

ENERGY AUDITOR & RETROFITTER: PRACTICAL INFORMATION FOR PRACTITIONERS

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Energy Auditor & Retrofitter, Inc. is a non-profit organization that disseminates practical information on residential energy conservation. Its main product is a bimonthly magazine, **Energy Auditor & Retrofitter (EA&R)**, which was first published in September, 1984. For the past two years the staff has been developing EA&R into a magazine that will serve the needs of workers in the residential conservation industry. This task has involved three major activities: 1) identifying the potential market of readers; 2) transferring information from a variety of sources into the magazine format; and 3) serving as an open forum for those in the industry.

1. IDENTIFYING THE POTENTIAL MARKET

Our first efforts were directed at contacting conservation managers at the nation's investor-owned utilities, program managers at state energy offices, and representatives from a variety of organizations involved in energy conservation implementation or research. From our conversations we found that no similar type of magazine or newsletter existed on a national scale, and that a niche existed for a periodical aimed at workers in the residential conservation field. We arranged for free distribution of the magazine to auditors at most of the investor-owned utilities as well as rural electric cooperatives and municipal utilities. In addition, we distributed sample magazines to state and local energy offices, low-income weatherization agencies, and contractors that perform energy conservation retrofits.

We have also distributed EA&R at conferences attended by people active in the residential conservation field. Due to budget restrictions, however, we have usually contacted conference organizers and arranged for free distribution of the magazine, rather than actually attending the event.

2. TRANSFERRING INFORMATION

In spite of the flood of new conservation products in the past few years, there has been little research to document their performance and verify the manufacturers' claims. Also, only a fraction of this research actually reaches the conservation practitioner. The residential auditor or retrofitter must sift through a variety of popular and trade magazines, product brochures and technical reports to stay abreast of current research and trends in residential energy conservation.

EA&R staff researches and analyzes reports on the measured energy performance of energy-efficient products and programs designed to achieve energy conservation. Many of these reports are produced by national laboratories, universities, or utilities. However, they are written in very technical language and rarely reach the audience (the practitioners) who will benefit most from their information. We translate these articles into a form that is easily readable by most people. Two examples of recent articles that have relied on technical reports are:

- *How Effective is Insulation.* Two papers previously published in scholarly journals have shown that the actual thermal resistance of insulation is less than the rated value.
- *Window Insulation Put to the Test.* Several papers presented at the ASHRAE conference in January, 1986 reported that the R-values of some window insulation systems, as measured by an independent laboratory, were considerably lower than the manufacturers' claims.

Yet, the realities of installation and performance degradation often escape the scrutiny of researchers. The people who work with conservation products on a daily basis are therefore an essential source of information for articles. By contacting auditors, contractors, and manufacturers, our writers have identified some of the practical issues involved in installing and maintaining devices such as evaporative coolers, heat recovery systems for air-conditioners, and air-to-air heat pumps.

An evaluation of any product is not complete without an assessment of its cost-effectiveness. We regularly include sample calculations so that the reader can compute the energy savings of different conservation options. Encouraging practitioners to understand and use the calculation is more important than just providing them with a single payback period. We provide simple equations for calculating cost-effectiveness that can be adapted to the fuel price or weather conditions in many different areas.

In cases where products simply are *not* cost-effective, we alert our readers by writing critical reviews. These "small scandals" are not uncommon in a swiftly growing industry such as the energy conservation field. For example, we criticized the use of timeswitches for gas water heaters, which are much less cost-effective than other low-cost measures such as tank and pipe insulation and anti-convection valves.

3. SERVING AS A FORUM FOR THOSE IN THE INDUSTRY

From the outset EA&R has solicited advertisements from companies manufacturing or distributing residential conservation products. These include the manufacturers of conservation equipment, instrumentation, computer software and technical services. The advertisements provide a means by which these manufacturers can reach their potential buyers and users. However, we do require all advertisers to provide supporting documentation for their claims of product efficiency and performance, and in some cases have suggested that additional research be performed to back up an advertiser's claim.

As our circulation has expanded, we have begun to receive more feedback in the form of letters and phone calls commenting on past articles, requesting information about different technologies, manufacturers, or programs, and alerting us to new trends and products in the industry.

Readers are also requesting reprints of articles. For instance, an Arizona weatherization coordinator distributed copies of an article on the cost-effectiveness of evaporative cooling to all Low-Income Weatherization contractors in Arizona. Similarly, the LIHEAP coordinator for California requested reprints of an article on blower doors for distribution at a conference for California LIHEAP contractors.

One qualitative benefit of the magazine may be that it provides a sense of identity to many auditors and retrofitters. It is the only magazine dealing exclusively with conservation in existing homes, and it is, in reality, their magazine.