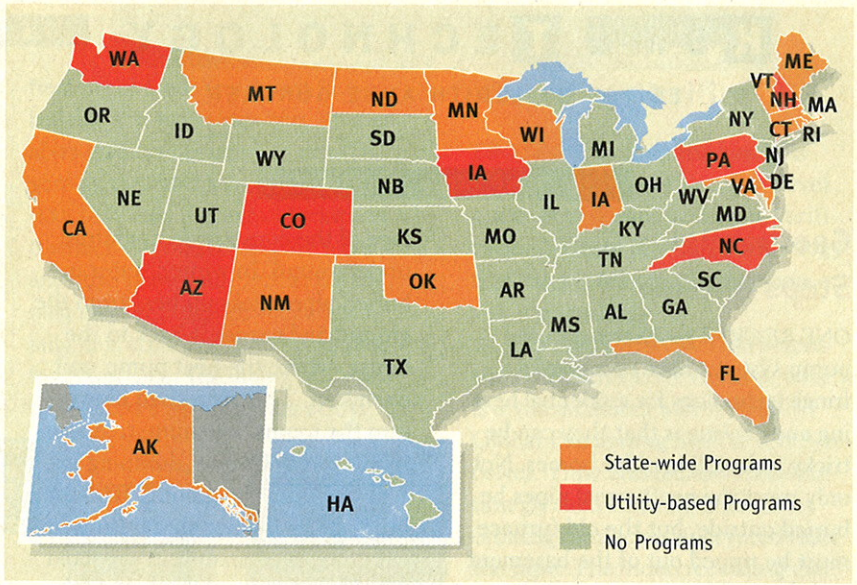
ALTERNATIVE ENERGY

Solar Power: Consumers Cash In

THERE'S NO doubt about it: Alternative-energy systems are expensive. For example, a typical photovoltaic system, which uses solar cells to convert sunlight to electricity, can cost a homeowner anywhere from $10,000 to $30,000, and supplies only about 50 percent of a household's energy needs.

Part of the problem involves storing excess electricity in costly batteries. But homeowners in many states do have an alternative: "storing" electricity in the utility grid for later use. These programs, called net energy metering, enable homeowners to receive full retail credit for any electricity they supply to the grid. Essentially, when the solar cells produce more energy than the house consumes, the electric meter spins backward.

According to Howard Wenger of the Pacific Energy Group, an energy research company, net metering programs can reduce the payback period—the amount of time it takes to generate enough electricity to repay the costs of the photovoltaic system—from about 45 years to 20 years. The exact monetary figures depend upon the efficiency of the photovoltaic panels and the amount of sunlight they receive, as well as the local utility rates.



ALEX REARDON

Net energy metering programs enable homeowners to sell home-grown electricity at retail rates to utilities. In this map, states colored orange have adopted net energy metering programs. The states in red offer regional programs through utility companies.

While homeowners benefit from lowered electric bills, utility companies gain too, because the solar cells are most productive when demand for electricity is generally greatest: on hot summer days. Therefore, net metering programs can help to reduce the need to build costly new power plants.—*Carol Brighton*

RECYCLING

Old Appliances Get a New Lease on Life

WHAT HAPPENS to dead appliances? Traditionally, they're buried in landfills. But, increasingly, they are winding up as raw material for new products.

Each year, more than 2.8 million tons of refrigerators, dishwashers, washing machines, and other household appliances are thrown away in the United States, experts estimate. One private company, Appliance Recycling Centers of America (ARCA), of Minneapolis, Minnesota, processes about 200,000 old appliances annually. In addition, the company reconditions a small number of appliances for resale.

Yet a significant portion—about 25 percent—of the waste isn't metal, but plastic. Now, ARCA has teamed up with the U.S. Department of Energy's Argonne National Laboratory to develop a method to salvage usable plastics. Early in 1997, ARCA will open a pilot facility to recover acrylonitrile-butadiene-styrene and high-impact polystyrene. Ultimately, the company plans to sell these plastics as raw materials to other manufacturers. According to the researchers, these recycled plastics could fetch anywhere from 30 cents to 60 cents per pound.

While the program may not affect homeowners directly, it's nice to know that at least part of our outmoded refrigerators and trash compactors may find a useful life after death.—*J.A.G.*

INFORMATION

A Brief Way to Save Energy

SOMETIMES THE appliance that will save you the most money isn't the one with the cheapest price tag—it's the one that can trim your utility bills, year after year. The Rocky Mountain Institute, a nonprofit organization that promotes energy-saving technologies, publishes a series of remarkably practical Home Energy Briefs that guide you through the energy intricacies of washing machines, refrigerators, light bulbs, and other electric products. Each brief costs $2. For a list of titles, write to RMI at 1739 Snowmass Creek Rd., Snowmass, CO 816-54-9199.—*J.A.G.*