent of Florida's overall generation capacity.

- Of the 2,583 MW of renewable generation, approximately 780 MW are considered firm (consistent and reliable) based on either operational characteristics or contractual agreement.
- During 2018, solar eclipsed biomass as the largest source of renewable energy in Florida. Solar accounts for 31.1 percent, or 804 MW, of Florida's renewable energy.
- Biomass is the second largest source of renewable energy with a capacity of 592 MW, which accounts for 22.9 percent of Florida's renewable energy.
- Municipal solid waste is Florida's third largest source of renewable energy. As of 2018, municipal solid waste accounts for 484 MW, or 18.7 percent, of Florida's renewable energy.
- As of 2018, Florida has plans for an additional 7,049 MW of renewable energy by 2028, with the majority anticipated to come from solar projects.

Trends in the Power Sector

Florida utilities are continuing to invest in solar energy and energy storage. On a network level, renewable energy storage provides for network resiliency, relieves transmission congestion, and reduces the intermittency of renewable energy resources. This allows solar energy to provide firm power generation characteristics similar to traditional generation sources. Projects completed or announced this year include:

- City of Tallahassee: The City of Tallahassee will be adding another 40 megawatts (MW) of solar PV to the existing 20 MW that came online in December 2017 next to the Tallahassee International Airport. The 40 MW addition will also be located near the airport and is expected to come online in 2020.
- JEA: On April 1, 2018, JEA launched a new battery incentive program, which provides a \$4,000 rebate per home or business for the purchase of a qualified battery storage system that is coupled with solar generation. This program essentially reduces ongoing demand on the grid, lowering costs for all JEA customers.

Additionally, JEA has selected EDF Renewables to build five new, 50 MW solar plants in the Jacksonville area. Completion is slated for early 2019 and the total output of all solar plants will be 250 MW.

- Florida Municipal Power Agency (FMPA): FMPA announced the addition of three new 74.5 MW solar plants, totaling 223.5 MW to be built and operated by NextEra Florida Renewables and expected to come online summer of 2020. Twelve Florida municipal utilities are participating with FMPA and will purchase power from the new plants through power purchase agreements.

- Orlando Utilities Commission (OUC): OUC deployed a 31.5 kilowatt floating solar PV array and has plans for an additional 13.4 MW.
- Florida Power & Light (FPL): In February 2018, FPL unveiled a 4-kilowatt storage system at their existing solar plant in Desoto County. This is the first large-scale application of direct current (DC) batteries at a solar power plant in the United States. A unique advantage of DC-coupled batteries is the ability to harness extra energy that a solar plant generates when the sun's rays are the strongest. This project builds on smaller solar plus storage projects.

Additionally, FPL announced the addition of four new solar plants to be operational by early 2019. Each solar plant will have a capacity of 74.5 MW. FPL expects the four solar plants will save customers more than \$40 million over their lifetime.

- Duke Energy Florida: Duke Energy Florida continues to make progress toward its goal of 700 MW of solar by 2021 with the announcement of a new 74.9 MW solar power plant in Columbia County with the expected completion in March 2020.
- Cities Aiming for 100 Percent Renewable: A number of Florida cities, including Orlando, St. Petersburg, Largo, Gainesville, Miami and Tallahassee, have endorsed, adopted or committed to planning studies for reaching 100 percent renewable generation.

Transportation Energy

Florida's large population, evolving demographics and projected growth require the state to develop and maintain a reliable and conveniently accessible transportation system. Florida's tourism industry is one of the largest contributors to the state's economy, and a progressive and diversified transportation system is vital to the tourist industry.

Petroleum

Florida's transportation sector uses more energy than any other sector in the state and nearly all the transportation fuel must be imported. Florida relies on petroleum products delivered by tanker and barge to Florida marine terminals, primarily in Jacksonville, Port Canaveral, Port Everglades and Tampa. An intrastate pipeline transports petroleum products from Tampa across Central Florida to Orlando.

- According to EIA, Florida is ranked third in the nation in terms of all types of transportation fuel consumption. This accounts for approximately 5.5 percent of the total United States' share of transportation fuel.
- Florida has a total of 6,200 motor gasoline stations, accounting for 5.5 percent of the total United States' share.
- Florida consumed more than 320.1 million barrels of motor fuel in 2016.
- Florida has no in-state refineries to process crude oil; however, Florida produced 164,000 barrels of crude oil as of July 2018, with most coming from Jay Field in Escambia County.

Alternative Fuel

Florida consumers, private businesses and local governments are realizing the benefits alternative fuel vehicles have to offer. Private commercial fleet owners, as well as local governments and school boards continue to convert their larger vehicle fleets to propane, compressed natural gas and liquefied natural gas. Electric vehicle use is also expanding as technology increases, charging infrastructure expands and consumer awareness grows.

- According to the USDOE Alternative Fuels Data Center, the state of Florida has 3,277 total public and private alternative fuel stations, of which 56 are compressed natural gas stations, 139 are propane stations and 2,976 are public and private electric vehicle charging stations installed throughout the state.
- The Florida Department of Highway Safety and Motor Vehicles lists the number of registered electric vehicles in Florida as 82,682 as of December 30, 2018.
- Florida has four USDOE designated Clean Cities Coalitions (CCCs): Southeast Florida, Central Florida, Tampa Bay and North Florida. The CCCs are responsible for promoting clean energy and alternative fuels for transportation throughout the state.
- The Electric Vehicle Transportation Center (EVTC) at the Florida Solar Energy Center was a five-year project funded through the United States Department of Transportation (USDOT) University Transportation Centers Program. The EVTC supported the USDOT's goal of integrating alternative fuel vehicles. The project ended September 2018.

Trends in the Transportation Sector

For the last hundred years, people have traveled from one place to another largely the same way. However, technology is changing the way people and goods are transported from point to point.

- Florida's electric utilities anticipate growth in the electric vehicle market. According to the FPSC's *Review of the 2018 Ten-Year Site Plans of Florida's Electric Utilities*, electric vehicle ownership is anticipated to grow rapidly over the next decade, resulting in approximately 420,000 electric vehicles operating within the electric service territories by the end of 2027.
- Over the next 10 years, Florida is eligible to receive over \$152 million from the Volkswagen Settlement Agreement for eligible mitigation actions that reduce nitrogen oxide emissions. These funds represent a tremendous opportunity for Florida to advance its alternative fuel fleet vehicles and infrastructure. Eligible mitigation actions include projects to reduce nitrogen oxide from heavy-duty diesel sources near population centers. Fifteen percent of funds may also be used to acquire, install, operate and maintain new light-duty zero emission vehicle supply equipment.
- Connected and autonomous vehicle technologies have the potential to improve vehicle safety as well as traffic mobility, efficiency and sustainability. While some states, including Florida, have laws enacted to help govern these technologies, as the technology continues to develop and evolve this will be a topic for state and local governments for many years to come.

- The market for natural gas technology vehicles and fueling infrastructure has experienced substantial growth since the first compressed natural gas fueling station opened in Florida in 1991. Since the Natural Gas Fuel Fleet Vehicle Rebate Program's (2013-2018) inception, the number of private and public compressed natural gas fueling stations in Florida has increased from 19 to 58 with another six stations planned as of May 2018.

3. 2018 FDACS OOE Accomplishments

The FDACS OOE offers programs to increase efficiency, install renewables, research new technologies and increase the use of alternative fuels in transportation. This section highlights the programs that the FDACS OOE offered during the 2018 calendar year.

Efficiency and Renewable Improvements in Commercial Aquaculture (ERICA)

The FDACS OOE worked with the Division of Aquaculture to develop ERICA to increase energy efficiency, reduce energy usage and lower operating costs at commercial aquaculture facilities in Florida. ERICA provides grant reimbursement for technologies that significantly increase energy efficiency and renewable energy for eligible commercial aquaculture facilities and farms located in Florida. The total funding available under this program is \$1,002,103. In 2018, FDACS OOE received 39 applicants and approved 15 applications totaling just over \$375,000.

Florida Small Community Energy Efficient Lighting Grant Program

The Florida Small Community Energy Efficient Lighting Grant Program is a competitive grant program that provided funding to eligible local governments to make energy-efficient upgrades to indoor or outdoor lighting in publicly accessible, community-oriented facilities, such as libraries, museums, parks and community centers. In 2018, the FDACS OOE awarded just over \$2 million in grants to 18 local governments. All work under this program will be complete in 2019.

Mapping the Energy Landscape of Water and Wastewater Treatment Facilities in Florida

Using a \$75,000 competitive award from the USDOE, the FDACS OOE is working with stakeholders to determine the current energy landscape of water and wastewater treatment facilities in the state. The survey will document those facilities that need updating, as well as those facilities that have already performed energy efficient improvements, and whether those improvements resulted in energy and money savings. FDACS OOE will complete the survey in 2019.

Rural Community Energy Efficiency Grant Program (RCEE)

RCEE provides funding to eligible local government entities in Rural Areas of Opportunities for projects that implement energy-efficient upgrades to publicly owned community-use facilities, traffic control devices, and/or street lighting. The total funding available under this program is \$346,760. The City of Marianna plans to use \$175,000 to update 34-year-old lighting equipment at the Marianna Educational Recreational Expo. Work under this program will be complete by the end of 2019.

Clean Energy for Low Income Communities Accelerator (CELICA)

CELICA is a Better Buildings Initiative of USDOE. According to the USDOE, low income households spend an average of 15 to 20 percent of their income on energy bills. FDACS OOE was one of 51 CELICA partners across the county working to address the issue of high-cost, low-efficiency energy usage in the low-income community sector. The program ended in August 2018.

The FDACS OOE uses information gleaned from stakeholders to consider strategies that aid communication between:

- Low-income communities interested in making building efficiency improvements; and
- Businesses that specialize in upgrading existing buildings and financial institutions.

Florida Renewable Efficiency Demonstration (FRED)

The FRED Program provides free energy evaluations valued up to \$4,500 to Florida agricultural producers. FRED also provides Florida agricultural producers grant reimbursement for 80 percent of the cost to implement the recommendations from the free energy evaluation up to \$25,000. These energy evaluations are conducted by three state universities designated to provide Mobile Energy Lab services, Florida A&M University, University of Central Florida, and University of Florida. The total funding available under this program is \$3 million. In 2018, the FRED Program provided 101 energy and water audits to agricultural producers and invested more than \$1.1 million to implement the resulting recommendations. This program ends September 1, 2019.



Solar Panels at a FRED Recipient in Leon County

Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast Act (RESTORE)

The FDACS OOE worked with the Office of Agricultural Water Policy to develop and administer a program for agricultural producers in the Apalachicola and Suwannee River Basins using \$2.5 million of RESTORE Act funds. The RESTORE Act created a trust fund from penalties paid by companies responsible for the Deepwater Horizon oil spill and outlines a structure by which the funds can be utilized to restore and protect the Gulf Coast region.

This program provides free energy and water audits as well as grant reimbursement for 75 percent of the cost to implement the recommendations from the free energy and water audit up to \$25,000. Examples of eligible projects for reimbursement include energy-efficient lighting and water pumps, and small-scale renewable energy generation such as solar or biomass.

Renewable Energy and Energy Efficient Technologies Grant Program (REET)

The REET Grant Program was a competitive grant program designed to provide funding for projects to conduct demonstration, commercialization, research and development projects relating to renewable energy technologies and innovative technologies that significantly increase energy efficiency for vehicles and commercial buildings. The FDACS OOE awarded three successful applicants in 2018. The awarded entities include:

- University of South Florida: “Large-Scale Development of an Innovative Algae Technology as a Sustainable Source of Renewable Energy and Products to Enhance and Diversify Florida's Economy” — Grant Funds \$250,002
- University of Florida: “A Versatile Photovoltaic Window Technology for Building Integrated Photovoltaic Applications” — Grant Funds \$399,919

- T2C Energy LLC: “Catalytic Conversion of AD Biogas and Landfill Gas into Drop-in Fuel” — Partial Grant Funding \$123,967

Florida Alliance for Accelerating Solar and Storage Technology Readiness (FAASSTeR)

FAASSTeR is a multi-partner, statewide effort to catalyze acceptance and strategies for the deployment of solar plus storage technologies, including the necessary infrastructure, in a cost-effective way. Nhu Energy Inc. is the prime recipient of a USDOE award. The FDACS OOE is a sub-recipient. The goals of this project are to:

- Inform policy and regulation in the state to maximize consumer benefits from solar energy; and
- Foster the development of an additional 10 percent solar capacity within Florida Municipal Electric Association member utilities.

Drive Electric Orlando

Using a \$400,000 award from the USDOE Clean Cities program, the FDACS OOE is working with the Electrification Coalition and the Central Florida Clean Cities Coalition to promote the Drive Electric Orlando project. Drive Electric Orlando offers consumers an option to rent an electric vehicle at the Orlando International Airport. The goal of this program is to increase consumer awareness of the benefits and capabilities of electric vehicles.

Drive Electric Orlando has brought together Orlando rental car agencies, hotels, restaurants and theme parks to offer consumers who participate in the program various incentives, including:

- Free valet parking;
- Preferred parking spots;
- Ample charging stations; and
- Free three-month membership to CLEAR Lane Access, which allows travelers to skip the identification check point at the airport and head straight to the physical screening.

Since October 2015, when the program launched, there have been 1,257 electric vehicle rentals with over 422,000 miles driven. Drive Electric Orlando has also trained over 250 rental car company employees to help ensure renters have a seamless and superior rental experience. The program is scheduled to end in January 2019.



Drive Electric Orlando Project Partners

Local Government Natural Gas Rebate Program

Due to the popularity of the Natural Gas Fuel Fleet Vehicle Rebate Program from Florida's local governments, the FDACS OOE created the Local Government Natural Gas Vehicle Rebate Program using \$1 million in federal funds. This program provides local government entities with rebates of up to \$25,000 per vehicle and \$250,000 per applicant for up to 50 percent of the costs associated with the conversion, purchase or lease of natural gas fleet vehicles registered in the state of Florida.

The FDACS OOE began accepting applications on August 15, 2018, and will continue to accept applications until June 28, 2019, or until all funds are expended. To date, FDACS OOE has received 70 applications, approved 57 applications and awarded \$449,616.25 in rebates.



Natural Gas School Buses at the School District of Indian River County

Biofuels Infrastructure Partnership (BIP)

The FDACS OOE was awarded \$15.2 million from the United States Department of Agriculture (USDA) Commodity Credit Corporation to increase the availability of infrastructure capable of dispensing higher blends of biofuels. Eligible infrastructure under the BIP program includes:

- Installation of blender pumps, which are capable of dispensing biofuel blends in a range from 15 percent to 85 percent (E15 to E85); and
- Dedicated E85 pumps, which dispense biofuel blends of 85 percent (E85).

BIP retrofits began in May 2016, and there have been 377 blender pumps and four dedicated E85 pumps installed at a total of 80 fuel station locations in Florida. All work under this project will be complete in December 2018.



E85 Pump at Gate Petroleum Station

Aquaponics Display at the Holland Building Wellness Garden

The FDACS OOE worked with the Division of Food, Nutrition and Wellness and the Division of Aquaculture to install an aquaponics display at the Holland Building Wellness Garden that provides hands-on demonstration to school aged children on how energy, water and food are integrated. The Division of Aquaculture designed and maintains the system, which houses tilapia and converts the fish waste to useable fertilizer. The FDACS OOE provided a small solar energy system that includes a solar panel and battery to operate the pumps. The Division of Food, Nutrition and Wellness provides and maintains the vegetable plants grown in the system.

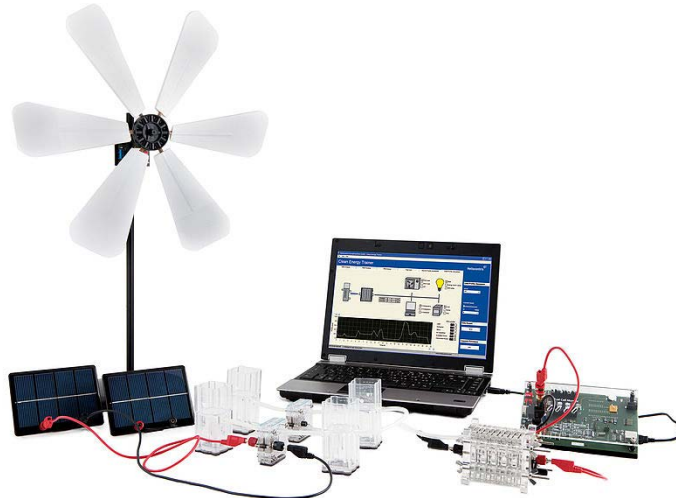


Aquaponics Display at the Holland Building Wellness Garden

Advanced Micro Grid Clean Energy Trainer Kit Program

The Advanced Micro Grid Clean Energy Trainer (CET) Kit Program is a competitive program designed to provide advanced education kits to Florida public school districts. The CET Kits are to be utilized by schools throughout each district for the purpose of providing hands-on science, technology, engineering and math activities to students during school hours, camps or after-school programs.

In 2018, the FDACS OOE made 11 CET Kits available to Florida public school districts. Only one school district applied to the program. Due to the lack of response from school districts, the FDACS OOE is working to restructure the program to utilize the remaining kits.



CET Kit

Energy Clearinghouse of Information

The Florida Energy Clearinghouse is a consumer-friendly portal to compare energy-saving technologies and learn more about energy usage, energy production, renewable energy technologies and research being conducted in Florida. The FDACS OOE continues to host, update and expand the Florida Energy Clearinghouse in accordance with Section 570.0741, F.S.



My Florida Home Energy homepage

State Energy Management Plan

In accordance with Section 255.257, F.S., the FDACS OOE continues to provide the department's building energy consumption and cost data to the Florida Department of Management Services (FDMS) for inclusion in the State Energy Management Plan Annual Summary Report. This report is designed to assist FDMS and other state agencies in the process of evaluating their energy conservation programs by measuring the ratio of annual energy consumption to square footage. Collected data from all state agencies is summarized annually.

State Heating Oil and Propane Program (SHOPP)

The SHOPP Program began in 2014 and continues to collect residential propane price information through a cooperative agreement with the EIA. Data is collected weekly from October through March which the EIA then aggregates and posts on its website (<http://www.eia.gov/petroleum/heatingoilpropane/>). The FDACS OOE will continue to participate through the heating season of 2020-2021.

4. Florida Building Commission (FBC)

The FBC is responsible for updating the Florida Building Code every three years to provide energy-efficient construction and design guidelines for Florida's commercial and residential infrastructure. Other duties include approving building code training providers and courses, conducting rulemaking workshops, developing declaratory statements, approving product applications and reviewing accessibility waiver requests. FDACS OOE Director Kelley Smith Burk serves as the FDACS appointee to the FBC.

In accordance with Section 553.74, F.S., FDACS holds a seat on the FBC and participates on the Energy Technical Advisory Committee and the Education Product Oversight Committee. As a member of the FBC, FDACS OOE contributes to code development and other discussions relevant to building efficiency.

5. National and Regional Participation

The FDACS OOE participates with state, regional and national organizations that help fulfill the mission of the office. The FDACS OOE has a seat on boards in the following organizations.

Southern States Energy Board (SSEB)

Section 377.711, F.S., establishes Florida as a member of the SSEB. The SSEB is a nonprofit interstate compact organization created by state law in 1960 and consented to by Congress with a broad mandate to contribute to the economic and community well-being of the southern region. Its mission is to enhance economic development and the quality of life in the Southeast through innovations in energy and environmental policies, programs and technologies. Florida is represented by Governor Rick Scott, Representative Mike La Rosa and FDACS OOE Director Kelley Smith Burk.

National Association of State Energy Offices (NASEO)

NASEO is the association that represents energy officials from each of the 56 states and territories. Formed by the states, NASEO facilitates peer learning among state energy officials, serves as a resource for and about state energy offices, and advocates the interests of the state energy offices to Congress and federal agencies. NASEO aids in the oversight of \$7 billion in funds derived from ratepayers and state appropriations annually and in emergency response and mitigation related to energy infrastructure, liquid fuels and cyber security. FDACS OOE Director Kelley Smith Burk serves as a Southeast Regional Representative to the NASEO Board.

Southeast Energy Efficiency Alliance (SEEA)

SEEA is the regional organization that promotes energy efficiency as a catalyst for economic growth, workforce development and energy security across 11 southeastern member states including Florida. Through stakeholder engagement, SEEA focuses its efforts to advance energy efficiency in four work areas: state, local and utility policy; the built environment; energy equity; and innovative finance. FDACS OOE Director Kelley Smith Burk serves as an SEEA Board member.

Florida Green Building Coalition (FGBC)

In January 2017, the FDACS OOE joined the FGBC, a leading certifier of green construction projects in Florida with nearly 17,000 “Florida Green” certified projects to date. FGBC is focused on promoting Florida-specific green building and sustainability techniques through its regional education and certification program.

FDACS OOE staff participates on the FGBC Education Committee, which promotes student engagement and develops up-to-date training materials. Participation in FGBC helps to keep FDACS OOE staff informed on current sustainability trends in today’s green construction industry.

Florida Energy Systems Consortium (FESC)

FESC was created in 2008 by Section 1004.648, F.S., and is unique in the United States; no other state has a statewide energy consortium involving all of its public universities. The concept combines the state’s university resources into one statewide center to advance energy research, technology transfer/commercialization, energy education and outreach in this rapidly changing and critically important field.

The FESC director reports to the FDACS OOE and is supported by the FESC Associate Director, Industrial Advisory Board, Oversight Board, and Steering Committee members. The Oversight Board is formed by the Vice President of Research (VPR) of each member university. Steering committee members are assigned by the VPRs (one faculty member from each university).

Florida Solar Energy Center (FSEC)

FSEC was created by the Florida Legislature in 1975 to serve as the state's energy research institute. The main responsibilities of the center are to conduct research, test and certify solar systems, and develop education programs. FSEC's mission is to research and develop energy technologies that enhance Florida's and the nation's economy and environment and to educate the public, students and practitioners on the results of the research. FDACS OOE Director Kelley Smith Burk serves as an FSEC Board Member.

Southeast Partnership for Advanced Renewables from Carinata (SPARC) Advisory Board

In 2013, the Farm to Fuel initiative authorized under Section 570.954, F.S., funded six projects through the Research and Development (R&D) Bioenergy Grant Program. One of the six projects studied the feasibility and best management practices for growing carinata in the southeast United States. Carinata is an inedible seed whose oil can be turned into jet fuel. Due to the initial success, the United States Department of Agriculture's National Institute of Food and Agriculture awarded the University of Florida Institute of Food and Agricultural Sciences a \$15 million grant to further study carinata and develop the supply chain to commercialize the crop. SPARC project's goal is the commercialization of carinata as a biofuel crop that can be planted within existing crop rotations. FDACS OOE Staff Analyst John Leeds serves as a SPARC Advisory Board member.



Carinata field in Quincy, FL

6. Response to Hurricane Michael

As a supporting agency, FDACS OOE supports the functions of ESF-12, Fuels, at the Florida Division of Emergency Management State Emergency Operations Center. Response and recovery efforts at the State Emergency Operations Center included procuring fuel and propane for governments, utility crews, first responders and mass care kitchens.

Eleven of the 13 full-time equivalents (FTEs) in the FDACS OOE worked in response and recovery during Hurricane Michael, in addition to fulfilling their normal duties of the office. The 11 FTEs worked 328 hours during Hurricane Michael; three staff members worked over 24 hours straight at the State Emergency Operation Center to ensure an uninterrupted response.

7. Florida Public Service Commission FEECA Report

Once published, the entire report as prepared by the Florida Public Service Commission, Annual Report on Activities Pursuant to the Florida Energy Efficiency and Conservation Act, will be available at: <http://www.psc.state.fl.us/Publications/Reports#>

8. In the Year Ahead

In 2019, a new Florida Commissioner of Agriculture will be sworn into office. FDACS OOE will work under the direction of the new Florida Commissioner of Agriculture to develop state energy policy and implement new energy programs.