Product Stewardship for Mercury-Containing Lamps in Minnesota

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John Gilkeson
Minnesota Pollution Control Agency
MN Legislative Background

- Disposal of household mercury-containing lamps prohibited as of Aug. 1, 1994, due to mercury content
- Electric utilities with >100,000 retail customers must support recycling for households and small businesses
- All other electric utilities may support recycling
- All utility spending counts toward CIP requirements
- All lamp promotion by utilities must include recycling info
- Retail signage requirement: saves energy, contains mercury, must be recycled
- Label requirement: contains mercury, must be recycled
Est’d CFL sales and discards

Compact Fluorescent Lamps (CFLs)

- Sales growth 2004-2005 for energy conservation; 2007 Energy Act
- Industry estimates life at 5-7 years, so discards start increasing in 2009
- Only household mercury product with increasing sales
- Mercury content decreasing but total mercury trends unclear
- LEDs will eventually replace but when?

NEMA estimates of HH CFL discards in MN (2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>Est’d HH CFL Discards</th>
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<tbody>
<tr>
<td>2007</td>
<td>273,000</td>
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<tr>
<td>2008</td>
<td>346,000</td>
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<tr>
<td>2009</td>
<td>571,000</td>
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<tr>
<td>2010</td>
<td>1,120,000</td>
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<tr>
<td>2011</td>
<td>2,419,000</td>
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Tubular and HID lamps

Tubular Lamps
- Household sales stable, 12-20% of total state market of 11 million lamps per year, most are 4-foot lamps
- Household discards similar to sales; 1-2 million lamps
- Household lamps being discarded may be older with higher mercury content
- New lamps contain 4 to possibly 20 mg mercury

High Intensity Discharge lamps
- Relatively small numbers used by households
- Mercury content 10 to 100 mg
Overview of collection locations

- Many large and small utilities support lamp collection through small retailers and HHW programs; Xcel, MN Power, East Central, Dakota Electric, GRE
- ~150 small retailers collecting CFLs and tubes
- 82 big box retailers collecting CFLs only
- 38 HHW programs collecting CFLs and tubes year-round
- 25 HHW programs collecting CFLs and tubes through seasonal/mobile programs
But many counties underserved

- 22 counties have no year round lamp collection
- 34 counties have 1 small retail or year round HHW
  - 15 of these counties do not have a site in the county seat
- 7 counties have 2 small retail or year round HHW
  - 2 of these counties do not have a site in the county seat
- 5 counties have 3 small retail or year round HHW
- 19 remaining counties have 4 or more small retail and year round HHW locations

[Collection locations for all types of lamps, does not include big box retail locations for CFLs only]
Est’d costs and rates for MN

- MN lamp program costs are ~47 to 75 cents per lamp for collection, transportation, recycling (program average for all types – CFL, tube, HID)
- Funded by utilities, public programs, consumers
- Recovery rates are difficult to estimate but are generally believed to be around 10-20% for CFLs and 30-40% for tubes, at the most
- HHW programs collected ~525k tubes and ~150k CFLs in 2010 (also ~14k HID)
- Big box and small retail collection numbers not available
Industry Profile

- Most tubular lamps sold in US are made in US by ‘Big Three’ mfrs: GE, Philips, Osram-Sylvania
- Many brands/mfrs of CFLs; all HH CFLs made in China
- NEMA Lamp Section includes about 16 manufacturers that actively participate
- NEMA submitted plans to ME and VT on behalf of about 28 manufacturers
Maine

Maine enacted lamp legislation in LD973 in 2009, codified in 38 MRSA §1672, including mercury content standards tied to RoHS (1 mg for CFLs)

- Mfrs must submit a plan for review and approval
- Program must include:
  - Convenient collection locations throughout the state
  - Recycling eqpmt and practices in accordance with UWR
  - Effective education and outreach
  - Annual reporting of recovery, estimated rate, and methodology
- Contractor services retail and municipal locations with FedEx and milk run services.
Washington

- Washington enacted lamp legislation in Senate Bill 5543 in 2010, codified in RCW 70.275
- Washington promulgated rules (Ch. 173-910) in late 2012, including stewardship plan guidelines
- Product Care withdrew proposal to operate “Standard Plan” due to Dec. 2012 NEMA lawsuit
- 2013 legislation is needed to address funding issues
- WA ECY will reissue RFP when funding resolved
- Plan covers households and entities discarding no more than 15 lamps per ninety days
- Establish a variety of permanent collection sites and mailback programs, education/outreach, evaluation
Vermont

- Vermont enacted lamp legislation in Act 36 in 2011, codified in 10 VSA Ch. 164A (incl. content standards)
- Vermont had an existing network of collection sites operated by retailers, municipalities, and electric utilities, similar to Minnesota. All sites have option to become collection sites under mfr program.
- VT issued program guidelines; NEMA submitted plan on behalf of 28 manufacturers
  - Free collection of all CFLs, ≤10 non-CFLs (HH, small business)
  - Convenient locations, at least two per county (any muni or retail)
  - Public education and outreach
  - Compliance with environmental standards
  - Annual reporting on program, including number, rate, methodology
Minnesota-2013

- Transition to mfr-funded program from current funding mix
- Outreach/education, program evaluation
- Address ‘small business – 10 lamps’ clause in current law (VT and WA provisions similar)
- Public and private collection sites in program
- Provide “convenience” throughout state – meet rural and urban program needs; no underserved counties/regions
- Mercury content standards