

Below, a technician is inspecting a home insulation system that incorporates "radiant barrier" technology originally developed for NASA's Apollo lunar landing program. The Radiant Barrier insulation is an adaptation of a highly effective aluminum shield used on the Apollo spacecraft and other space systems as a radiation barrier that held in or kept out heat, cold air and water vapor.

The radiant barrier is part of a broader Guaranteed Watt Savers™ (GWS) system of "total home low energy consumption" being marketed as a joint venture of Guaranteed Watt Savers System, Inc., Charlotte, North Carolina and Smart-House Consultants, Incorporated, Oklahoma City, Oklahoma. The GWS design technique combines space technology, advanced building technology and an engineering systems design approach to effect significant savings in home heating and cooling costs.

Under the GWS systems, plans for a new home are computer-analyzed relative to expected heat loss and gain, then the company provides specifications — designed specifically for each structure — as to heating, cooling, ventilation and insulation. The company inspects the work of the heating, air and insulation contractors and installs its own Smart-House Radiant Barrier, designed to

reflect away 95 percent of the Sun's radiant energy.

On completion of a home, technicians check for air tightness using a machine that creates a vacuum in the house and enables computer calculations of the air exchanged, a measure of energy efficiency. When satisfied that the house has been built to its specifications, the company provides a guarantee that the home will use only a specified number of kilowatt hours yearly. A separate meter is installed to monitor and verify the energy use by the heating/cooling system. The system is applicable, with modifications, to existing homes as well as new structures.

Smart-House and GWS teamed up in 1982 and since then have effected a number of advancements in the system, such as the use of a computerized infiltrimeter to verify air tightness, and the introduction of duct sealing and coating the underside of a roof with low emissivity paint in insulating existing homes. The GWS/Smart-House network has expanded considerably over the years: there are now 15 active centers in North Carolina, South Carolina, Oklahoma and Florida.

™ Guaranteed Watt Savers is a trademark of Guaranteed Watt Savers System, Inc.

