Fields of Opportunities

STATE OF IOWA

CHESTER J. CULVER, GOVERNOR
PATTY JUDGE, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
RICHARD A. LEOPOLD, DIRECTOR

To: The Honorable Chester J. Culver and Members of the General Assembly

From: Richard A. Leopold, Director

Re: Mercury Containing Lamp Recycling Program Study

Date: January 22, 2009

I am pleased to send the Mercury Containing Lamp Recycling Program Study as required by 2008 Iowa Acts Senate File 2321. The Department was directed to conduct a study and make recommendations for the implementation and financing of a convenient and effective mercury containing lamp recycling program. The attached report provides background information, outlines several financing options, and gives several recommendations for fluorescent lamp recycling.

502 EAST 9th STREET / DES MOINES, IOWA 50319-0034
PHONE 515-281-5918 FAX 515-281-8895 www.iowadnr.gov

Mercury Containing Lamps Recycling Program Study

A Report to the Iowa General Assembly

January, 2009

Iowa Department of Natural Resources
Richard A. Leopold, Director

Prepared by:
Theresa Stiner
(515) 281-8646
Theresa.Stiner@dnr.iowa.gov

Mercury Containing Lamps Recycling Program Study

2008 Iowa Acts Senate File 2321 directed the Department of Natural Resources (DNR) to conduct a study and make recommendations on the implementation and financing of a convenient and effective mercury-containing lamp recycling program.

Introduction:

Figure 1. Linear fluorescent lamps

Linear fluorescent lamps (Figure 1) have been used in industrial, commercial, and residential settings since the 1940's. They come in various lengths and may be straight, round or U shaped. Compact fluorescent lamps (CFL) (Figure 2) were developed as an alternative to incandescent lamps in the 1980's and are four times more efficient and last up to 10 times longer than incandescents. They have self-contained ballasts and are designed to be used in incandescent light fixtures. They are used in homes as well as some commercial applications. In recent years, sales of CFLs have grown rapidly due to improvements in design, light quality, reduced cost and increased concern for energy efficiency. However, the increased efficiency has come with a trade off. All fluorescent lamps contain a small amount of mercury. Mercury is not released when the lamp is used and properly recycled; however, it is released when the lamp is broken or disposed of in a landfill. Many people are unaware of the need to recycle fluorescent lamps or do not have a convenient way to recycle them.

Figure 2. Compact Fluorescent Lamp

Mercury in lamps:

All florescent lamps contain some mercury. The amount of mercury depends on the type of lamp and the manufacturer. The members of the National Electrical Manufacturers Association (NEMA) have agreed to limit the amount of mercury in CFLs to 5 mg for 25 watts or less. The actual average is estimated at 3 to 4 mg.[1] for comparison, the amount of mercury in 1000 CFLs is equal to that in a single mercury thermostat. Four-foot linear fluorescents contain an average of 13.3 mg, of mercury with a range of 2.5 mg to 70 mg.[2]

Figure 3. Amount of mercury (lower left) in an average CFL relative to a dime.

It is important to note that when comparing the life cycle of a CFL to the use of incandescent lamps, the

[1] NEMA Recycling Household CFLs September 2007
[2] IMERC Fact Sheet Mercury Used in Lighting updated August 2008

CFL actually results in less mercury in the environment. Incandescent lamps use more energy, much of which comes from coal fired power plants. As a result, using incandescent lamps results in more mercury (and greenhouse gas) emissions.[3]

Even though the amount of mercury used in each bulb is small, due to the increased sales and widespread use, there is a need to manage fluorescent lamps in such a way that the mercury does not escape to the environment. Without a recycling system there is a much greater potential for mercury exposure to homeowners and sanitation workers. If a mercury lamp is "thrown away" it may break in the homeowner's trash can, exposing the family to mercury vapors. If it survives the trash can in tact, it will certainly be broken either in the waste hauler's truck, at a waste transfer station, or at the landfill. When a fluorescent lamp is broken, the mercury vapor escapes immediately but the mercury contained in the phosphor powder volatilizes over time. A study conducted by the Maine Department of Environmental Protection found that when a single CFL is broken in a small, unventilated room, the mercury concentration often exceeded the Maine Ambient Air Guideline of 300ng/m^3.

Although CFLs and linear fluorescent lamps make up the vast majority of mercury containing lamps, there are other types that are used in limited applications. Additional types of mercury containing lamps are:

- Tanning lamps
- Black lights
- Germicidal lamps
- High output fluorescent lamps (HO)
- Cold cathode lamps used for backlighting in liquid crystal displays (LCD)
- High Intensity Discharge (HID)
- Metal halide (MH) lamps
- Ceramic metal halide lamps (CMH)
- High pressure sodium lamps
- Mercury vapor lighting
- Mercury short arc lamps
- Mercury xenon short-arc lamps
- Mercury capillary lamps
- Neon lights (with the exception of red neon lights)

[3] Using a CFL for 10,000 hours results in 16mg of mercury emissions while a CFL used for 10,000 hours will result in only 6.4mg of mercury emissions.

Current regulations:
Hazardous material from businesses may not be disposed of in an Iowa landfill. In the case of fluorescent lamps, their status as a hazardous waste is determined on the basis of the Toxicity Characteristic Leaching Procedure (TCLP). This test measures the amount of heavy metals that may leach out of a waste after it is buried in a landfill. While some linear fluorescent lamps pass the TCLP test and can be landfilled, most fail the TCLP for mercury and therefore may not be landfilled. Some states have placed a disposal ban on all fluorescent lamps.

Sales of CFLs:
CFL sales have grown rapidly due to the energy savings over incandescent lamps and the recent improvements in light quality and applications. In 2007, 290 million energy star CFLs were sold nationally, doubling the previous year's sales. Prorating for Iowa, there will be approximately 2.9 million CFLs ready to be discarded or recycled in 2012. These 2.9 million CFLs contain a total of 20 to 25 pounds of mercury. Because incandescent lamps currently do not meet the efficiency standards set in the Energy Independence and Security Act of 2007, incandescent lamps will be effectively phased out in the US by 2014 while CFL sales are likely to increase.

Some consider CFLs to be an interim technology, with light emitting diodes (LED) (Figure 4), which do not contain mercury, eventually replacing them. Light emitting diodes are currently used in a variety of applications from stop lights to Christmas decorations, however the price of LEDs will need to drop significantly before they will be widely used in place of CFLs or incandescent lamps.

Figure 4. Light emitting diode (LED)

Iowa collection infrastructure for mercury containing lamps:
There are about 4 billion fluorescent lamps, both linear and compact, in circulation in the United States. Of these about 700 million are discarded annually[4]. Prorated for Iowa, this equates to approximately 7 million fluorescent lamps discarded annually.

Iowa households and Conditionally Exempt Small Quantity Generators (CESQG)[5] can properly dispose of any hazardous material, including mercury containing lamps at a Regional Collection Center (RCC). Currently there are 20 RCCs serving 82 counties. Three more RCCs serving an additional five counties will be operational by summer 2010. See Appendix A for a map of the RCCs. Regional Collection Centers are operated by local governments and receive some financial support from the state. The growing demand for recycling of CFLs will result in increased cost for the local governments operating these facilities. RCCs pay $.40 to $.50 per CFL for recycling. That does not include the costs for collection, packaging or transportation to the recycler.

[4] "Spatial Assessment of Net Mercury Emissions from the Use of Fluorescent Bulbs", Environmental Science and Technology, Matthew J Eckelman, Paul T Anastas and Julie B. Zimmerman
[5] This classification applies to businesses that generate less than 220 pounds of hazardous waste and less than 2.2 pounds of acute hazardous waste per month.

In June, 2008, Home Depot launched an in-store CFL recycling program. This free service is available to consumers at all Home Depot stores. A number of Ace Hardware stores also provide in-store recycling however they do charge a fee (See Appendix B for a list of collection locations). Several lamp recycling companies sell mail-in kits. (Figure 5) The consumer purchases the kits on line and receives packaging material with pre-paid postage. This is a very convenient option for businesses that generate small quantities of fluorescent lamps.

Businesses that generate larger quantities can contract with a hazardous waste disposal company or a lamp recycler. The infrastructure for recycling large quantities of fluorescent lamps is well established in Iowa and the recycling costs are part of a company's cost of doing business, therefore a funded collection program is not needed for businesses that generate large quantities.

Figure 5 Examples of linear and compact fluorescent lamp mail-in kits

Fluorescent Lamp Collection Financing Options:
The following discusses four basic options (with modifications) for financing a household/small business fluorescent lamp recycling system. Many variations exist for each system and hybrid options can be created beyond those described here.

1) Extended producer responsibility (EPR) with costs internalized (Manufacturer Cost Internalization)
2) Manufacturer-run program based on consumer fee (Consumer Fee)
3) Combined utility/ratepayer financing (Utility/Manufacturer Financing)
4) Retailers provide program and internalize costs (Retailer Cost Internalization)

None of these options puts the responsibility for collecting and recycling on local or state government; neither do any of them place all responsibility on the manufacturer.

The pros and cons are based on multi-stakeholder discussions in the Product Stewardship Institute's (PSI) National Dialogue on Fluorescent Lighting and feedback the DNR received from stakeholders. They do not necessarily represent the views of the Product Stewardship Institute, any individual participant in the PSI dialogue or the Iowa DNR. The PSI dialogue has not reached consensus on the relative merits of the various financing mechanisms at this time, except to agree that something is needed for the consumer and small commercial sectors.

I. Extended Producer Responsibility (EPR) Systems with Cost Internalization

In an EPR system:

⇒ Manufacturers have primary responsibility to design, implement, and pay for a collection and recycling system.

⇒ Retailer involvement in collection is encouraged, but not required.
⇒ Program performance may be measured according to convenience of the system established and/or rate of recovery of product.
⇒ Penalties can be established for failure to achieve performance goal.

Pros: This model allows companies to make their own pricing decisions internally, and to distribute the costs according to their own business model and interests. This model has the potential to impact product design if reducing toxicity or switching to an alternate technology reduces their costs. Extended Producer Responsibility is consistent with the goal of life-cycle product stewardship under Waste Management Strategies in the Iowa Climate Change Advisory Council Final Report.

Cons: Manufacturers will be forced to raise costs somewhere in their business to cover the cost of designing and implementing such a program, which could mean an increase in the cost of CFLs (and corresponding decrease in demand). Retailers may not allow Manufacturers to adjust the price of their product. If the cost is incorporated into the price by the manufacturer, the cost increase may be magnified through the distribution chain.

Manufacturers maintain that no product design incentive is created by such a system. Manufacturers have significantly reduced the amount of mercury in CFLs without EPR legislation. Fluorescent technology requires the use of a small amount of mercury to function and manufacturers are currently working on mercury free alternatives.

RELATED EXAMPLES: Iowa's Mercury Free Recycling Act (mercury switches from vehicles), Iowa's thermostat collection and recycling law, Washington's electronics collection and recycling law, Minnesota's electronics collection and recycling law, Rechargeable Battery Recycling Corporation,

The roles for the following parties may include:

Manufacturers

- Pay for collection and recycling program. Pay all the administrative costs and operational costs associated with the product stewardship program including collection, transportation and recycling.
- Register with DNR, registration fee pays for the administration of the program
- Design program. Manufactures submit a plan, either individually or collectively, for DNR approval.
  May include goals based on convenience:
  - Recovery goals for years 1, 2, and 3 of the program. The DNR will set the recovery goals for years four and following.
  - Location of collection sites or other services used by the product stewardship program.

    - How mercury lamps will be collected from households and small businesses in all counties and in cities with a minimum population of 5,000.
    - How the collection program is convenient and adequate to serve the needs of covered entities in both urban and rural areas.

  or goals based on recovery rate:

    - Each manufacturer is responsible for collecting an amount equal to the manufacturers share (%) of the market, times the number of lamps available for recycling, times recovery goal set in legislation. (would need to know the number discarded annually) *Should linear and compact be combined or have separate goals?*
    - Manufacturers may set up any sort of collection program, partner/contract with anyone to provide any number of collection points. May collect any brand.
    - Report amount collected annually.
- Create a Product Stewardship Organization (PSO) to implement program. Either individually or collectively operate a product stewardship program approved by the DNR; **or** enter into an agreement with a stewardship organization to operate a product stewardship program on the producer's behalf.
- Pay penalty if targets not met. Pay per pound or per lamp fee for every pound or lamp short of goal (or based on not meeting a convenience metric)

Retailers *(These options encourage but do not require retailers to collect lamps for recycling.)*

- May not sell or offer for sale a product from a manufacturer that is not a participant in an approved stewardship plan.
- If a brand is not claimed by a participating manufacturer, a retailer may chose to take on the manufacturer's responsibilities in order to sell the product.
- May chose to be a collection point. If a collection point, must post sign indicating that mercury lamps are accepted for recycling. If not a collection point, must post a sign indicating the nearest collection point.
- Provide education to consumers

Utilities

- May chose to be a collection point
- Provide outreach and education to consumers
- Only distribute lamps made by manufacturers that are in compliance

State government

- Review and approve plans
- Maintain a list on a website of manufacturers that are in and out of compliance
- Review annual reports

- Set goals for years four and following, or notify manufacturers of annual collection goals (depending on performance metrics and goals)
- Use fines paid by manufacturers that fell short of goal to provide additional fluorescent lamp recycling in rural and underserved areas (if penalty)
- Only distribute lamps made by manufacturers that are in compliance

Local Government

- May chose to be a collection point
- Provide education to constituents
- Only distribute lamps made by manufacturers that are in compliance

II. Manufacturer-run Program based on Consumer Fee

In a fee-based system, a set fee is added to the cost of each fluorescent lamp sold. Fees can be set so that they are visible to the consumer at the point of sale, or invisible to the consumer but visible only to the manufacturer (and possibly retailer or wholesaler as well). The fee is paid to a PSO that would design and implement the collection and recycling program on behalf of manufacturers. The fee could be paid to the PSO by manufacturers, retailers or whoever (manufacturer, distributor or wholesaler) first sells the product into the state.

Pros: With a fee visible to the customer, consumers are educated about the need for proper end-of-life management of the product because they see the fee at the point of sale. (The fee may also be visible only between the retailer or wholesaler and the manufacturer.) Manufacturers retain responsibility for recycling, and can be assured that costs for a collection and recycling program are passed on.

Cons: Consumers may resent the charge, and it may impact sales of CFLs. Retailers must charge and track the fee. There is little incentive to seek the most cost-effective options possible for the collection and recycling system as long as costs are kept low enough that they can be recovered by collecting the fee. There may be anti-trust obstacles to manufacturers agreeing on a set fee. It may be difficult for the state to ensure that the fee is being paid on all fluorescent lamps. It would also be necessary—and likely challenging—to account for and reimburse fees associated with lamps that are sold into the state but ultimately retailed in another state.

In the case of long-lasting CFLs, by the time many of the millions of bulbs being sold today are ready for recycling, the technology will likely have been replaced by mercury-free products. Meanwhile, because of recent wide-scale CFL promotion, there are far more being sold today than there are ready for recycling. This would require building up a cash reserve.

RELATED EXAMPLE: Waste Electrical and Electronics Equipment Directive of the European Union (fee visible to consumers only for first 6 years)

The roles for the following parties may include:
Manufacturers would establish a PSO (which would have primary responsibility for designing and implementing a collection system). The PSO would:

- Plan and implement collection and recycling system
- Collect fees
- Report annually to the DNR of collection and expenditures

Wholesaler

- Pay fee if selling into the state

Retailers if the fee is visible to consumers, retailers would be responsible for collecting the fee from consumers.

The roles for retailers, utilities and state and local governments need not be any different from the other EPR systems described above.

Performance measures could be based on convenience, recovery rate, or both.

III. Combined Utility/Ratepayer and Manufacturer

A system that relies on utilities (or energy efficiency program administrators) to pay could include some of the same elements as the systems described above.

In such a system, a fee or other charge would be added to all utility bills (sometimes called a public goods charge) which could be passed to a PSO that would design and implement the collection and recycling program. This limits, but does not preclude, partial manufacturer responsibility. The consumer would not see a fee attached to the product at the point of sale, and no end-of-life fee would be charged.[6]

Pros: Utilities are currently playing an active role in distributing CFLs for their energy efficiency benefits and have a responsibility to ensure that lamps are properly managed at end-of-life. The use of utility financing for a collection and recycling program would not impact the cost of (and associated demand for) the product. Those who consume more energy will pay a greater portion of the cost of recycling, which may encourage use of more efficient lighting technology.

Cons: While there are examples of utilities across the country already contributing to fluorescent lamp recycling programs (both voluntarily and as required by law), many

[6] In some programs, including Minnesota, there may be a fee charged at the end-of-life with this type of program.

have limits on such spending that would require a legislative or regulatory change in order to allow them to increase their spending on recycling to meet the needs of a widespread program. Utilities and energy efficiency programs (typically run from public goods charges themselves) are also charged with addressing climate change concerns by increasing efficiency and accessing alternative energy sources. There is no connection to product design with such a model. Without legislative mandate, utility funding for recycling programs is considered a short-term solution. When new federal lighting efficiency standards come into effect, utilities will likely cease promoting CFLs to the extent that they are today. There may also be oversight concerns related to having a public goods charge managed by a private organization (the PSO).

RELATED EXAMPLES: Maine (Efficiency Maine); Minnesota (utilities with 200,000+ customers); small-scale, voluntary initiatives elsewhere across the country.

The roles for the following parties may include:

Utilities/Energy efficiency programs

- Collect fee from rate payers and remit to PSO to pay for collection and recycling
- Provide information and education to consumers

Manufacturers *This is roughly based on the proposal of the manufacturers in California's AB 1109 stakeholder process. In Maine and Minnesota, there is no PSO, and no designated role for manufacturers.*

- Establish PSO
- Serve as principal members of PSO
- Fund PSO administration and education/outreach

Product Stewardship Organization (PSO)

- Board of directors made up of manufacturers and other stakeholders
- Develop and implement plan for the collection, transportation, and recycling of mercury lamps. This will include collection points and promotion of mail back options where cost effective.
- Oversee outreach and education in collaboration with state and local government, retailers, utilities and manufacturers
- Set interim goals and milestones
- Manage funds
- Report annually to the DNR on collection and recycling as well as collected funds and expenditures.

The roles for state and local government and retailers need not be any different from the EPR systems described above.

Performance measures can be based on either recovery rate, convenience, or both.

OPTION: Alternatively, the funds from manufacturers can go to cover recycling, and ratepayers can cover education and outreach efforts.

IV. Retailer Cost Internalization

All retailers that sell fluorescent lamps would be required to collect fluorescent lamps for recycling, or would do so of their own accord. Individual retailers would contract with recyclers. There are other options for retail collection as well.

Pros: Retail locations are logical, easy to access locations for consumers. The costs paid for recycling would be kept at a minimum because there would be no organizational infrastructure such as a PSO required. If retailers are collecting at all their locations, reverse distribution systems would likely be more common. Retailers can influence product design by selecting the products they choose to sell.

Cons: The program costs would be higher than in a PSO-managed program due to scale and lack of unified coordination, promotion and program design. The cost of the product would likely increase to cover recycling costs (and demand may therefore decrease). Retailers have typically been very effective in opposing legislation that would require all retailers to participate. This could also discourage retailers from selling CFLs.

RELATED EXAMPLES: San Luis Obispo County, CA; Dane County, WI; The Home Depot, IKEA, and some other retailers are collecting CFLs voluntarily (and internalizing costs).

The roles for the following parties may include:

Retailers

- Act as collection point for the same products they sell
- Contract with recycler
- Provide public outreach and education
- Report amount collected and recycled to state

State Government

- Insure that all retailers are collecting fluorescent lamps
- Insure that lamps are being recycled properly
- Tabulate and review collection totals from retailers

Manufacturers and local government would not have direct roles in such a system. Utilities could still provide consumer education, but this would likely not be required.

Performance measures can be based on either recovery rate, convenience, or both.

Recommendations:

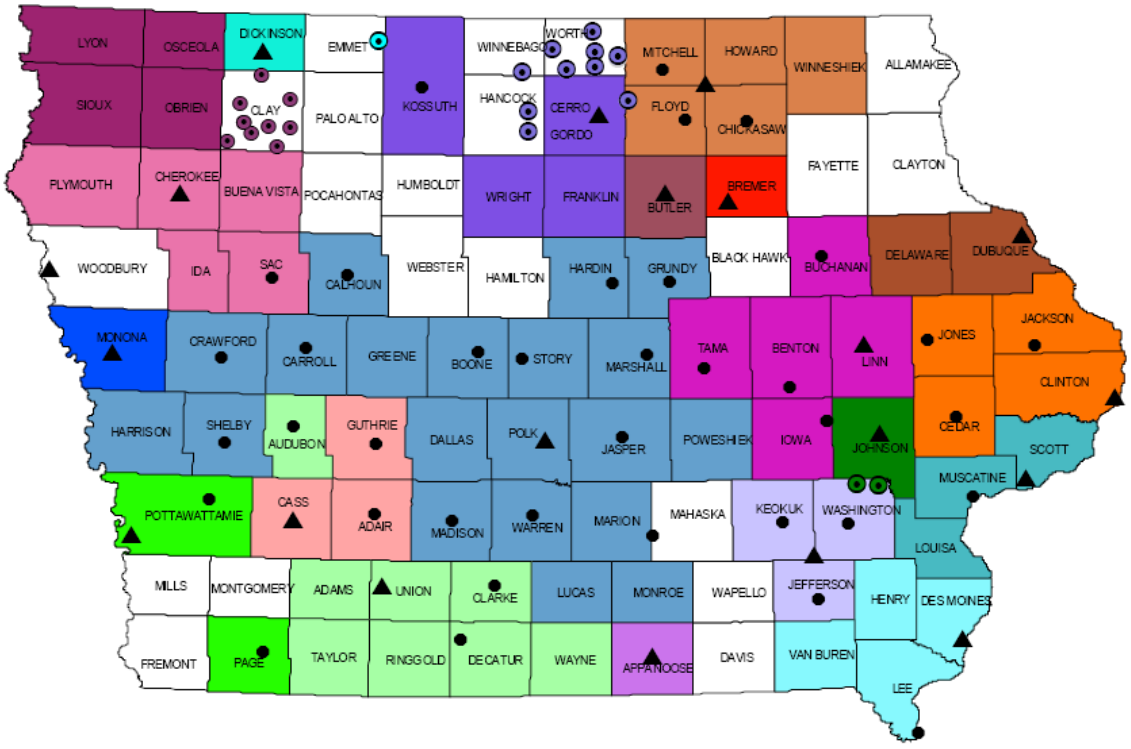
Based on consultation with stakeholders, participation in the national dialogue of fluorescent lamps conducted by the Product Stewardship Institute and observation of efforts in other states, the DNR makes the following recommendations:

1. A financed collection program should be limited to households and small businesses. The infrastructure for collection and recycling mercury lamps from large businesses is well established and the recycling costs are part of a company's cost of doing business.
2. A collection program should include both linear and compact fluorescent lamps, but not focus on other types of mercury containing lamps.
3. A collection program should build upon the existing collection infrastructure of the Regional Collection Centers (RCCs) and voluntary collection by retailers.
4. A consensus among the stakeholders has not been reach on the best financing option for fluorescent lamps. As the demand for lamp recycling grows, particularly for CFLs from households, the costs to the RCC program will continue to increase. The DNR favors an extended producer responsibility system. However as there is not a consensus among the stakeholders, either nationally or in Iowa, the DNR recommends continuing to work with stakeholders.

Appendix A: Iowa Regional Collection Centers

Regional Collection Centers

Regional Collection Centers (RCC) are permanent collection facilitites designed to assist the public and small businesses with proper management of hazardous materials.



▲ **RCC Main Facilites** ● **Satellites**

- Appannose Co. RCC
- Bremer Co. RCC
- Butler Co. RCC
- Cass Co. RCC
- Cedar Rapids / Linn Co. RCC
- Clinton Co. RCC
- Council Bluffs RCC
- Dickinson Co. RCC
- Dickinson Serviced Cities
- Dubuque Co. RCC
- Floyd, Mitchell, Chickasaw RCC
- Haz Chem RCC
- Iowa City RCC
- Iowa City Serviced Cities
- Landfill of North Iowa
- LNI Serviced Cities
- Metro Waste Authority
- Monona County RCC
- Niaswa RCC
- Niaswa Service Cities
- PCB RCC
- Prairie and Partners RCC
- Scott Co RCC
- SEMCO
- Sioux City RCC
- Unserviced Counties

Appendix B: Mercury lamp collection points[7]

Name	*Location*	*City*	*Phone*	*Material Accepted*	*Cost to Consumer?*
CARVER ACE HARDWARE	615 24TH STREET	AMES, IA	(515) 232-1791	CFLs	YES
THE HOME DEPOT	2335 SE DELAWARE AVE	ANKENY , IA	(515) 963-1890	CFLS	NO
THE HOME DEPOT	920 MIDDLE ROAD	BETTENDORF, IA	(563) 359-7228	CFLS	NO
SOUTHERN IOWA ELECTRIC COOPERATIVE	800 EAST FRANKLIN STREET	BLOOMFIELD, IA	(641) 208-5615	CFLs	LIMITED
CARVER ACE HARDWARE	703 EAST 18TH STREET	CEDAR FALLS, IA	(319) 277-4690	CFLs	YES
THE HOME DEPOT	4501 1ST AVENUE SE	CEDAR RAPIDS , IA	(319) 294-0480	CFLS	NO
CARVER ACE HARDWARE	3825 CENTER POINT ROAD, NORTHEAST	CEDAR RAPIDS, IA	(319) 354-7770	CFLs	CALL
THE HOME DEPOT	1850 LINCOLN WAY	CLINTON , IA	(563) 242-0349	CFLS	NO
THE HOME DEPOT	3101 MANAWA CENTER DR	COUNCIL BLUFFS , IA	(712) 366-7814	CFLS	NO
THE HOME DEPOT	4900 SE 14TH ST	DES MOINES , IA	(515) 287-7269	CFLS	NO
CARVER ACE HARDWARE #14316	2727 BEAVER AVENUE	DES MOINES, IA	(515) 279-4245	CFLs	YES
CARVER ACE HARDWARE	4808 UNIVERSITY AVENUE	DES MOINES, IA	(515) 277-0062	CFLs	YES
NORTHWEST IOWA POWER COOPERATIVE	31002 COUNTY ROAD C-38	LEMARS, IA	(712) 546-3505	CFLs	LIMITED
CONSUMER'S ENERGY	2074 242ND STREET	MARSHALLTOWN, IA	(641) 752-1593	CFLs	LIMITED
OTTUMWA-WAPELLO COUNTY RECYCLING CENTER	2415 EMMA STREET	OTTUMWA, IA	(515) 683-0685	All Lamps	LIMITED
THE HOME DEPOT	415 CUNNINGHAM DRIVE	SIOUX CITY , IA	(712) 255-5310	CFLS	NO
SPENCER MUNICIPAL	712 GRAND AVENUE	SPENCER, IA	(712) 580-5800	CFLs	LIMITED
HEARTLAND POWER CO OP	216 JACKSON STREET	THOMPSON, IA	(641) 584-2251	CFLs	LIMITED
THE HOME DEPOT	10850 PLUM DRIVE	URBANDALE , IA	(515) 251-5819	CFLS	NO
THE HOME DEPOT	1050 SOUTHTOWN DRIVE	WATERLOO , IA	(319) 232-8889	CFLS	NO
THE HOME DEPOT	3700 UNIVERSITY AVE	WEST DES MOINES , IA	(515) 221-2233	CFLS	NO

[7] This list is from the Change A Bulb Network and may not be all inclusive. http://www.recycleabulb.com/locations/index.aspx