



FLORIDA SOLAR ENERGY CENTER®

*Creating Energy Independence*

# **Florida Rural Small Business Energy Assistance Collaborative Cumulative Report Ending July 31, 2016**

FSEC-CR-2033-16

July 31, 2016

## **Authors**

Janet McIlvaine

## **Prepared for**

United States Department of Agriculture  
Rural Development  
USDA Case No. 09-048-822843791, Grant No. 1

©2016 University of Central Florida.

All Rights Reserved.

1679 Clearlake Road  
Cocoa, Florida 32922, USA  
(321) 638-1000

**[www.floridaenergycenter.org](http://www.floridaenergycenter.org)**



A Research Institute of the University of Central Florida

## **Disclaimer**

The Florida Solar Energy Center/University of Central Florida nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the Florida Solar Energy Center/University of Central Florida or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the Florida Solar Energy Center/University of Central Florida or any agency thereof.

<b>Progress Report, Period of Performance: March 25, 2015 – July 31, 2016.....</b>	<b>1</b>
<b>Introduction.....</b>	<b>1</b>
<b>Audit Service Area.....</b>	<b>1</b>
<b>Budget and Expenditures .....</b>	<b>1</b>
<b>Number of Audits and Outlook .....</b>	<b>2</b>
<b>Recruitment Activity Overview .....</b>	<b>3</b>
Internal and External Recruitment Strategies .....	3
Recruitment Presentations .....	5
USDA Area Offices .....	6
<b>Status of Audit Candidates .....</b>	<b>7</b>
REAP Applicants who received an FSEC Audit .....	7
Audit Candidates Currently in Pre-qualifying .....	7
Audit Candidate that Passed Pre-qualifying that Lost Interest Prior to Scheduling the Audit.	8
Audit Candidates Found Eligible That Lost Interest Prior to Completing Pre-Qualifying .....	8
Audit Candidates Found Ineligible .....	9
Audit Candidates, Status Unknown .....	9
<b>Conclusion .....</b>	<b>10</b>
<b>Appendices.....</b>	<b>11</b>
<b>Appendix A – UCF Business Owner Agreement .....</b>	<b>A-1</b>
<b>Appendix B – Promotional and Recruitment Materials .....</b>	<b>B-1</b>
<b>Appendix C – FSEC REAP and Subsidized Audit Presentation.....</b>	<b>C-1</b>
<b>Appendix D – Audit Highlights .....</b>	<b>D-1</b>
<b>Appendix E – Technical Reports.....</b>	<b>E-1</b>

## **Progress Report, Period of Performance: March 25, 2015 – July 31, 2016**

### **Introduction**

The U.S. Department of Agriculture's (USDA) Rural Development initiative reaches out to communities across America with many programs (<http://www.rd.usda.gov/programs-services/all-programs>). USDA's Rural Energy for America Program (REAP) offers grants and loan guarantees for energy efficiency improvements and renewable energy systems to agriculture operations and qualifying rural small businesses.

USDA has awarded the University of Central Florida a grant to provide a limited number of subsidized Energy Audits to eligible businesses in Florida in support of USDA Rural Development (USDA-RD) Grant and Loan programs for rural small businesses. The ultimate goal of the energy audits is to increase participation in REAP.

Audits are being offered by the Florida Solar Energy Center (FSEC), a non-profit research institute of UCF located in Cocoa, Florida. FSEC conducts energy research for and supports many federal, state, and private agencies; utilities; non-profit housing providers; and other homebuilding and construction industry stakeholders. The audit team includes engineers, an architect, and energy analysts.

The grant agreement between UCF and the USDA was signed on March 24, 2015 to be in effect for a two year period. Approximately eight months remain in the grant period.

### **Audit Service Area**

The original audit service territory was restricted to Bradford, Sumter and Polk Counties which have the highest utility rates in the state. In theory, the businesses in these areas would be highly motivated to seek REAP funding for energy efficiency improvements and renewable energy systems. FSEC learned that the high commercial utility rates identified in the proposal process do not necessarily apply to small businesses because the electric rate structure is tied to consumption. Higher consumption results in higher rates. Small businesses, which typically have smaller buildings and/or operations, are less likely to have consumption in the higher rate tiers dampening motivation to make improvements.

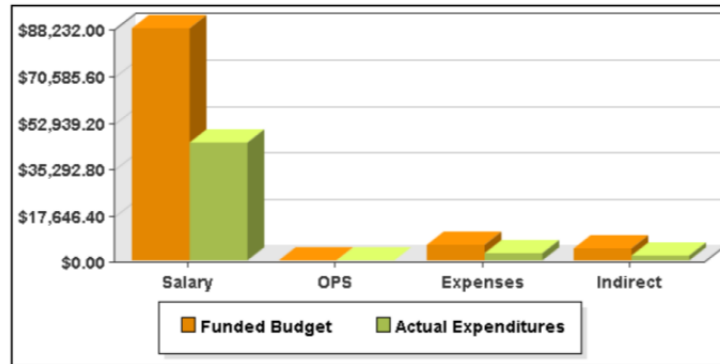
FSEC requested and received a contract modification on February 4, 2016 to expand promotion and recruiting throughout the entire state to increase chance of reaching motivated businesses and ag producers – wherever they are located in Florida.

### **Budget and Expenditures**

At the time of the Progress Report in July 2015, only \$2,726.57 of the total \$99,143 had been spent. As of the last progress report in December 31, 2015, total expenditure had reached only \$10,067. As of the end of July 2016, expenditures total \$47,877.88 with an additional \$2,591.02 encumbered for audit travel expenses, leaving \$48,674.10 to complete the work. The screen shot in Figure 1 shows these numbers in UCF's financial tracking tool.

Figure 1. Expenditures and Balances as of the Pay Period July 31, 2016

**Title:** Florida Rural Small Business Energy Assistance Collaborative  
**Dates:** 03/25/2015 — 03/25/2017  
**Account No.:** 20126124 (PeopleSoft)  
**Account Type:** C&G External  
**Budget Level:** Level 2: Budget transfers between the Salary and OPS categories are allowable.  
**Is Tuition Allowable:** Yes  
**Is Tuition Budgeted:** No



	Net Contractual Funding [1]	Funded Budget[2]	Actuals	Expenditures		Balance[3]
				Encumbrances	PreEncumbrances	
☒ Salary	\$88,232.00	\$88,232.00	\$44,962.79	\$0.00	\$0.00	\$43,269.21
☒ OPS	\$0.00	\$0.00	\$76.70	\$0.00	\$0.00	(\$76.70)
☒ Expenses	\$6,190.00	\$6,190.00	\$562.45	\$2,591.02	\$0.00	\$3,036.53
☒ Indirect	\$4,721.00	\$4,721.00	\$2,275.94	\$0.00	\$0.00	\$2,445.06
PeopleSoft Balance	\$99,143.00	\$99,143.00	\$47,877.88	\$2,591.02	\$0.00	\$48,674.10

## Number of Audits and Outlook

Three of the anticipated 26 audits have been performed: one for energy efficiency improvements and two for renewable resource assessment (Figure 2). Several audit candidates are in the pre-qualifying stage (see Status of Audit Candidates.) Despite extensive efforts to promote the REAP program and recruit candidates for the USDA-subsidized energy audits FSEC is offering (see Recruitment Activities), interest has been much lower than expected.



Figure 2. Audit Site in Ormond Beach (left) with sky map for solar resource assessment (right)

The end date for this grant is only eight months away - on March 25, 2017. Despite slightly increased interest in 2016 compared to 2015, the FSEC team now feels pessimistic about completing 26 audits. We have sufficient budget to do the actual audits; however, we have few candidates and are reluctant to spend any more funds recruiting candidates because no recruitment strategy has proven successful. FSEC is eager to continue supporting USDA's REAP promotion in any way possible and to conduct any audits that are needed by the Area Offices. The nature of the REAP application requirements are such that the independent energy audits and solar resource assessments that FSEC offers are not required if the total project cost is less than \$200,000. Instead, applicants may use calculations produced by the vendor(s) involved in the project. That narrows the field of candidates to those businesses with both the means and the organizational capacity to undertake an extensive building renovation and/or renewable energy installation. If we had understood this, we would not have proposed providing 26 audits. Prior to further expenditures, the project PI's would like to discuss next steps with USDA project management.

## **Recruitment Activity Overview**

Recruitment activities have included partnering with organizations that serve small businesses, reaching out to rural electric co-op's, distribution to our own FSEC email lists, presentations at USDA events, and appealing to contacts through Florida Rural Economic Development Initiative, interest has been much lower than expected.

### ***Internal and External Recruitment Strategies***

Availability of the subsidized audits was announced on June 5, 2015 the FSEC website in The Energy Chronicle blog, FSEC's flagship electronic communication tool, which attracts an average of 375 unique visitors per month. Additionally, FSEC set up a dedicated webpage for REAP information. See screen shot in Appendix B or visit: <http://www.fsec.ucf.edu/USDA-REAPenergyaudits>

Major recruitment strategies include:

1. Outreach using FSEC's internal communications mechanisms
2. Partnering with organizations that serve small businesses and agriculture operations
3. Partnering with rural electric co-op's
4. Contacting participants of allied programs such as Main Street America, the Florida Rural Economic Development Initiative, and Economic Development Councils.
5. Presentations about REAP and the subsidized energy audits at USDA and Florida agriculture events

The combined reach (number of promotion recipients) from these three strategies is 7,057 as delineated in Table 1. Example fliers and promotions are shown in Appendix B.

**Table 1. Overview of Recruitment Activities**

<b>Status</b>	<b>Organization</b>	<b>Description</b>	<b>Reached</b>
<b>Outreach using FSEC's internal communications mechanism</b>			
Completed	UCF/Florida Solar Energy Center	FSEC blog "The Energy Chronicle", approximately 375 unique users/month	375
Completed	UCF/Florida Solar Energy Center	FSEC Buildings Research Division e-newsletter, Summer 2015, Autumn 2015, and Spring 2016 editions. 1,470 recipients each mailing	4,410
Completed	UCF/Florida Solar Energy Center	Distribute to in-house email database of persons interested in renewable energy and/or energy efficiency	530
<b>Partnering with organizations that serve small businesses</b>			
Completed	Lake Wales Area Chamber of Commerce & Lake Wales Economic Development Council	Email blast to 400 chamber members (99% are small businesses)	400
Completed	SCORE of Central Florida	Facebook post	125
Completed	Titusville Area Chamber of Commerce	Email blast	500
Completed	Small Business Assistance Center of Polk County	email blast, circulate to related organizations, Facebook post	550
<b>Partnering with rural electric co-op's and other programs</b>			
Completed	All Rural Electric Co-ops in Florida	Direct communication by phone and email	NA
Completed	Clay County Electric Co-op	Include article in 2016 mailer targeting business customers.	Partner did not publish
<b>Partnering with allied programs</b>			
Ongoing	17 Main Street America programs in cities eligible for REAP funding	Introduction calls to each program. Only a few returned calls.	17
<b>Cold call rural small businesses</b>			
Completed	Downtown Madison	Door to door distribution of fliers, meet and greet	25
Completed, Could do more	Titusville and Palm Bay (Brevard County)	Phone calls, County Commissioners	15

Status	Organization	Description	Reached
<b>Presentations at USDA and Florida agriculture events (see bulleted list below)</b>			<b>110</b>
<b>Counties entirely composed of eligible locations</b>			
	Local government business advocacy & building permit departments	No action taken yet	TBD
	SBA loan officers	No action taken yet	TBD
	Contractors (HVAC and lighting)	Did not pursue. Unlikely to see \$200K job in one trade category	NA
	ag extension offices	Some efforts made, could do more	TBD
	PV installers	No action taken yet	TBD
<b>Total Direct Reach (approximate)</b>			<b>7,057</b>

As noted above in Table 1, Clay County Electric Co-op requested an article on REAP to include in an annual mailing to business accounts in the spring or summer of 2016. The article was written and submitted in a timely manner (see Appendix B), but the point of contact became non-responsive and presumably the article was not included in the mailer.

In 2016, FSEC pursued several avenues recommended by USDA Florida Rural Development staff including contacting the Florida Economic Development Councils and reaching out to businesses in-person. FSEC staff made personal visits and phone calls to approximately 40 businesses in Madison, Florida and Titusville, Florida – both municipalities are 100% qualifying rural areas. FSEC also contacted county commissioners in Brevard County that have rural areas within their districts. None of these efforts produced any audit candidates.

FSEC called all 17 Main Street America programs in Florida cities that qualify as rural areas. A few answered or returned calls; however, none of these efforts produced any audit candidates.

### ***Recruitment Presentations***

FSEC presented the subsidized audit opportunity (see presentation in Appendix C) at five events in 2016 held by Florida USDA-RD Area offices and one Florida Ag Extension Office:

- January 21, 2016, USDA Energy Symposium, Davenport, FL. *USDA Subsidized Energy Audits for REAP Applicants*, 20 minutes, approximately 15 attendees, with D. Beal.
- February 19, 2016, State of Florida Rural Economic Development Initiative February Meeting, Madison, FL. *USDA Subsidized Energy Audits for REAP Applicants*, 20 minutes, approximately 25 in-person attendees and 25 webinar attendees.
- February 25, 2016, USDA Energy Symposium, Brooksville, FL. *USDA Subsidized Energy Audits for REAP Applicants*, 20 minutes, approximately 20 attendees, with D. Beal.
- April 6, 2016, USDA Energy Symposium, LaBelle, FL. *USDA Subsidized Energy Audits for REAP Applicants*, 20 minutes, approximately 30 attendees, with D. Beal.
- June 23, 2016, Agricultural Energy Workshop, Opportunities to Save Money with Energy Efficiency or Renewable Energy System Projects, UF Hastings Agricultural Extension Center, Hastings, FL. *USDA Subsidized Energy Audits for REAP Applicants*, 20 minutes, approximately 20 attendees.



## USDA Area Offices

In 2016, FSEC staff made a concerted effort to forge closer relationships with the RD Area Offices by conducting an introduction call with the REAP contact in each RD Area office in Florida. Table 2 shows the contacts and dates of calls.

Table 2. USDA Area Offices Contact Log

Date	Area	Person	Action	Notes	Next step	Done?	Notes
2/16/2016	1	Jennifer Dillard and Alan Pratt	introduction call	Intro call. They had a candidate for a solar farm, but mng't changed & it's on hold or off	send intro email - done	yes	
2/16/2016	1	Jennifer Dillard and Alan Pratt	sent intro email				
3/30/2016	1	Jennifer Dillard and Alan Pratt	email follow up	are they doing an energy workshop?	no response	yes	
2/12/2016	2	Loria Philips	introduction call	has an application in gadsden - another is grocery store	send intro email - done	yes	
2/12/2016	2	Loria Philips	sent intro email			yes	
3/30/2016	2	Loria Philips	email follow up	are they doing an energy workshop?	no response	yes	
2/9/2016	3	Elda Rogers	Intro call	has been promoting in Suwanee county, targeting Madison county next	send intro email - done	yes	
2/9/2016	3	Elda Rogers	sent intro email			yes	
3/30/2016	3	Elda Rogers	follow up	did she contact st augustine main street?	she did - no interest	yes	
6/10/2016	3	Elda Rogers	email	request to call Quiet Whisper owner	pls phone Cecilia	yes	
6/15/2016	3	Elda Rogers	received call	Ms Davis may not be interested in REAP anymore	follow up with Cecilia by phone	yes	She lost interest
2/16/2016	4	Danielle Ehlers	Intro call	gave our contact to edc. Was out with Theresa in Palatka	send intro email	yes	
2/16/2016	4	Danielle Ehlers	intro email	sent same intro email		yes	
2/24/2016	4	Danielle Ehlers	email @Prime Global	gave her contact info for bill mcracken		yes	
2/24/2016	4	Bill McCracken	follow up call	gave him Danielle Ehlers' contact info	send applications	4/1/2016	
	4	Danielle Ehlers	follow up call				
3/30/2016	4	Danielle Ehlers	message	told her we are doing the audit			
3/31/2016	4	Prime Global	audit	completed audit	reporting	yes	
3/31/2016	4	Danielle Ehlers and Theresa Purnell	email asking questions	theresa responded to 3/4	nail down who will be helping Prime Global through the application	yes - Danielle	
4/1/2016	4	Bill, Steve (NJ), Steve (FL), Danielle Ehlers and Theresa Purnell	email	sent application, thank you, and request for a conf call			
1/7/2016	5	LaTasha	Discuss Audit Candidate	Bob Riley, Pronto Cleaners Contact info	contact Bob Riley - done	yes	
1/13/2016	5	Bob Riley	Initial interview		audit quote - done	yes	
2/2/2016	5	Bob Riley	Follow interview, audit price	limited audit to w/d & comb safety	send BOA - done	yes	
2/2/2016	5	Bob Riley	Sent filled-in BOA	his share \$200	confirm rec'd - done	yes	
2/5/2016	5	Bob Riley	confirm rec'd BOA	says he will send it back	LaTasha follow up	yes	
2/16/2016	5	Troy Post	sent email and website message	Troy Post, ED, North Brevard Economic Development Zone	look for phone number	yes	no response
2/16/2016	5	LaTasha	email exchange	she will dropping in on Bob 2-17-2016	follow-up w/LaTasha	yes	
2/16/2016	5	Robin Fisher	email	Brevard county commis district 1	contact his office	yes	no response
2/16/2016	5	Trudie Infantini	email	Brevard county commis district 3	contact her office	yes	no response
2/11/2016	6	Yashira Mendez	Intro call	nursery farm in Plant City Shadowwood Farms (REAP app) & residence	send intro email	yes	
2/12/2016	6	Yashira Mendez	sent intro email	sent intro email	follow up @Shadowwood Farms, other audit candidates	yes	
2/22/2016	6	Yashira Mendez	David and Janet follow up call	invited us to March 6 energy workshop, no progress from Shadowwood	follow up on details for workshop	yes	
3/30/2016	6	Yashira Mendez	follow up	confirmed energy workshop location	send presentation	yes	
April	6	Yashira Mendez	email & phone call	let her know we are working with Sarasota Growers			

## Status of Audit Candidates

The following list catalogs FSEC's 15 audit candidates by how far in the process they got. Numerous incidental calls for general information are not recorded.

### *REAP Applicants who received an FSEC Audit*

**Name:** Prime Global Group, Inc.

**Location:** 3 Aviator Way, Ormond Beach Florida, 32174

**Nature of Business:** Manufacturer of winding equipment used by producers of zip lock bag products

**Contact:** Steve Honczarenko (Via Bill McCracken)

**Status:** Two (2) audits were conducted March 31, 2016 – one audit for energy efficiency improvements, one audit and site assessment for solar photovoltaic system. Technical reports were produced and assistance with REAP applications for loan and grant for efficiency improvements and the solar system was provided. The business owner submitted REAP applications in time for the May 2, 2016 deadline. We believe the applicant received grant and loan funding; however, we did not receive any official report on the matter from the applicant.

**Name:** Sarasota Growers, Inc.

**Location:** 1001 Sinclair Drive, Sarasota, FL 34240.

**Nature of Business:** Nursery stock grower

**Contact:** Richard Walden (Via Yashira Mendez)

**Status:** One audit and site assessment was conducted April 21, 2016. A technical report was produced and assistance with the REAP application for loan and grant for the solar system was provided. The business owner submitted a REAP application in time for the May 2, 2016 deadline. We do not think the applicant received grant or loan funding; however, we did not receive any official report on the matter from the applicant. See photos in Appendix D - Audit Highlights.

### *Audit Candidates Currently in Pre-qualifying*

**Name:** Skyo Industries, Inc.

**Location:** 2 Sunshine Blvd, Ormond Beach, FL 32174

**Nature of Business:** Manufacturer of screw drivers

**Contact:** Warren Anderson (Via Bill McCracken)

**Status:** FSEC staff met with Mr. Anderson at the Skyo facility in March of 2016. He intends to make energy efficiency improvements to his 30,000 square foot manufacturing facility. FSEC has prepared a Business Owner Agreement and Scope of Work for Skyo; however, Mr. Anderson requested a delay until September 2016.

**Name:** Blue Sky Farms

**Location:** 4805 CR 13 S, Elkton, FL 32033

**Nature of Business:** Potatoe grower

**Contact:** Danny Johns

**Status:** FSEC visited the Blue Sky facility. Mr. Johns plans to make improvements to existing refrigeration units and install a solar photovoltaic system. FSEC anticipates conducting an audit for this business in September.

**Name:** Lipman Family Farms

**Location:** 125 Roberts Ave East, Immokalee, FL 34142

**Nature of Business:** Multi-crop producer

**Contact:** Kevin Yue, PE

**Status:** FSEC received an inquiry from Mr. Yue regarding three quotes for \$2,000,000+ photovoltaic systems. Internal discussions at Lipman Family Farms are preliminary.

***Audit Candidate that Passed Pre-qualifying that Lost Interest Prior to Scheduling the Audit***

**Name:** Quiet Whisper Assisted Living Facility

**Location:** 190 SW Derek Glen, Lake City, Florida 32024

**Nature of Business:** Health care

**Contact:** Cicilia Davis (Via Elda Rogers, USDA RD Area 3 Office)

**Status:** Candidate wanted to make energy efficiency improvements. After discussions of specific improvements and the intended general contractor, Ms Davis signed a Business Owner Agreement signaling readiness to schedule an audit. Subsequently she decided not to submit an application for REAP funding after finding out that the application might not be successful.

***Audit Candidates Found Eligible That Lost Interest Prior to Completing Pre-Qualifying***

**Name:** PizzaBoyz

**Location:** 919 Saint Johns Ave, Palatka, Florida 32177

**Nature of Business:** Pizza restaurant

**Contact:** Alex Sharp

**Status:** Eligible, after reading more about solar power, candidate decided not to pursue REAP.

**Name:** Pronto Cleaners

**Location 1:** 8480 South Florida Ave, Floral City, FL 34436

**Location 2:** 957 Howell Ave., Brooksville, FL 34601

**Nature of Business:** Dry cleaning/laundromat

**Contact:** Bob Riley

**Status:** Candidate wanted to replace existing laundromat equipment with higher efficiency units. After discussions of specific models, the business owner did not show up for a scheduled site meeting (preliminary to the audit) and stopped returning calls possibly because he or his project was found to be ineligible by the local USDA-RD agent. There was some confusion about his eligibility.

**Name:** C & B Farms

**Location:** 27320 Co Rd 835, Clewiston, FL 33440

**Nature of Business:** Specialty produce

**Contact:** Krista Pencarinha

**Status:** Business owner intends to expand refrigeration and to install a vacuum refrigeration system which is more efficient than standard split system refrigeration. This technology is outside our scope of expertise; however, we helped the business owner find an engineering firm (Global Refrigeration Solutions) that could conduct the audit for them and offered to work together to produce the required Technical Report. Subsequently, the business owner decided to postpone the refrigeration expansion and possibly apply for REAP grant funding in the Spring of 2017.

**Name:** Poo-fessional Recycled Organics and Land Management

**Location:** 18510 Tyler Road, Odessa, FL 33556

**Nature of Business:** Recycling and screening unsuitable soils, plant debris, and manure to produce professional grade compost, compactable fill, potting soil, composted topsoil, firewood, and shavings for animal bedding.

**Contact:** Not available

**Status:** After initial discussions of possible building efficiency improvements, the business owner decided to work with the USDA RD Area 5 office.

#### *Audit Candidates Found Ineligible*

**Name:** Goldenrule Housing & Community Development Corp Inc.

**Location:** 417 E. 2nd Street, Sanford, FL 32771

**Nature of Business:** Housing Counseling assisting low income families, first time homeowners.

**Contact:** Cynthia Smith

**Status:** Ineligible non-profit organization. Located outside eligible rural area.

**Name:** Affordable Homeownership Foundation Inc.

**Location:** 5264 Clayton Court #1 & #4, Fort Myers, FL 33907

**Nature of the business:** Non-Profit Housing Agency

**Contact:** Lois M. Healy-CEO

**Status:** Ineligible non-profit organization. Located outside eligible rural area.

**Name:** Sun Country Homes of Florida, Inc.

**Location:** 1206 Pondella Circle, North Ft Myers, FL 33903

**Nature of business:** Real estate sales

**Contact:** Marion Briggs

**Status:** Located outside eligible rural area.

**Name:** Continental Building Products

**Location:** 886 N Hwy 17, Palatka, FL 32177

**Nature of Business:** Wall board manufacturer

**Contact:** Sarah Coad (Via Clay County Electric)

**Status:** Eligible location. Does not meet small business criteria.

#### *Audit Candidates, Status Unknown*

**Name:** Quail Life Farm and Hatchery

**Location:** 18510 Tyler Road, Odessa, FL 33556

**Nature of Business:** Quail hatchery and product production

**Contact:** Not Available

**Status:** The business owner intends to expand the refrigerated storage capacity within an existing building and wants to make select a higher-than-standard refrigeration system as well as consider other building improvements to reduce energy consumption. After initial discussions, we learned that the business owners may have had financial history that disqualified them from REAP eligibility. The business may have been able to resolve those and submit a REAP application; however, FSEC did not conduct an audit and was not involved in their application.

## Conclusion

Sixteen months into the grant, only three of the anticipated 26 audits have been performed despite extensive efforts to recruit audit candidates using FSEC's internal resources and external partnerships that resulted in outreach of approximately 7,000 discrete, individual touch points. Additionally, FSEC met and corresponded with all of the REAP specialists in USDA-RD Florida's Area Offices. Though we have no official information, it seemed anecdotally that more REAP applications were submitted for the May 2, 2016 deadline than previous deadlines.

The end date for this grant is only eight months away - on March 25, 2017. The FSEC team now feels pessimistic about completing 26 audits. We have sufficient budget to do the actual audits; however, we have few candidates and are reluctant to spend any more funds recruiting candidates because no recruitment strategy has proven successful.

FSEC is eager to continue supporting USDA's REAP promotion in any way possible and to conduct any audits that are needed. One thing that we did not anticipate was that the nature of the REAP application requirements are such that the independent energy audits and solar resource assessments that FSEC offers are not required if the total project cost is less than \$200,000. Instead, applicants may use calculations produced by the vendor(s) involved in the project. That narrows the field of candidates to those businesses with both the means and the organizational capacity to undertake an extensive building renovation and/or renewable energy installation. There are still a few possible recruitment strategies we can try, but prior to further expenditures, the project PI's would like to discuss next steps with USDA project management. We need a clear directive on how to proceed.

## Appendices

Appendix A – UCF Building Owner Agreement .....	A-1
Appendix B – Promotional and Recruitment Materials.....	B-1
Appendix C – FSEC REAP and Subsidized Audit Presentation.....	C-1
Appendix D – Audit Highlights.....	D-1
Appendix E – Technical Reports.....	E-1
Prime Global Group, Inc., Energy Efficiency Improvements	
Prime Global Group, Inc., Photovoltaic System	
Sarasota Growers, Inc., Photovoltaic System	

## Appendix A – UCF Business Owner Agreement

### BUSINESS OWNER AGREEMENT

#### Business Energy Audit

**THIS ENERGY AUDIT AGREEMENT** (hereinafter “Agreement”) is entered into between \_\_\_\_\_ (hereinafter “Business”) in the interest of the building(s) located at \_\_\_\_\_ (hereinafter “Location”) and the University of Central Florida, by and on behalf of its Board of Trustees (“UCF”), for the benefit of the Florida Solar Energy Center (“FSEC”) with an effective date of the last party to sign below (“Effective Date”). Business and UCF may herein be referred to as a “Party” or collectively as the “Parties”.

**Whereas**, UCF was awarded a grant from the United States Department of Agriculture (“USDA”) (Case # 09-048-822843791-01, UCF Account 20126124; hereinafter the “Grant”), to generally provide energy audits to a limited number of qualified and motivated rural small businesses; and

**Whereas**, per the requirements of the Grant, any business receiving an energy audit must contribute twenty-five percent (25%) of the cost of the Energy Audit as mutually agreed upon by Parties; and

**Whereas**, Business desires to have UCF perform an Energy Audit at the Business Location ; and

**Whereas**, UCF, having determined the Business to be qualified and motivated, desires to conduct an Energy Audit and provide an audit report to all Parties and the USDA as mandated in the Grant reporting requirements; and

**Now therefore**, in consideration of the foregoing, and the potential for post-audit energy savings, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. The period of performance for this Agreement shall not exceed two (2) years from the Effective Date.
2. The scope of the energy audit for Business Location is detailed in Appendix A (“Energy Audit”), which is hereby incorporated into this Agreement. The Business acknowledges and agrees that it has been presented with sufficient information on the details of the Energy Audit for the Location.
3. Business agrees to:
  - a. be present for all site visits and participate in the Energy Audit,
  - b. make the Location available to UCF staff members for carrying out the Energy Audit,
  - c. provide information to and work with UCF to acquire information needed for the audit report including utility bills and reasonable cost estimates for individual improvements,

- d. inform UCF of actions taken as a result of the audit including application for grants and loans to finance implementation and actual implementation of improvements (regardless of finance method), and
  - e. collaborate with UCF following implementation, if any, to document beneficial results.
4. UCF agrees to provide:
- a. an audit report to the Business and the USDA,
  - b. contact information for assistance with USDA financing opportunities, and
  - c. direction for incorporating elements of the audit report into USDA grant and loan applications.
5. Per USDA Grant requirement, **Business agrees to pay UCF the amount of \$\_\_\_\_\_, representing 25% of the mutually agreed upon total Energy Audit cost of \$\_\_\_\_\_.** Such payment shall be due upon execution of this Agreement and prior to the Energy Audit.
6. All visits to the Business Location by UCF will be scheduled in advance with the Business and an authorized agent of the Business must be present during all visits.
7. During the period of this Agreement, UCF may wish to visit the Business Location for additional data collection. UCF will consult with the Business prior to any return visits.
8. To the extent permitted by applicable law, UCF agrees to keep all data collected from Business and Location anonymous outside of the UCF study team and the USDA grant administration team in required reporting. Business gives permission to UCF to publicly publish all data collected from Business and Location, in an anonymous fashion by not linking the data to Business or Location. The Business may agree by written consent to have the Location highlighted in UCF or USDA documents.
9. UCF shall not provide Business with any direct monetary benefits as a result of the Agreement. Business has no expectation of any direct monetary benefits, and is providing the Location for the Energy Audit at no cost to UCF. Business shall benefit as a result of the Agreement via the results of the Energy Audit that will be provided to Business subsequent to the Energy Audit. Business warrants and indemnifies that Business has no relationship, direct or indirect, to UCF or any employee thereof.
10. This Agreement shall not be deemed to create any form of employment relationship or business organization between the Parties.
11. UCF does not anticipate any physical risks or discomforts to its agents or to Business or its agents. Some inconvenience and risk may occur as a result of the Energy Audit to be performed at the Location.
12. UCF MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED WITH REGARD TO THE ENERGY AUDIT, AUDIT REPORT, OR ANY RESULTS THEREFROM, IF ANY,



PERFORMED UNDER THIS AGREEMENT. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR THAT ANY DELIVERABLES OR RESULTS DEVELOPED BY UCF UNDER THIS AGREEMENT WILL NOT INFRINGE ANY THIRD PARTY PATENT, COPYRIGHT, TRADEMARK, OR OTHER THIRD PARTY RIGHTS. UCF MAKES NO REPRESENTATION AS TO THE USEFULNESS OF DELIVERABLES OR RESULTS. IF BUSINESS CHOOSES TO EXPLOIT THE ENERGY AUDIT, AUDIT REPORT, OR ANY RESULTS IN ANY MANNER WHATSOEVER, IT DOES SO AT ITS OWN RISK.

13. Business knowingly and voluntarily releases and forever discharges UCF, the University of Central Florida Board of Trustees, the State of Florida, the Florida Board of Governors and their respective officers, directors, agents, employees, servants, and volunteers from any and all liability whatsoever for any and all damages, losses, and injuries sustained by Business (including but not limited to Business' employees, customers, invitees, and agents) or damages to and losses sustained by Business Location, Business' property or any combination thereof, including but not limited to any claims, demands, actions, causes of action, judgments, damages, expenses and costs, including attorneys fees, which arise out of, result from, occur during or are connected in any manner with Business' participation in the Energy Audit.
14. In no event will either Party be responsible for any indirect damages, incidental damages, consequential damages, exemplary damages of any kind, and/or any indirect economic damages whatsoever regardless of whether such damages arise from claims based upon contract, negligence, tort (including strict liability or other legal theory), a breach of any warranty or term of this Agreement, and regardless of whether a Party was advised or had reason to know of the possibility of incurring such damages in advance.
15. UCF warrants and represents that it is self-funded for liability insurance, both public and property, with said protection being applicable to officers, employees, and servants while acting within the scope of their employment by UCF. UCF and Business further agree that nothing contained herein shall be construed or interpreted as (1) denying to either party any remedy or defense available to such party under the laws of the State of Florida; (2) the consent of the State of Florida or its agents and agencies to be sued; or (3) a waiver of sovereign immunity of the State of Florida beyond the waiver provided in Section 768.28, Florida Statutes.
16. Nothing in this Agreement shall be construed to convey to the Business any right, title or interest in, under or with respect to any research results, data, or any intellectual property related thereto, or any license to use, sell, or exploit any such results, data, or intellectual property related thereto.
17. Business represents and warrants that Business has the authority to enter into this Agreement and that Business is either i) the rightful owner of the property at Location with full rights, title, and interest in the Location or ii) authorized by rightful owner of property at Location to invite UCF on to the property at Location and perform the Energy

Audit. Business signatory below further represents and warrants that they are a proper agent of Business and have the right to bind Business under this Agreement. UCF acknowledges that it has relied without independent investigation upon the representations and warranties of the Business set forth in this Agreement.

18. Notwithstanding any provision to the contrary, UCF may terminate this Agreement at any time upon written notice to Business.
19. Business may not use UCF's name or trademarks in any promotion, statement, advertisement, press release, or communications to the general public or any third party without UCF's express written consent. Any proposed public statement, advertisement, press release, or communications by Business shall be submitted to UCF for its review and written approval at least thirty (30) days prior to the planned dissemination or publication.
20. The validity, interpretation, and performance of this Agreement shall be controlled by and construed under the laws of the State of Florida. Jurisdiction and Venue for any action to construe or enforce the terms of this Agreement shall be in Orange County, Florida. The Parties specifically waive the right to any other jurisdiction and venue, and the defense based on inconvenient forum.
21. No failure or delay by a Party hereto to insist on the strict performance of any term of this Agreement, or to exercise any right or remedy consequent to a breach thereof, shall constitute a waiver of any breach or any subsequent breach of such term. No waiver of any breach hereunder shall affect or alter the remaining terms of this Agreement, but each and every term of this Agreement shall continue in full force and effect with respect to any other then existing or subsequent breach thereof. The remedies provided in this Agreement are cumulative and not exclusive of the remedies provided by law or in equity.
22. If any one or more of the provisions of this Agreement shall be held to be invalid, illegal, or unenforceable, the validity, legality, or enforceability of the remaining provisions of this Agreement shall not be in any way affected or impaired thereby and shall remain in full force and effect.
23. This Agreement embodies the entire agreement and understanding between the Business and UCF and supersedes all prior agreements and understandings relating to the subject matter hereof. Except as otherwise expressly provided for herein, this Agreement may be changed, waived, discharged or terminated only by an instrument in writing, signed by the Party against which enforcement of such change, waiver, discharge or termination is sought.

IN WITNESS WHEREOF, the Parties execute this agreement, fully intending to be bound by the same.

BUSINESS NAME

Authorized Agent / Owner: \_\_\_\_\_ Date\_\_\_\_\_

University of Central Florida

By: \_\_\_\_\_ Date\_\_\_\_\_

Name: Joel Kennedy Title: Sr. Contract Manager

[REMAINDER OF PAGE INTENTIONALLY BLANK

---

*Note: BOA will be accompanied by:*

#### APPENDIX A

Energy Audit Scope of Work

<<insert intended scope of energy audit>>

## Appendix B – Promotional and Recruitment Materials


From Janet McIlvaine <janet@fsec.ucf.edu>★  
Subject **USDA Subsidized Energy Audit**  
To janet@fsec.ucf.edu★

**USDA Subsidized Energy Audits  
For Eligible Small Businesses in Rural Florida\* Communities**

The U.S. Department of Agriculture's (USDA) offers grants and loans for renewable energy systems & energy efficiency improvements to qualifying rural small businesses and agriculture operations through the Rural Energy for America Program (REAP). USDA chose the University of Central Florida (UCF) to perform a limited number of heavily subsidized energy audits in Florida to support the loan and grant programs. Businesses must meet location, size, and other eligibility criteria to be considered for an energy audit. Energy audits will be conducted by experienced staff at UCF's Florida Solar Energy Center (FSEC). FSEC is a nonprofit, UCF research institute that conducts research for and supports many federal, state, and private agencies. FSEC staff can help determine eligibility, answer questions about the subsidized energy audits being offered in Florida, and provide USDA contacts.

To be considered for a subsidized energy audit for your rural small business, contact Janet McIlvaine:

- Email\*\*: [janet@fsec.ucf.edu](mailto:janet@fsec.ucf.edu)
- Subject: REAP energy audits, <insert business name>
- Include the following:
  - Business name
  - Address of the building(s) to be audited (must be in Florida\*)
  - General nature of the business (retail, health care, restaurant, pharmacy, etc.)
  - Your name, title, phone number, and best contact time



*A research institute of the  
University of Central Florida*

[www.FloridaEnergyCenter.org](http://www.FloridaEnergyCenter.org)

*For more information about the audit and links to USDA resources:*  
<http://blog.floridaenergycenter.org/echronicle/2015/06/usda-energy-audits/>

---

*Concerned this might be spam? Google "USDA Press Release No. 0107.15" to see the official announcement. UCF is on the "list of recipients" linked near the bottom of the release.*

*Explore example projects: <http://farmenergy.org/success-stories/energy-efficiency>*  
YOU too can play a role in America's energy independence.

*\*Not in Florida? Contact your state or local USDA office: <http://www.rd.usda.gov/browse-state>*  
*\*\*Not an email user? Contact Janet McIlvaine at 321-638-1434.*

Figure B1: Email blast to an FSEC database of 530 recipients and dedicated REAP webpage located at: <http://www.fsec.ucf.edu/USDA-REAPenergyaudits>

# The Energy Chronicle

A Newsletter of the Florida Solar Energy Center

« [New Florida Energy Code Effective June 30, 2015. Sign Up for the Training You Need; Limited Time Discount Available](#)

[Energy Chronicle Home](#)

[Subscribe to the Chronicle](#)

## Energy Audits for Rural Small Businesses

Revised June 10, 2015

The U.S. Department of Agriculture (USDA) Rural Energy for America Program (REAP) offers Renewable Energy Systems & Energy Efficiency Improvement Loans & Grants to rural small businesses. USDA chose the University of Central Florida's FSEC to provide a limited number of subsidized building energy audits to small businesses in rural Florida communities who are eligible for the grants and loans. Audit candidates must also meet FSEC criteria, which will be determined by a phone interview.



A limited number of subsidized building energy audits will be available to small businesses in rural Florida communities. Photo: ThinkStock.com

**What is a building energy audit?** An energy audit is an assessment of the energy use and energy saving opportunities in a building. The business or building owners play a role in the audit by providing utility bills and getting quotes for the improvements to facilitate cost-benefit calculations. The audit report provides recommendations and calculations that help applicants complete the technical sections of the Renewable Energy Systems & Energy Efficiency Improvement Loan & Grant applications.

**Action Item:** To be considered for a subsidized energy audit of the

### Recent Posts

- » [Energy Audits for Rural Small Businesses](#)
- » [New Florida Energy Code Effective June 30, 2015. Sign Up for the Training You Need; Limited Time Discount Available](#)
- » [EnergyWhiz Energizes Students in Hydrogen and Solar](#)
- » [Energy Department Funds UCF Research in Housing Innovations](#)
- » [2015 EnergyWhiz Winners](#)

### Recent Comments

- » [FreeSolar on 2015 EnergyWhiz Winners](#)
- » [kirsten burnett on MEDIA ADVISORY: Student-Designed and Built Solar Cars, Electric Go-Carts, Solar Cookers, Hydrogen Cars and Contraptions, Energy Efficient Pet Homes and Solar Inventions – All in One Day!](#)
- » [sherri on MEDIA ADVISORY: UCF's First Electric Vehicle Fast Charging Station Opens in Cocoa – Grand Opening and Ride & Drive Announced](#)
- » [elizabeth on MEDIA ADVISORY: UCF's First Electric Vehicle Fast Charging Station Opens in Cocoa – Grand Opening and Ride & Drive Announced](#)
- » [Mike. B on Notice to Consumers, Contractors, and Building Officials](#)

### Archives

- » [June 2015](#)
- » [May 2015](#)
- » [April 2015](#)
- » [March 2015](#)
- » [February 2015](#)
- » [October 2014](#)
- » [September 2014](#)
- » [August 2014](#)
- » [June 2014](#)
- » [May 2014](#)
- » [April 2014](#)

[blog.floridaenergycenter.org/echronicle/2015/06/usda-energy-audits/](http://blog.floridaenergycenter.org/echronicle/2015/06/usda-energy-audits/)

1

Figure B2. Excerpt from the FSEC blog post announcing the audit opportunity on June 5, 2015 revised June 10, 2015. <http://blog.floridaenergycenter.org/echronicle/2015/06/usda-energy-audits/>



**Subject:** Re: Grant opportunity for small businesses  
**From:** Karen Sutherland <ksutherland@fsec.ucf.edu>  
**Date:** 6/25/2015 11:37 AM  
**To:** "Decaminada, Dawn" <dawn@cfdc.org>  
**CC:** Janet McIlvaine <janet@fsec.ucf.edu>

This is great. Big thanks Dawn!

On 6/24/2015 11:04 AM, Decaminada, Dawn wrote:

The Polk County Small Business Assistance Center is pleased to share the following opportunity to Polk County rural small businesses.

The U.S. Department of Agriculture's (USDA) Rural Development initiative reaches out to communities across America with many programs (<http://www.rd.usda.gov/programs-services/all-programs>). USDA's Rural Energy for America Program offers grants and loans for energy efficiency improvements and renewable energy systems to agriculture operations and qualifying rural small businesses.

- Example energy improvements include adding insulation, window tinting, high-efficiency lighting, refrigeration unit and air conditioner replacement.
- An energy audit is required. USDA has chosen the University of Central Florida to provide a limited number of subsidized energy audits to eligible businesses in Florida.
- Audits will be conducted by staff at the Florida Solar Energy Center (FSEC), a non-profit research institute of UCF located in Cocoa, FL.
- FSEC conducts energy research for and supports many federal, state, and private agencies.
- FSEC staff can help determine eligibility for USDA's grants and loans, a prerequisite to receive a subsidized energy audit.

Contact Janet McIlvaine: at [janet@fsec.ucf.edu](mailto:janet@fsec.ucf.edu) (preferred) or 321-638-1434. Please make your email subject "REAP energy audits, <insert your business name>" and in the email include the business name, address to be audited, general nature of the business (retail, health care, restaurant, pharmacy, etc.), and your contact information.

See FSEC's Blog post for more information <http://blog.floridaenergycenter.org/echronicle/2015/06/usda-energy-audits/>

Sincerely,  
Dawn Decaminada



Supervisor  
Small Business Assistance Center  
330 West Church St.  
Bartow, Florida 33830  
Office: 863-534-5921  
Cell: 863-344-1558  
Fax: 863-534-5932  
Web: [www.cfdc.org/sbac](http://www.cfdc.org/sbac)

Figure B3. Email blast from the Small Business Assistance Center of Polk County. Similar text was provided to the Titusville Chamber of Commerce, Lake Wales Area Chamber of Commerce, and the Lake Wales Economic Development Council.

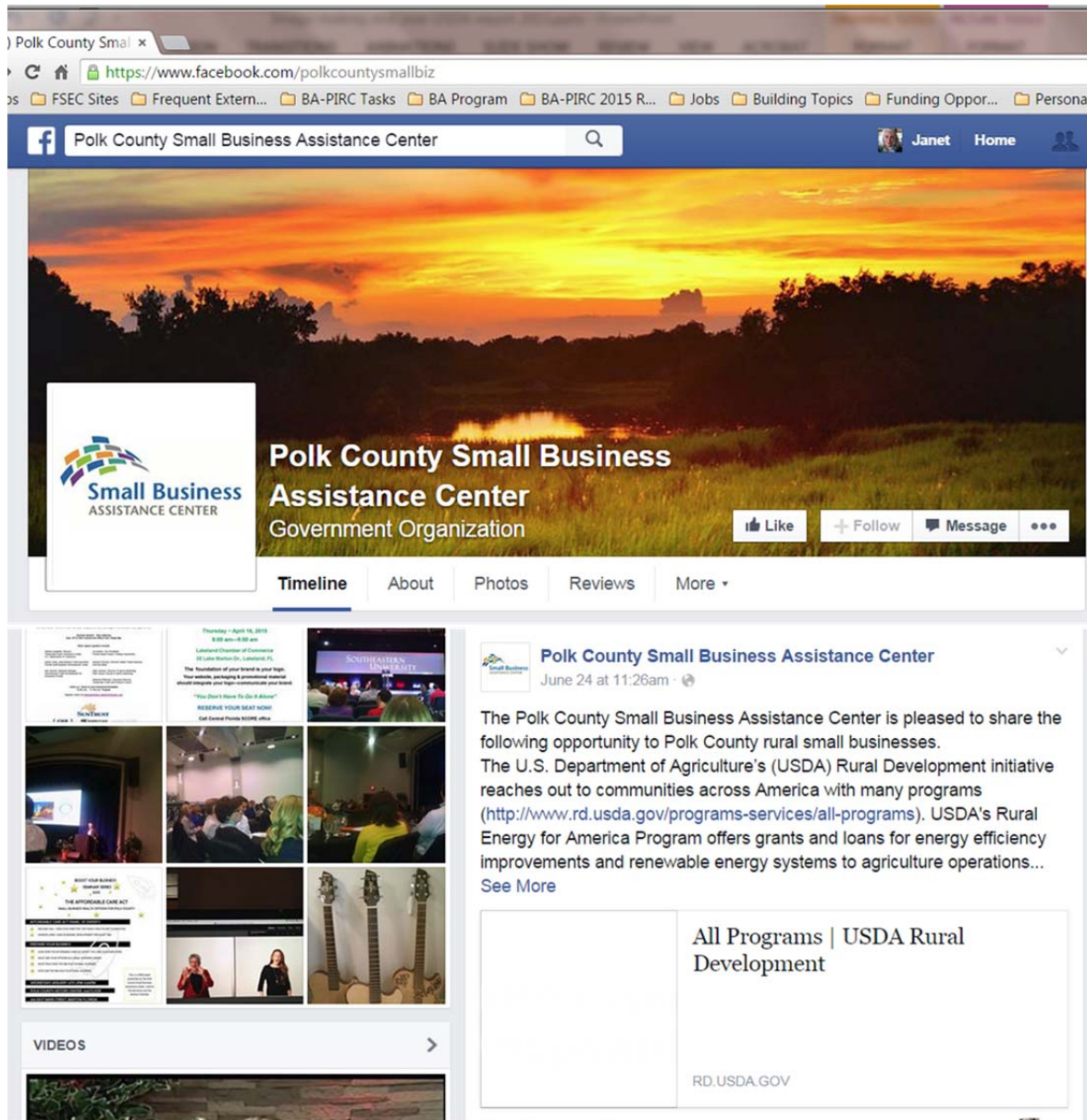



Figure B4. Facebook post by the Small Business Assistance Center of Polk County specifically promoting the REAP Energy Audit opportunity and USDA Rural Development programs.



Figure B5. Facebook Post by SCORE of Central Florida providing a link to USDA Rural Development programs.




Figures B6-B10 (below, 5 pages). Fliers for recruiting audit candidates.



USDA  
Rural Development  
Committed to the future of rural communities.

**Rural Energy For America  
(REAP) Applicants in Florida:**



FLORIDA SOLAR  
ENERGY CENTER®  
Creating Energy Independence

\*Audit recipients must meet USDA eligibility criteria for the REAP program.  
\*\* Audit cost depends on the size and scope of your facility and operations.



### **Agriculture Producers & Rural Small Business Owners:**

The USDA has grants and loan guarantees for renewable energy and energy efficiency improvements. Find out how the Rural Energy for America Program (REAP) can help you improve facilities and operation cost.

### **This program may be right for your business if you...**

- Need to reduce electric bills
- Plan to replace AC, coolers, ventilation, lighting, major equipment
- Are considering solar power for ventilation fans, pumping, or lighting
- Have to replace windows or plan to add on to an existing building
- Need to improve comfort, lighting quality, ventilation, or pumping

### **☒ Get the facts about USDA's Rural Energy For America Program**

1. USDA REAP overview: <http://www.rd.usda.gov/reap>
2. Ask for the REAP specialist at the USDA Rural Development Office nearest you:
  - Crestview (850) 682-2416
  - Marianna (850) 526-2610
  - Lake city (386) 719-5590
  - Ocala (352) 732-7534
  - Davenport (863) 420-4833
  - Royal palm beach (561) 792-2727
  - North ft. Myers (239) 997-7331

### **☒ Get the facts on the energy audit required for REAP funding**

1. Applications require cost-benefit & other calculations
2. Must be done by a qualified energy auditor
3. USDA has subsidize the Florida Solar Energy Center (FSEC) at the University of Central Florida (UCF) to conduct audits for REAP candidates\*
4. Contact an FSEC auditor to learn more:
  - Janet McIlvaine 321-638-1434
  - Karen Sutherland 321-638-1474
  - Jeff Sonne 321-638-1406
  - David Beal 321-638-1433

\*Audit recipients must meet USDA eligibility criteria for REAP. Audit cost depends on the size and scope facility, operations, and improvement plans.

Flyer-6 - General





### **USDA Rural Energy for America Program (REAP) partners with UCF**

The U.S. Department of Agriculture (USDA) offers grants and loan guarantees for renewable energy systems & energy efficiency improvements to agriculture operations and rural small businesses through the Rural Energy for America Program (REAP). Rural small businesses must meet location, size, and other eligibility criteria however, any agriculture operation regardless of size or location is eligible. For a program overview, please visit USDA's REAP webpage: <http://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency>

Examples of eligible renewable energy systems and energy efficiency upgrades include but are not limited to:

- Heating, ventilation and air conditioning systems (HVAC)
- Insulation, air sealing, and duct sealing/replacement
- Lighting and appliances
- Solar electric (photovoltaic) panels
- Ventilation fans, heaters, etc for livestock barns and green houses
- High efficiency and solar water heating systems
- Coolers or refrigeration units
- Doors, windows, insulation, ducts
- Switching to more efficient pumps for irrigation
- Replacement of inefficient office equipment
- If you have high energy bills, we can help you figure out or verify why and recommend improvements

REAP applications require projected energy production and energy savings calculations. To assist applicants in Florida, USDA has arranged for deeply subsidized energy audits and assessments to be provided by the University of Central Florida through UCF's Florida Solar Energy Center, a third party research institute with decades of experience in renewable energy and building energy efficiency. ([www.floridaenergycenter.org](http://www.floridaenergycenter.org)) .

To receive this technical assistance from the Florida Solar Energy Center, you must qualify as an eligible REAP applicant (ag operation or rural small business), be located in Florida, and be seriously considering an eligible system, efficiency improvement, or construction project; HOWEVER, receiving an audit does not obligate you to submit a REAP application.

To learn more, get help determining eligibility, and be considered for a subsidized energy audit for your agriculture operation or rural small business, contact your local USDA Area Office (see list below) or a member of the Florida Solar Energy Center's REAP team:

- Janet McIlvaine, 321-638-1434, [janet@fsec.ucf.edu](mailto:janet@fsec.ucf.edu)
- Karen Sutherland, 321-638-1474, [ksutherland@fsec.ucf.edu](mailto:ksutherland@fsec.ucf.edu)
- Please include "USDA" in the subject line to ensure your email does not get caught in the spam filter.
- Info page: <http://www.fsec.ucf.edu/USDA-REAPenergyaudits>

We look forward to helping you take advantage of this extraordinary USDA funding opportunity!

**REAP Contacts at USDA's Rural Development Area Offices in Florida\***

Area 1, Crestview (850) 682-2416

Ms. Jennifer Dillard (ext 128), [Jennifer.Dillard@fl.usda.gov](mailto:Jennifer.Dillard@fl.usda.gov)

*Serving Escambia, Holmes, Okaloosa, Santa Rosa, and Walton Counties.*

Area 2, Marianna (850) 526-2610

Ms. Loria Phillips, [Loria.Phillips@fl.usda.gov](mailto:Loria.Phillips@fl.usda.gov), or any member of the REAP team

*Serving Bay, Calhoun, Franklin, Gadsden, Gulf, Jackson, Jefferson, Leon, Liberty, Wakulla, and Washington Counties.*

Area 3, Lake city (386) 719-5590

Ms. Elda Rogers (ext 110), [Elda.Rogers@fl.usda.gov](mailto:Elda.Rogers@fl.usda.gov)

*Serving Baker, Bradford, Clay, Columbia, Duval, Hamilton, Lafayette, Madison, Nassau, Suwannee, St. Johns, Taylor, and Union Counties.*

Area 4, Ocala (352) 732-7534

Danielle Ehlers (352) 732-7534 ext 121, [danielle.ehlers@fl.usda.gov](mailto:danielle.ehlers@fl.usda.gov)

*Serving Alachua, Citrus, Dixie, Flagler, Gilchrist, Lake, Levy, Marion, Putnam, Seminole, Sumter, and Volusia Counties.*

Area 5, Davenport (863) 420-4833

Ms. LaTasha Thomas-Pace (ext 118), [Latasha.ThomasPace@fl.usda.gov](mailto:Latasha.ThomasPace@fl.usda.gov)

*Serving Brevard, Hernando, Hillsborough, Indian River, Orange, Osceola, Pasco, Pinellas, and Polk Counties.*

Area 6, Royal Palm Beach

(561) 792-2727 - Ms. Yashira Mendez (ext 130) [Yashira.Mendez@fl.usda.gov](mailto:Yashira.Mendez@fl.usda.gov)

*Serving Broward, Dade, Glades, Hendry, Highlands, Martin, Monroe, Okeechobee, Palm Beach, St. Lucie, Charlotte, Collier, DeSoto, Hardee, Lee, Manatee, and Sarasota Counties.*

Note: The above list of REAP Specialists was compiled in February of 2016 for reference and convenience of potential REAP applicants in Florida by the Florida Solar Energy Center. Specialists noted above are subject to change and may be only one of an Area Office's REAP team.

---

\*Not in Florida? Contact your state or local USDA office: <http://www.rd.usda.gov/browse-state>





## Who We Are

The Florida Solar Energy Center (FSEC) is the largest and most active state-supported renewable energy and energy efficiency research, training and certification institute in the United States. FSEC is a non-profit research institute of the University of Central Florida established in 1975. Researchers specialize in alternative energy (solar electric, solar thermal, and hydrogen) and building energy efficiency for the hot-humid climate. FSEC is located on a 20-acre research complex on Florida's Space Coast at UCF's Cocoa Campus, 35 miles east of Orlando. Learn more about FSEC's current work and history, please visit [www.floridasenergycenter.org](http://www.floridasenergycenter.org)

## What We Do

The Center's professional staff of 60 has expertise in engineering, energy research, building science, energy and policy analysis, and education and training with 30 technical, administrative, and student support staff. The Center has gained national and international recognition for its wide range of research, education, training and certification activities including:

- Zero-energy and zero-energy ready buildings
- Applied building science
- Building failure diagnostics
- Laboratory and field experiments with construction processes, components, and equipment
- Utility demand side management research
- Building simulation software development and calibration with measured data
- Photovoltaic (solar electric) systems
- Solar thermal (water heating) systems
- Hydrogen from renewable resources
- Photoelectrochemical processes
- Alternative-fueled vehicles

FSEC annually receives \$3 million in operating funds from the State of Florida which is supplemented by \$5 million to \$8 million in contracts and grants from federal, state, non-profit, and private entities for research, training, and services. Total funding since FSEC's inception in 1975 exceeds \$225 million.

## FSEC Buildings Research

The Buildings Research Division specializes in measured energy use and savings in occupied buildings and highly instrumented laboratories, computer simulation software, home energy rating industry leadership, and technical assistance to the construction industry through programs such as the U.S. Department of Energy funded Building America Partnership for Improved Residential Construction. In 2015, the U.S. Department of Agriculture selected FSEC to provide energy audits to agriculture operations and rural small businesses. Other research efforts are developed in partnership with builders, contractors, manufacturers, nonprofit organizations, private sponsors and national laboratories. Results are widely disseminated through industry and trade journals, national and local media and available free at: <http://www.fsec.ucf.edu/en/publications/publist.php?dept=br>

[www.fsec.ucf.edu](http://www.fsec.ucf.edu) 321-638-1000 1679 Clearlake Road, Cocoa, FL 32922

Figure B11 (below, 2 pages). Article written for but not used by Clay County Electric Co-op



**UCF providing subsidized energy audits to agriculture operations and small, rural businesses applying for USDA energy efficiency improvement and renewable energy grants and loan guarantees**

The University of Central Florida (UCF) has partnered with the U.S. Department of Agriculture (USDA) to provide subsidized energy audits to agriculture operations and small, rural businesses applying for USDA grants and loan guarantees for energy efficiency improvements and renewable energy installations through the Renewable Energy for America Program (REAP). Rural small businesses must meet location, size, and other eligibility criteria however, any agriculture operation regardless of size or location is eligible. For a program overview, please visit USDA's REAP webpage:

<http://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency>

If you have high energy bills, we can help you figure out or verify why and recommend improvements! Examples of eligible energy efficiency upgrades include but are not limited to:

- Ventilation fans, heaters, etc for livestock barns and green houses
- Heating, ventilation and air conditioning systems (HVAC)
- Insulation, air sealing, and duct sealing/replacement
- Lighting and appliances
- High efficiency and solar water heating systems
- Coolers or refrigeration units
- Doors, windows, insulation, ducts
- Switching to more efficient pumps for irrigation
- Replacement of inefficient office equipment

Renewable energy installations (such as solar electric panels) also qualify under the REAP program.

REAP applications require projected energy production and energy savings calculations. To assist applicants, USDA has arranged for deeply subsidized energy audits and assessments to be provided by the Florida Solar Energy Center, a research institute of the University of Central Florida ([www.floridaenergycenter.org](http://www.floridaenergycenter.org)).



To receive this technical assistance from the UCF's Florida Solar Energy Center, you must qualify as an eligible REAP applicant (ag operation or rural small business), be located in Florida, and be seriously considering an eligible system, efficiency improvement, or construction project; HOWEVER, receiving an audit does not obligate you to submit a REAP application.

To learn more, get help determining eligibility, and be considered for a subsidized energy audit for your rural small business or agriculture operation, contact a member of the Florida Solar Energy Center's REAP team:

- **Janet McIlvaine, 321-638-1434, [janet@fsec.ucf.edu](mailto:janet@fsec.ucf.edu)**
- **Karen Sutherland, 321-638-1474, [ksutherland@fsec.ucf.edu](mailto:ksutherland@fsec.ucf.edu)**

*Please include "USDA" in the subject line to ensure your email is not caught in the spam filter.*

We look forward to helping you take advantage of this extraordinary USDA funding opportunity!

---

#### **REAP Contacts at USDA's Rural Development Area Offices in Florida:\***

Area 1, Crestview office: **Escambia, Holmes, Okaloosa, Santa Rosa, and Walton Counties.**  
Ms. Jennifer Dillard (850) 682-2416 (ext 128), [Jennifer.Dillard@fl.usda.gov](mailto:Jennifer.Dillard@fl.usda.gov)

Area 2, Marianna office: **Bay, Calhoun, Franklin, Gadsden, Gulf, Jackson, Jefferson, Leon, Liberty, Wakulla, and Washington Counties.**  
Ms. Loria Phillips (850) 526-2610, [Loria.Phillips@fl.usda.gov](mailto:Loria.Phillips@fl.usda.gov) or any member of the REAP team

Area 3, Lake City office: **Baker, Bradford, Clay, Columbia, Duval, Hamilton, Lafayette, Madison, Nassau, Suwannee, St. Johns, Taylor, and Union Counties.**  
Ms. Elda Rogers (386) 719-5590 (ext 110), [Elda.Rogers@fl.usda.gov](mailto:Elda.Rogers@fl.usda.gov)

Area 4, Ocala office: **Alachua, Citrus, Dixie, Flagler, Gilchrist, Lake, Levy, Marion, Putnam, Seminole, Sumter, and Volusia Counties.**  
Danielle Ehlers (352) 732-7534 (ext 121)

Area 5, Davenport office: **Brevard, Hernando, Hillsborough, Indian River, Orange, Osceola, Pasco, Pinellas, and Polk Counties.**  
Ms. LaTasha Thomas-Pace (863) 420-4833 (ext 118), [Latasha.ThomasPace@fl.usda.gov](mailto:Latasha.ThomasPace@fl.usda.gov)

Area 6, Royal Palm Beach office: **Broward, Dade, Glades, Hendry, Highlands, Martin, Monroe, Okeechobee, Palm Beach, St. Lucie, Charlotte, Collier, DeSoto, Hardee, Lee, Manatee, and Sarasota Counties.**  
Ms. Yashira Mendez (561) 792-2727 (ext 130) [Yashira.Mendez@fl.usda.gov](mailto:Yashira.Mendez@fl.usda.gov)

*Note: The above list of REAP Specialists was compiled in February of 2016 for reference and convenience of potential REAP applicants in Florida by the Florida Solar Energy Center. Specialists noted above are subject to change and may be only one of an Area Office's REAP team.*

## **Appendix C – FSEC REAP and Subsidized Audit Presentation**



## **Appendix D – Audit Highlights**

## **Appendix E – Technical Report Excerpts**



Florida Solar Energy Center  
1679 Clearlake Road  
Cocoa, Florida 32922  
(321) 638-1000  
**[www.floridaenergycenter.org](http://www.floridaenergycenter.org)**



A Research Institute of the University of Central Florida