

SUBGROUP MEMBERS

Central VA Waste Management Authority • EPA Region III • Maxlite • VA Department of Environmental Quality • VA Department of Mines, Minerals, and Energy • Wal-Mart



“CFL recycling programs are becoming a real need as more and more consumers purchase energy efficient bulbs. The V-REMS subgroup is working to make residential CFL recycling a reality.”

Harry Gregori,
The Sustainability Park



GOAL

To promote more effective Compact Fluorescent Light Bulb (CFL) recycling programs, foster education about the proper disposal of CFLs, and strengthen the infrastructure necessary to handle CFLs.

BACKGROUND

When not disposed of properly, CFLs can contribute to increasing concentrations of mercury in landfills. If they are recycled, millions of pounds of materials can be recovered from CFLs, including glass and heavy metals. V-REMS partners want to

emphasize education and outreach for CFL recycling, and provide convenient collection locations for residential CFL users.

QUICK FACTS: Compact Fluorescent Light Bulbs

- ◆ CFLs use 75% less energy than the standard incandescent light bulb, and last up to 10 times longer. A CFL can last up to 10,000 hours, whereas an incandescent can last up to only 1,000 hours.
- ◆ CFLs produce approximately 70% less heat than their incandescent counterparts.
- ◆ A CFL lasts 4.1 years on average. An incandescent bulb only lasts 3.5 months.
- ◆ At 10 cents per kwh, a CFL only costs \$23.25 to run over its lifetime, while incandescent bulbs cost \$73.13 to run over the same amount of time.

THE CHALLENGE:

Insufficient Infrastructure for CFL Recycling

The use of CFLs is encouraged by the EPA and state agencies to decrease energy consumption, but Virginia is lacking the infrastructure for proper disposal. V-REMS partners are addressing the need to develop this infrastructure and make it more accessible to the public.

“V-REMS created a platform to facilitate the onset of CFL collection throughout Virginia. I know the more rural areas of the state would greatly benefit from this service and the efforts of the V-REMS subgroup.”

Christine Arcari,
VA DEQ

THE SOLUTION:

V-REMS Partners Develop A Partnership Wide CFL Recycling Initiative

V-REMS partners are developing a CFL Collection and Recycling program. A subgroup has been commissioned to determine possible venues for the recycling program and to measure the amount of pollution diverted from Virginia landfills, should such a program be initiated. V-REMS plans to start a partnership-wide outreach and education program, which will include established collection facilities and events.

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ACCOMPLISHMENTS AND PROJECTIONS

V-REMS partners demonstrated examples of outreach and shared case studies and lessons learned, all of which contributed to the following successes:

- ◆ The CVWMA's e-cycling events were larger than ever due to support and assistance CVWMA received through the V-REMS partnership. In April alone, CVWMA hosted ten events and collected 200,000 lbs. of electronics.
- ◆ The efforts of V-REMS partners Fort Lee and DSCR to reduce energy has led the partnership to participate in Operation Change Out, an ENERGY STAR campaign aimed to motivate military institutions to change out incandescent light bulbs with more efficient CFLs.
- ◆ Non-military partners will participate in the parallel Change a Light, Change the World program.
- ◆ V-REMS has been instrumental in helping Wal-Mart overcome the challenges of implementing a CFL recycling program. VA DEQ has provided regulatory assistance while other partners leveraged information about qualified contractors and lessons learned. The support of many V-REMS partners helps to ensure that the project is a success.

Library of Resources for CFL Recycling and Recyclers

- ◆ Virginia DEQ Fluorescent Lights Website: <http://www.deq.virginia.gov/info/lightbulbs.html>
- ◆ EPA ENERGY STAR Mercury and CFLs FAQ: http://www.energystar.gov/ia/partners/promotions/change_light/downloads/Fact_Sheet_Mercury.pdf
- ◆ EPA Region III Notice on Cathode Ray Tube Rule: <http://www.vrems.org/ewebeditpro/items/O124F17816.pdf>
- ◆ The Manufacturer E-Waste Compliance Study: <http://www.ecyclingresource.org/ContentPage.aspx?Pageid=34&ParentID=35>
- ◆ EPA Region III eCycling Website: <http://www.epa.gov/reg3wcmd/eCycling/index.htm>
- ◆ EPA Hazardous Waste Recycling: <http://www.epa.gov/epawaste/hazard/wastetypes/universal/lamps/index.htm>
- ◆ Operation Change Out website: http://www.energystar.gov/index.cfm?c=oco.op_changeout

PROJECTED METRICS OF SUCCESS

The following projections are based on the number of CFLs sold as well as the number collected for recycling. The calculations for estimating the metrics of success are based on a series of assumptions such as the amount of mercury in an average household CFL, the energy and carbon emissions savings of CFLs, the cost differential between CFLs and incandescent light bulbs, etc. The process for calculating and evaluating the metrics of success will undoubtedly evolve – suggestions are welcome.

- ★ VA DEQ aided in creating an understanding of collection liabilities and general discussion of household hazardous waste collection and management that proved useful to the entire V-REMS partnership.
- ★ V-REMS military partners participating in Operation Change Out will change over 20,000 incandescent bulbs to CFLs in the coming year, saving \$500,000 in electricity costs and 8,000,000 lbs. of greenhouse gas emissions.



V-REMS partners from Wal-Mart, CVWMA, The Sustainability Park, and DEQ meet to discuss a CFL pilot recycling program.

“By leveraging partners’ expertise and resources, the V-REMS CFL subgroup has worked together to support the business case for a cleaner environment. Through the V-REMS structure, partner state regulators helped to clarify household hazardous waste regulations in Virginia. Without the state’s support, it would be much harder to implement a household CFL recycling program.”

Jayson Scadden,
Wal-Mart

V-REMS Partnership Sponsors:

Defense Supply Center Richmond, Defense Logistics Agency, DoD
White House Council on Environmental Quality

For More Information: Visit - www.vrems.org

Jimmy Parrish: jimmy.parrish@dla.mil, (804) 279-6949

Steve Wassersug: steve.wassersug@getf.org, (239) 822-4338

Arista Hickman: arista.hickman@getf.org, (703) 379-2713