

Compact Fluorescent Light Outreach Program Report

City of Sarasota

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Report Outline:

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1. Introduction

The city and county of Sarasota are working jointly to achieve the goals set by an Energy Star grant to educate the public about energy efficient light bulbs. The grant has provided compact fluorescent light bulbs to distribute to the public for free in an effort to reduce energy consumption and carbon dioxide emissions in Sarasota County. This report will describe the advantages of CFL's, answer frequently asked questions, describe the outreach program, and present the data about the CFL's distributed this summer.

2. Background on CFL's

Compact Fluorescent Light Bulbs (CFL's) produce energy more efficiently than conventional household incandescent light bulbs. In incandescent light bulbs, 90% of the energy used to burn the filament escapes as heat instead of light. CFL's contain gas that produces UV light when the gas is excited by electricity. The UV light hits the white coating in the CFL's and the coating changes it into light. This process requires far less energy than incandescent light bulbs and leads to less carbon emissions and savings on household energy bills.



Incandescent light bulb and a Compact Fluorescent light bulb

3. Benefits of CFL's

- CFL's last 10 times longer
- About \$30 savings or more in electricity cost over the bulb's lifetime¹
- 75% less electricity is used by producing 75% less heat
- CFL's release only 25% of the carbon dioxide emissions compared to incandescent light bulbs²

4. Frequently Asked Questions about CFL's

- *Do CFL's contain mercury?*
 - Yes, CFL's contain about enough mercury to cover the tip of a ballpoint pen, or 4 milligrams. The mercury is sealed within the glass tubing, and harmless if contained in the glass. The National Electrical Manufacturers Association has worked to reduce the amount of mercury in CFL's at least 20% in the last year.
 - Overall CFL's result in less mercury in the environment compared to traditional light bulbs because they use less electricity and pollution from power plants is the main source of mercury emissions in the U.S.
- *How do you dispose of CFL's?*
 - The EPA recommends that consumers should recycle CFL's at local designated sites. In Sarasota bulbs can be recycled at:
 - Any Home Depot
 - Sarasota County HHW Chemical Collection Center at 8750 Bee Ridge Road SARASOTA, FL 34241³
- *What if the bulb burns out before it should?*
 - Look at the CFL base to find the manufacturer's name. Visit the manufacturer's web site to find the customer service contact information to inquire about a refund or replacement.
 - Manufacturers producing ENERGY STAR qualified CFL's are required to offer at least a two-year limited warranty (covering manufacturer defects) for CFL's used at home.⁴

5. Outreach Program

During this summer volunteer interns through the City of Sarasota's Sustainability Advocacy Volunteer Educator (SAVE) Program have distributed free CFL's at the Farmer's Market on Saturday mornings. Volunteers have asked residents to sign pledges, provided by Energy Star, that state:

¹ http://www.energystar.gov/index.cfm?c=cfls.pr_cfls

² <http://www.thebulb.com>

³ Visit www.Earth911.com for locations in other municipalities.

⁴ www.energystar.gov/ia/partners/promotions/change_light/downloads/Fact_Sheet_Mercury.pdf

“I’ll do my part to save energy resources and help protect our environment by changing a light to one that’s earned the government’s Energy Star for energy efficiency.”

This pledge also asks for the resident’s zip code for data purposes used in this report. Each Saturday for five weeks volunteers distributed an average of ninety-six CFL’s. Some of these bulbs were distributed to residents of neighboring Florida counties and a few were given to residents of other states, but the majority remained in Sarasota County.

6. Outcomes and data

- Total Carbon Dioxide emissions saved by replacing 220 incandescent light bulbs with CFL’s = **110,880 pounds**
- Total savings by replacing 220 incandescent light bulbs with CFL’s = **\$8,272.00**
* Source <http://www.thebulb.com/store/t-savingscalculator.aspx>

CFL's distributed per Zip Code in Sarasota County

Zip Code	CFL's Distributed	Electric Bill Savings	lbs of CO2 emissions prevented
34228	5	\$188.00	2520
34229	1	\$37.60	504
34230	9	\$338.40	4536
34231	27	\$1,015.20	13608
34232	19	\$714.40	9576
34233	9	\$338.40	4536
34234	24	\$902.40	12096
34235	12	\$451.20	6048
34236	33	\$1,240.80	16632
34237	7	\$263.20	3528
34238	4	\$150.40	2016
34239	23	\$864.80	11592
34240	8	\$300.80	4032
34241	8	\$300.80	4032
34242	6	\$225.60	3024
34243	12	\$451.20	6048
34275	8	\$300.80	4032
34285	2	\$75.20	1008
34288	1	\$37.60	504
34292	2	\$75.20	1008
Totals	220	\$8,272.00	110880

7. Conclusion

This summer the City of Sarasota has worked to fulfill their goal of reducing the community's energy consumption through distributing CFL's to residents at the Farmer's Market. The City is also working to reduce their own energy consumption through the efforts of their Energy Conservation Initiative. Currently the City uses T8 lighting, energy efficient fluorescent lighting, in all buildings, LED lights for street lighting, and LED traffic lights throughout the City.

Although CFL 's are the most the cost effective energy efficient solution for home lighting today, the future will produce improved lights that overcome their limitations. In the future Light-emitting diodes, or LED lighting may evolve to replace the common household incandescent light bulb. Today the most practical choice for energy conservation is to replace incandescent light bulbs with CFL's. Through Sarasota's CFL outreach program hundreds of residents are now helping to reduce the community's energy consumption and carbon dioxide emissions.