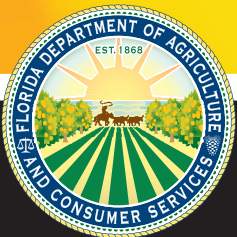


2016

ANALYSIS OF THE ECONOMIC CONTRIBUTION OF THE RENEWABLE ENERGY TAX INCENTIVES



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



FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
COMMISSIONER ADAM H. PUTNAM

March 9, 2018

Dear Governor Scott, President Negron and Speaker Corcoran:

Pursuant to Section 377.703(2)(n), Florida Statutes, I am pleased to provide you with the attached Analysis of the Economic Contribution of the 2016 Renewable Energy Tax Incentives. The tax incentives include the Florida Renewable Energy Technologies Sales Tax Refund, the Florida Renewable Energy Technologies Investment Tax Credit and the Florida Renewable Energy Production Credit.

Due to an ongoing review of the Renewable Energy Technologies Investment Tax Credit, only the Florida Renewable Energy Technologies Sales Tax Refund and the Florida Renewable Energy Production Credit are included in this analysis.

The department estimates that a total investment of \$7.56 million for these two programs created an estimated total of 781 jobs and generated approximately \$46.4 million in labor income. Further, these programs produced an estimated economic contribution of more than \$167 million.

We look forward to continuing to work with you to create a stable, reliable, diverse and resilient supply of energy for Florida's future.

Sincerely,

Kelley Smith Burk
Director, Office of Energy

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1. Introduction

This report, required by Section 377.703(2)(n), Florida Statutes, is an overview of the utilization of these programs granted under the 2016 application cycle, as well as a critical assessment to determine if the programs produced a positive economic impact on our state and created new jobs for Floridians.

Through its rules, the Florida Department of Agriculture and Consumer Services (FDACS) required that all applicants provide a description of the economic impact that the eligible project has had on the state. This information may include the total dollar value of additional investments made, the number of jobs created and the total dollar value of salaries and wages of jobs created as a result of the project. Regional economic modeling was used as the basis for this evaluation. FDACS also reviewed public response to the programs, including requests for technical assistance in completing 2016 applications.

2. Florida Renewable Energy Technologies Sales Tax Refund

Pursuant to Section 212.08(7)(hhh), Florida Statutes, the Florida Renewable Energy Technologies Sales Tax Refund Program provides a refund of previously paid Florida sales tax on materials used in the distribution, including fueling infrastructure, transportation and storage of biodiesel (B10-B100), ethanol (E10-E100) and other renewable fuels. An eligible item is subject to a one-time refund and must have been purchased between July 1, 2012, and June 30, 2016. This program is limited to \$1 million in Florida sales tax refunds each state fiscal year for all taxpayer applicants.

2.1 Utilization Summary

The Florida Renewable Technologies Sales Tax Refund was oversubscribed for the first time in the final year of the program. FDACS received eight applications for Fiscal Year 2015-2016 and issued five sales tax refunds, including one partial refund, totaling \$1 million.

Table 1. Utilization of the Florida Renewable Energy Technologies Sales Tax Refund

Fiscal Year	Appropriation	Total Refunds Approved	Unused Refunds
FY2012-2013	\$1 million	\$0	\$1 million
FY2013-2014	\$1 million	\$261,686.16	\$738,313.84
FY2014-2015	\$1 million	\$27,740.66	\$972,259.34
FY2015-2016	\$1 million	\$1 million	\$0

Four of the eight applications received were granted a full credit and one application was granted a partial credit. Two of the eight applications, including the applicant that received a partial refund, did not receive a full refund due to an exhaustion of funding. One application was deemed incomplete. The rule administering this program allows applicants to submit a corrected application. However, the applicant did not submit a corrected application.

Table 2. FY2015-16 Approved Applicant List

Taxpayer	Approved Refund	Fueling Infrastructure	Transportation	Storage
Gate Petroleum	\$137,500.37	\$117,133.46	\$20,366.91	\$0
RaceTrac	\$411,350.34	\$411,350.34	\$0	\$0
RaceTrac*	\$251,274.84	\$251,274.84	\$0	\$0
Viesel Fuel	\$99,161.69	\$68,467.72	\$4,598.27	\$26,095.70
Viesel Fuel	\$100,712.76	\$86,494.73	\$2,480.18	\$11,737.85
Total	\$1,000,000	\$934,721.09	\$27,445.36	\$37,833.55

*RaceTrac received a partial sales tax refund due to exhausted funding.

2.2 Methodology

The Renewable Energy Technologies Sales Tax Refund is awarded to eligible applicants as a reimbursement of state sales taxes paid on materials used in the distribution of biodiesel, ethanol and other renewable fuels. These materials include those used to build, repair or maintain fueling infrastructure, transportation and storage facilities for renewable fuels in Florida. However, the total expenditures on renewable fuel distribution supported by this program are much larger than the refunds awarded, since the refunds represent just a small fraction of the total costs of these improvements. Specifically, the refunds amount to just 6 percent of the total expenditures in materials destined for renewable fuel distribution in the state.

To determine the contribution that the program has made to Florida's economy, a model of the state's economy was created using the IMPLAN regional economic modeling system (Minnesota Implan Group, Inc., 2013) and associated state database for 2014. The use of a regional economic model allows a descriptive analysis that tracks the gross economic activity created by the policy as the dollars cycle through the region's economy (Watson et al., 2007). IMPLAN databases incorporate federal and state economic statistics on commodity production, household and government final demand, industry output, employment, labor and property income, domestic and international trade, personal and business taxes, transfer payments, capital investment and business inventories. The model estimates regional economic multiplier effects, including direct changes in output or employment, indirect effects on supply chain activity and induced effects on employee household and government spending (Hodges & Spreen, 2012).

At a sales tax rate of 6 percent, the \$1 million in tax refunds supported total equipment purchases for renewable fuel distribution of \$16,666,666.67. Broken down by spending category, \$934,721.09 was awarded for purchases in fueling infrastructure materials of \$15,578,684.83; \$27,445.36 was awarded for investments in renewable fuels transportation of \$457,422.67; and \$37,833.55 was awarded for purchases in fuel storage materials of \$630,559.17. Purchases of fueling infrastructure materials generally include items like pumps, piping, tubing and connectors, and therefore are entered in the IMPLAN model in the "fabricated pipe and pipe fitting manufacturing" sector. Investments in renewable fuels transportation in Florida will generally occur as truck transportation, and are therefore entered in the IMPLAN model in the "truck transportation" sector. Similarly, purchases of fuel storage materials are likely to be large metal tanks, metal pipes and other metallic structures, hence they were entered in the IMPLAN model in the "metal tanks (heavy gauge) manufacturing" sector, which manufactures tanks, vessels, and other containers by cutting, forming and joining heavy-gauge metals, as well as installs heavy-gauge metal tanks (IBIS World, 2014).

2.3 Results

Estimated direct, indirect, induced and total economic contributions of this program are summarized in Table 3. During the 2015-2016 fiscal year, awarded sales tax refunds for renewable fuel distribution capital improvements of \$1 million resulted in total purchases of new equipment or transportation investments of \$16,666,667 and a total economic contribution of \$27,475,204. These refunds also supported or created a total of 133 jobs with an average annual pay of \$57,109, for a total income contribution of \$7,624,145.

Table 3. Summary of Economic Impacts in 2016 for Renewable Energy Technologies Sales Tax Refund

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	61.6	\$4,127,494	\$6,099,857	\$16,666,667
Indirect Effect	30.7	\$1,707,168	\$2,667,907	\$5,152,382
Induced Effect	41.2	\$1,789,488	\$3,205,746	\$5,656,170
Total Effect	133.5	\$7,624,150	\$11,973,510	\$27,475,219

Estimated local, state and federal taxes collected as a result of the economic activity supported by the program are summarized in Table 4. FDACS estimates \$665,719 was collected in state and local taxes, while \$1,879,326 was collected in federal taxes.

Table 4. Tax Impacts in 2016 for the Renewable Energy Technologies Sales Tax Refund

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations
Total State and Local Tax	\$9,864	\$0	\$572,013	\$48,969	\$34,873
Total Federal Tax	\$863,735	\$25,997	\$75,193	\$654,673	\$259,728

3. Florida Renewable Energy Production Credit

Pursuant to Section 220.193, Florida Statutes, the Florida Renewable Energy Production Credit Program provides an annual corporate tax credit equal to \$0.01/kWh of electricity produced and sold by the taxpayer to an unrelated party during a given tax year. The credit may be claimed for electricity produced and sold on or after January 1, 2013, through June 30, 2016. The combined total amount of tax credits which may be granted for all taxpayers under this section is limited to \$5 million in state fiscal year 2012-2013 and \$10 million per state fiscal year in state fiscal years 2013-2014 through 2016-2017.

3.1 Utilization Summary and Public Response

The Florida Renewable Energy Production Credit Program continues to be a very popular program. During the 2016 production year, FDACS received a total of 24 applications, eight of which were new to the program and had not previously applied. FDACS issued 21 tax credits to qualified applicants for over \$6.5 million. FDCAS received three applications that did not meet the governing rule criteria and therefore did not receive a tax credit.

Table 5. Florida Renewable Energy Production Credit Program Status

Fiscal Year	Appropriation	Total Credits Approved	Unused Credits
FY2012-13	\$5 million	\$5 million	\$0
FY2013-14	\$10 million	\$10 million	\$0
FY2014-15	\$10 million	\$10 million	\$0
FY2015-16	\$10 million	\$10 million	\$0
FY2016-17	\$10 million	\$6,568,634.12	\$3,431,365.88

It is important to note that the production period for the final year of the program was a six-month production period versus a 12-month production period in the previous three application cycles. If the production period had been for 12 months, the program would have been oversubscribed.

Table 6: 2016 Production Year Approved Applicant List

Taxpayer	Type of Renewable Energy	Total Kilowatt Hours Produced	Facility Operation Date	New/ Expanded Facility	Total Approved Credit
Alliance Dairies	Biomass	2,597,076	2012	New	\$25,970.76
Duke Energy Florida	Solar	1,519,621	2016	New	\$15,196.21
Duke Energy Florida Solar Solutions	Solar	3,274,268	2016	New	\$32,742.68
FPL DeSoto Plant	Solar	24,877,000	2009	New	\$248,770.00
FPL Martin Plant	Solar	48,435,000	2010	New	\$484,350.00
FPL Space Coast Plant	Solar	9,492,000	2010	New	\$94,920.00
Gulf Power Company	Biomass	11,585,000	2010	New	\$115,850.00
G2 Energy	Biomass	12,240,360	2009	New	\$122,403.60
Harvest Power Orlando	Biomass	6,959,682	2013	New	\$69,596.82
Ikea Miami	Solar	808,317	2014	New	\$8,083.17
Ikea Orlando	Solar	707,317	2012	New	\$7,073.17
Ikea Sunrise	Solar	755,238	2013	New	\$7,552.38
Ikea Tampa	Solar	946,943	2012	New	\$9,469.43
International Paper Company	Biomass	179,342,527	2007	New	\$1,793,425.27
Lockheed Martin	Solar	1,819,739	2015	New	\$18,197.39
Mosaic Fertilizer TG3	Waste Heat	66,008,750	2008	New	\$660,087.50
Mosaic Fertilizer TG4	Waste Heat	72,784,750	2014	New	\$727,847.50
Rayonier A.M. Products	Biomass	136,897,926	2006	New	\$1,368,979.26
New Hope Power Company	Biomass	53,500,411	2006	New	\$535,004.11

Waste Management Renewable Energy Naples	Biomass	8,301,247	2011	New	\$83,012.47
Waste Management Renewable Energy Springhill	Biomass	14,010,240	2006	New	\$140,102.40
TOTAL		656,863,412			\$6,568,634.12

3.2 Methodology

The program supported the production of 656,863,412 kilowatt-hours of electricity from renewable sources in the 2016 production period. At a state average price of 10.64 cents per kilowatt-hours during the last 24 months (Energy Information Administration), this amounts to an estimated \$69,890,267.04 in revenue from the sale of electricity. This estimate of total revenues from sales of renewable electricity supported by the program was entered into the IMPLAN model in the relevant electric power generation sectors. Specifically, \$45,266,227.50 was entered into the biomass electricity generation sector, \$ 9,856,411.14 was entered into the solar electricity generation sector, and \$14,767,628.40 was entered into the other electricity generation sector.

3.3 Results

Estimated direct, indirect, induced and total economic contributions of the program are summarized in Table 7. For 2016, a total program investment of \$6,568,634.12 million produced an estimated total output contribution of \$139.5 million. The value added contribution totaled \$68.3 million, and the labor income contribution totaled \$38.8 million. Similarly, the program is estimated to have supported or created nearly 648 jobs throughout the state.

Table 7. Summary of Economic Impacts in 2016 for the Renewable Energy Production Credit

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	116.8	\$14,647,992	\$29,209,174	\$69,890,264
Indirect Effect	323.8	\$15,208,734	\$22,984,876	\$41,283,201
Induced Effect	207.1	\$8,984,243	\$16,075,655	\$28,358,846
Total Effect	647.7	\$38,840,969	\$68,269,705	\$139,532,311

Estimated local, state and federal taxes collected as a result of the economic activity fostered by the program are summarized in Table 8. Total state and local taxes collected were estimated to be \$12 million, while total federal taxes collected were estimated to be \$9.5 million.

Table 8. Tax Impacts from the Renewable Energy Production Credit

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations
Total State and Local Tax	\$29,338	\$0	\$11,620,487	\$258,143	\$153,360
Total Federal Tax	\$2,568,793	\$794,341	\$1,527,552	\$3,451,110	\$1,142,187

4. Return on Investment

To examine the gains that result from the Renewable Energy Technologies Sales Tax Refund and the Renewable Energy Production Credit to the economy of Florida, FDACS developed several measures of the Return on Investment (ROI) of the associated programs. Two variations of ROI show the economic contributions and tax revenues generated for each dollar that the state invested in the Renewable Energy Technologies Sales Tax Refund and the Renewable Energy Production Credit during 2016. The measure is calculated using the following equation:

$$ROI = \frac{Return}{Investment}.$$

In the equation, *Return* refers to either the estimated total economic contribution or state and local taxes collected as a result of the program, while *Investment* refers to the total amount of credits approved by the department. In addition, the ‘economic benefits’ measure defined in Section 288.005, Florida Statutes, is also calculated as:

$$ROI = \frac{(State\ and\ Local\ Tax\ Contribution - Investment)}{Investment} \times 100.$$

The ROI in Section 288.005, Florida Statutes, is defined as the “direct, indirect, and induced gains in state revenues as a percentage of the state’s investment. The state’s investment includes state grants, tax exemptions, tax refunds, tax credits, and other state incentives.” The different ROI measures for each of the two programs are shown in Table 9.

Table 9. Return on Investment (ROI) from the Renewable Energy Technologies Sales Tax Refund and the Renewable Energy Production Credit

Program	Contribution ROI	State and Local Tax ROI	F.S. 288.005 ROI
Renewable Energy Technologies Sales Tax Refund (Program)	\$27.48	\$0.67	-33.43%
Renewable Energy Production Credit (Program)	\$21.24	\$1.84	83.62%

Calculation of the ROI from the Renewable Energy Tax Incentives shows that these programs provide positive and sizable returns to the state of Florida. Each dollar invested in the Renewable Energy Technologies Sales Tax Refund yields an estimated \$27.48 in economic output throughout the state, and an estimated 67 cents of each dollar returns to state and local government coffers in the form of taxes. The Renewable Energy Production Credit has an even more impressive return on investment, as every dollar invested in this program results in an estimated \$21.24 of economic activity throughout the state, and an estimated \$1.84 returns to state and local government as tax revenues.

5. Conclusion

The economic contribution of the Florida Renewable Energy Technologies Sales Tax Refund and Florida Renewable Energy Production Credit have been substantial. In 2016 alone, an investment of \$7.56 million resulted in an estimated 781 jobs created or supported statewide. Similarly, the Florida Renewable Energy Technologies Sales Tax Refund and Florida Renewable Energy Production Credit were responsible for raising an estimated \$12.7 million in state and local taxes, generating an estimated \$46.4 million in labor income and producing an estimated total economic contribution of more than \$167 million.

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