



Buildings for the 21st Century

Buildings that are more energy-efficient, comfortable, and affordable...that's the goal of DOE's Office of Building Technology, State and Community Programs (BTS). To accelerate the development and wide application of energy efficiency measures, BTS:

- Conducts R&D on technologies and concepts for energy efficiency, working closely with the building industry and with manufacturers of materials, equipment, and appliances
- Promotes energy/money saving opportunities to both builders and buyers of homes and commercial buildings
- Works with State and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use
- Provides support and grants to States and communities for deployment of energy-efficient technologies and practices



RESIDENTIAL RECESSED CANS TECHNOLOGY PROCUREMENT

In cooperation with the Consortium for Energy Efficiency (CEE), the U.S. Department of Energy (DOE) — through its Pacific Northwest National Laboratory (PNNL) — is developing a program to pull new, high-efficiency, lower-cost, residential recessed cans into the market. The program, based on technology procurement, will be implemented in cooperation with electric utilities and market transformation organizations.

Background

DOE, the Northeast Energy Efficiency Partnership (NEEP), and others have identified residential recessed cans as a high-energy use product in need of design improvements. A recent NEEP survey found that new single-family homes have, on average, 23 cans per home. Such heavy use of recessed cans suggests that residential lighting use is growing rapidly, estimated to be about 1500 kWh per year per household.

Recessed cans are by far the most popular residential lighting fixture. The U.S. Census Bureau reports that about 19 million residential recessed cans were sold in 1998. Although precise numbers on the installed stock of recessed cans are not available, one can conservatively estimate that at least 150 million cans are installed, almost all of which use incandescent bulbs.

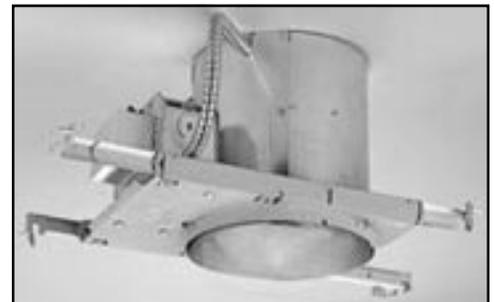
In recognition of the large and growing electricity consumption due to recessed cans, DOE is implementing a recessed cans program in cooperation with utilities and market transformation organizations. The initiative uses a

process called technology procurement to pull new products into the market. The recessed cans technology procurement has been under review and development since late 1999 by CEE's Lighting Committee, which is developing a broader residential lighting fixtures initiative, of which this technology procurement is a part.

Technology Procurement

Technology procurement is a method to pull new technologies and products into the marketplace through competitive procurements backed by large volume buyers. Generally, it involves a multi-step process including:

- ✓ Organization of target large volume buyers and market influencers (such as utilities);
- ✓ Issuance of a competitive solicitation to potential manufacturers, requesting bids for new products meeting specifications developed in cooperation with buyers;
- ✓ Implementation of promotion/marketing program to maximize the purchase of the newly available products.



RESIDENTIAL RECESSED CANS

For more information about the DOE Office of Building Technology, State and Community Programs, contact:

Energy Efficiency and
Renewable Energy
Clearinghouse (EREC)
1-800-DOE-3732
www.eren.doe.gov/buildings

For Program and Product Information on the Web:

<http://www.eren.doe.gov/buildings/emergingtech>

For program information:

Jeff McCullough
Pacific Northwest
National Laboratory
P.O. Box 999
Richland, WA 99352
Phone: **(509) 375-6317**
FAX: (509) 372-4370
Email:
jeff.mccullough@pnl.gov

Marc LaFrance

U.S. Department of Energy
1000 Independence Ave. SW
EE-41, 1J-018
Washington, DC 20585-0121
Phone: **(202) 586-8423**
FAX: (202) 586-5557
Email:
marc.lafrance@ee.doe.gov



Printed with renewable – source
ink on paper containing at least
50% wastepaper, including
20% post consumer waste.

April 2000

By working closely with potential buyers, technology procurement greatly increases the likelihood that products brought to market will be well received by buyers. By organizing large volume buyers for new products, technology procurement reduces the risks to manufacturers of new product introduction, and allows them to introduce products at more competitive prices.

Program Description

The recessed cans technology procurement program has several major elements, described briefly below:

- ✓ **Market Research:** to further refine the target market, the approach, and overall program design; results of lighting market research being done by the Northwest Energy Efficiency Alliance, CEE, and the California Statewide Lighting and Appliances program will be incorporated.
- ✓ **Technology Research:** to fully understand the technology issues and opportunities for efficient residential cans.
- ✓ **Buyer Engagement and Recruitment:** to solicit guidance, assistance with program design, and expressions of interest from potential large volume buyers, including builders, home centers, government agencies, and others.
- ✓ **Manufacturer/Supplier Engagement:** to inform manufacturer and suppliers about the program opportunity, and to solicit their guidance and expert knowledge.

✓ **Request for Proposals (RFP) Development and Issuance:** after extensive input and review from buyers, suppliers, and program partners, PNNL will issue a RFP in the fall of 2000 to solicit bids from potential suppliers. Bids and products will be evaluated, winners announced, and ordering agreements established with winning bidders.

✓ **Program Promotion/Incentives:** with assistance from program partners, the program will be promoted to potential buyers, with special efforts aimed at large volume buyers to establish new products in the market; utility incentives and other methods will be used in promotions.

Program Status

The CEE Lighting Committee has agreed to make the recessed cans program a major part of CEE's new Residential Lighting Initiative. DOE and CEE-sponsored market research efforts are underway. The Northwest Energy Efficiency Alliance has agreed to support the new CEE Residential Lighting Initiative, including the recessed cans program. Technology and product design investigations are underway and have already identified a number of key technical issues needing resolution. Discussions with potential manufacturers and buyers have begun. Draft technical specifications are under development. Financial and in-kind support is being solicited from potential program partners.