



OSU Facilities Management

Work Instructions

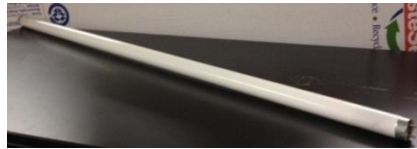
Regulated Lamps Recycling

Purpose: According to federal and state regulations, all OSU units and auxiliaries must dispose of regulated lamps (i.e. fluorescent and HID) properly and keep them out of the solid waste stream. OSU Energy Services provides pre-paid shipping boxes for the transport of these types of lamps to a recycling facility where metal, glass and mercury are separated and prepared for reuse.

Any questions not answered by these instructions may be directed to sustainability@okstate.edu

- I. Identifying Regulated Lamps (ask an Electrical Trades employee if you are unsure)
 - a. Fluorescent Lamps

- i. Linear



- ii. U-bend



- b. Compact Fluorescent Lamps (CFLs)

- i. Spiral

1. These common lamps are easily distinguished by their spiral pattern.



- ii. Non-spiral

1. These are sometimes difficult to distinguish from incandescent lamps. Note that these will often be a slightly different shape than incandescent lamps and you can often see through the cloudy part of the glass to see a spiral fluorescent inside.



c. High Intensity Discharge (HID)

- i. Often “football” shaped, distinguish from incandescent lamps with larger size, different shape, and much more hardware inside glass.



d. The following lamps are NOT regulated and should not be put in recycle boxes.

- i. Incandescent



- ii. Halogen



II. Choosing Boxes from Supply - Which Lamps Go in Which Boxes? Box Capacities and Maximum Weights

a. Stock #EREC100 (4' box) “4ft Triple Guard” or “4ft Triple Guard Lite”

- i. Linear fluorescent and U-bend tubes of 4' or less
ii. For example: 30 T-12s OR 68 T-8s OR up to 70 lbs.
iii. 70 lbs. max.

b. Stock #EREC200 (8' box) “8ft Triple Guard”

- i. Linear fluorescent tubes and U-bend tubes of 8' and greater than 4'
ii. For example: 30 T-12s OR 68 T-8s OR up to 70 lbs.
iii. 70 lbs. max.

c. Stock #EREC300 (11”X14”X14” box) “Compact Fluorescent Recycling Kit”

- i. CFLs
ii. For example: 350 2-pin OR 175 4-pin OR 106 spiral OR up to 70 lbs.
iii. 70 lbs. max.

d. Stock #EREC400 (23”X23”X23” box) “Lamp Recycling Kit”

- i. HIDs, U-bend tubes of 4' or less, compact fluorescents
ii. For example: 60 400-watt HIDs OR 43 T-12s OR 75 T-8s OR up to 70 lbs.
iii. 70 lbs. max.

e. Stock #EREC500 (5-gallon bucket inside box) “Ballast Bucket 5.g”

- i. Non-PCB ballasts
ii. 70 lbs. max.

III. Paying for Lamp Shipping Boxes

- a. Bring the “Lamp Recycling” Work Order number, which has been provided to your department for this purpose, to FM Procurement Services to pick up lamp boxes (sizes indicated above).
- b. The cost of the boxes, which include pre-paid shipping and recycling services, is paid for by Energy Services. To keep utility costs down, take only the number of boxes that is needed and ensure boxes are completely full of lamps before sealing and mailing. Overfilling boxes may lead to extra fees. Refer to maximum capacities and weight under item II of these instructions.
- c. Supply will record the unique tracking number for each box you take.

IV. Storing Boxes

- a. Store boxes up off the floor (at least four inches) to keep them dry.

V. Assembling Boxes

- a. Cut the plastic band without damaging the box.
- b. Unfold the boxes, you should have:
 - i. A white outer box with printing on it
 - ii. A brown inner box that is blank (only 4ft & 8ft boxes)
 - iii. A clear plastic liner
- c. Close one end of the brown inner box—do not interfold flaps—and tape it shut with duct or packing tape.
- d. Put the brown inner box into the clear liner closed-end first, set aside.
- e. Close the “bottom” end of white outer box—fold flaps in numerical order—and tape shut with reinforced (“filament” or “strapping”) tape.
- f. Insert clear plastic liner with brown inner box closed-end first into white outer box.



VI. Putting Lamps in Boxes

- a. 4ft & 8ft boxes
 - i. Whenever possible, keep the box horizontal on a level shelf, waist to chest height with open end toward an area large enough to slide the lamps into the boxes safely.
 - ii. Standing boxes up makes it hard to fit in the maximum number of lamps, which increases the per lamp shipping and recycle cost.
 - iii. If you have a variety of lamp lengths, try to place the longer lamps in first.



- b. 14x14x11 & 23x23x23
 - i. Set lamps into these boxes as shown.



VII. Broken Lamps

- a. Should a lamp break during packaging, leave the broken pieces inside the box; a small amount of breakage is allowed.
- b. Other breakage of lamps containing mercury may be cleaned up according to these instructions:
 - i. <http://www2.epa.gov/cfl/cleaning-broken-cfl-detailed-instructions>
 - ii. Dispose of broken regulated bulb debris by adding it to a lamp recycling box that already contains a substantial number of CFL or HID type lamps in it. Placing broken bulb debris in a box meant for linear lamps will decrease the box's capacity for whole lamps.

VIII. Sealing Boxes

- a. Close end of brown inner box—do not interfold flaps—and tape shut with duct or packing tape.
- b. Fold excess clear plastic liner over top of brown inner box.
- c. Close the white outer box—fold flaps in numerical order—and tape shut with reinforced (“filament” or “strapping”) tape. Do not use duct tape on outer box.



IX. Mailing Boxes (FedEx postage is prepaid).

- a. Set out with your regular outgoing mail, or
- b. Call University Mailing Services for pick-up
 - i. (405) 744-5385

X. Bulk Pickup

- a. Bulk pickup can be arranged for very large quantities, such as after a lamp retrofit.
- b. Contact the Facilities Management Electrical Shop for more information 4-7759