



MEMORANDUM

To: Richard Karney, Ron Lewis – DOE; Susan Gardner - D&R

From: Noah Horowitz, Senior Scientist - NRDC

Date: May 7, 2003

Re: NRDC Comments on DOE's 3/15/03 Draft CFL Spec

The Natural Resources Defense Council, an environmental advocacy organization with over 550,000 members, respectfully submits its comments below on the Department of Energy's (DOE's) most recent draft specification for compact fluorescent lamps (CFLs). We support the overall direction the DOE is taking in revising its specification and want to commend DOE for the open process it is using.

1. *We strongly support DOE's decision to require manufacturers to: a) submit test results for efficacy, rapid cycle stress test, lumen maintenance at 1,000 hour and 40% of life, and interim life for initial qualification, and b) allow manufacturers to delay submission of average rated lamp life until full qualification.*

In revising its specification, one of DOE's goals was to require manufacturers to fully qualify their products prior to allowing them to label their products as meeting Energy Star. In response to DOE's first draft of the revised specification, several manufacturers complained that this requirement would stifle innovation and preclude timely introduction of new products, especially those with extended rated lifetimes (i.e. 8,000, 10,000 hrs, etc.).

We believe that DOE has in its latest draft struck a fair compromise and adequately responded to manufacturers' concerns by allowing manufacturers to receive initial qualification prior to submitting their average rated life test data, which we acknowledge can take well over a year to generate. The tests required for initial qualification can be obtained in a reasonable time frame and provide DOE and other interested stakeholders with reasonable assurance that the Energy Star qualified product will perform well. We believe it would be a huge disservice to CFL users for products to be marketed as Energy Star qualifying prior to DOE receipt and acceptance of this initial data set.

NRDC continues to strongly support inclusion of both the rapid cycle stress test and the 1,000-hour lumen maintenance tests in the final DOE specification. Even though manufacturers will also need to submit the 40% of life lumen maintenance data, we believe the 1,000-hour lumen maintenance test provides meaningful data without having to wait a prolonged period of time for results. The benefit of this test parameter is that random testing programs like PEARL will be able to identify potentially problematic products at an earlier date. This will permit DOE to take appropriate follow-up activities much faster and limit the extent of negative consumer experiences for products that had been qualified with DOE but were not performing as promised. (see our previously submitted comments for justification for the rapid cycle stress test)

2. *We urge the DOE to begin a prompt in-depth investigation into the performance of screw-based CFL reflector products and if necessary to outright ban this product category from the Energy Star program until further notice.*

The PEARL Cycle 3 test results showed gross non-compliance with the Energy Star specification for all 4 of the covered reflector bulb products that were tested. (Note, these products were from 4 different manufacturers, both large and small, and all performed poorly.) On average, the 40% of life lumen maintenance data was below 70%, with several data points around 60%. This level of poor performance will translate to grossly disappointed consumers who will have bulbs that are giving off 1/3 less light than they initially did. To make matters worse some of the reflector bulb samples tested in PEARL Cycle 3 and 4 had product integrity issues – the exterior housing or cover of a few of the samples physically cracked or broke off during testing, or the housing became stained or discolored.

Of perhaps greatest concern is the fact that these products are being tested in an open air environment while they are normally used in recessed can environments, many of which are air tight and result in much harsher operating environments. One would likely see increased product failures if testing were done in a simulated environment that mimics the higher operating temperatures and restricted air flow seen in many recessed cans.

As close to 50% of all lighting sockets in some new homes may be recessed cans suitable for a screw-based CFL reflector product, we need to make sure that the Energy Star labeled reflector products are ready for prime time and will perform as promised. A consumer with one or more bad experiences with an Energy Star labeled reflector CFL is unlikely to buy another or worse yet buy a CFL of any kind. This will result in massive lost energy savings.

Given the poor performance seen to date, we recommend DOE issue a temporary ban of reflector bulbs from its program until further data demonstrating product compliance is obtained. In the absence of an outright ban, we strongly encourage DOE to: a) ramp up its investigation of this product category via random off the shelf testing of a cross section of products and swift delisting of products that are found to be in gross non-compliance, and b) work with LRC and other researchers to develop a standardized “in-

situ” test method for reflector products and to incorporate this test method into the DOE specification.

3. *DOE should allow candelabra based products to qualify for the Energy Star label.*

Several manufacturers currently offer CFL products to fit in the smaller screw-based sockets found in chandeliers and other fixtures. NRDC believes these products should be able to earn the Energy Star label and that Energy Star should add them to the specification and establish appropriate efficacy requirements for this product category.

4. *When a product is found by DOE to be significantly out of compliance with the Energy Star specification and delisted from the program, the manufacturer should be required to immediately cease shipment of any additional Energy Star labeled product.*

During the April 29th meeting, there was extensive discussion regarding how to handle products delisted by DOE. We concur with the recommendation made by Mr. Feit of Feit Electric that no further shipments of delisted shipments shall be allowed. The potential sell-thru of any products that were previously shipped should be at the discretion of the retailer.

5. *Where testing is to be done with 5 samples base up and 5 samples base down, the averages for each of these categories should be separately reported in addition to the simple average of the 10 samples.*

In a few cases in the spec, the testing laboratory must test 5 of the samples base up and 5 base down and is to report the average of the 10 samples. We believe there is value in seeing this data reported separately and would like to see DOE formally require this. This data would be useful for: a) comparing the results to third party testing, such as PEARL, and b) review prior to the establishment of future specification revisions.