

PACIFIC SOLAR TECHNOLOGIES

P.O. Box 6486 ~ Kaneohe, HI 96789 ~ Tele: 808-330-1194 ~ Email: info@pacsotec.com
www.pacsotec.com

HIGH ELECTRIC BILLS OR HOT HOUSE?

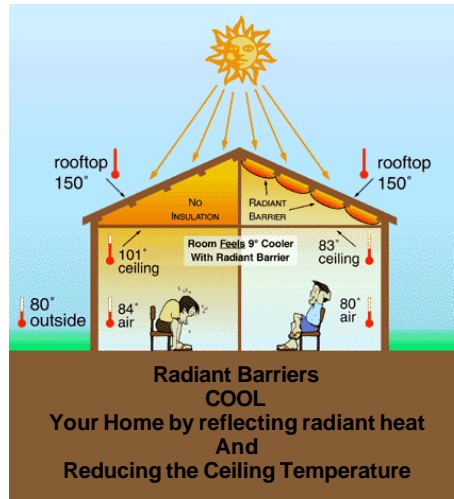
Have you ever wondered why your electric bill is so high? OR your house is so hot? Perhaps you even installed rolls of insulation, or had insulation blown into your attic and it was still hot, right?

Until recently, home insulation has not been a very exact science. Although most building codes specify insulation with a given R-factor, such as R-19 in Hawaii, Cellulose or Fiberglass Attic Insulation does not stop radiant heat. Insulation was designed to slow down conductive heat transfer, and although it does a good job of that, it does little to protect against radiant heat, the primary cause of discomfort and high utility bills. In summer, insulation can actually act as a "heat sink", trapping the heat of the day, and creating a hotter interior that can last late into the evening.

Over 40 years of research has shown that heat gain and loss in properly weatherized buildings is due primarily to far-infrared radiant heat transfer. Fortunately, the addition of clean, inexpensive, and easy to install radiant barriers can dramatically increase your comfort level while reducing your energy costs.



Popularized by use in the space programs, radiant barriers were used in the spacesuits and in the Apollo Spacecraft for temperature control. It was cal-



culated that it would take up to 7 feet of standard insulation to provide the same protection that a thin layer of reflective foil (a radiant barrier) could provide.

Radiant Barriers have been used for years in residential and commercial buildings, and now the Radiant Barrier system is fast becoming a household word. Industry experts predict that all buildings will eventually have ra-

diant barriers in place because of their universal benefits.

The concept is simple: each unit of radiant heat energy that is reflected away from your building in the summer means a cooler interior. If you use air conditioning, your system will recycle it's refrigerant less often resulting in less operation and less wear and tear on your equipment, AND less money to pay in utility costs.

Because the radiant heat is reflected, you will not feel its effects in summer. This increased comfort means you will never be forced to continually adjust your thermostat, and that translates directly into additional utility savings.

Many times, consumers feel that they should get the approval of a friend, or "energy expert". Unfortunately, even the "experts" are many times unable to fully explain the complex relationships between conductive, convective and radiant heat transfer, let alone explain how the physiology of operative temperature and thermal comfort translates into

(Continued on page 2)

PACIFIC SOLAR TECHNOLOGIES

P.O. Box 6486 ~ Kaneohe, HI 96789 ~ Tele: 808-330-1194 ~ Email: info@pacsotec.com
www.pacsotec.com

Page 2

(Continued from page 1)

energy savings and improved living environments.

Other energy service contractors will often give many illogical reasons as to why a radiant barrier system will not work well for their customer, even though the documented heat reduction and savings history is proven. The reason is obvious. No business wants its customers buying anything from another company.

In a nutshell, there are three modes of heat transfer: CONDUCTION, CONVECTION, and RADIATION (INFRA-RED). Of the three, radiation is the primary mode; conduction and convection are secondary and come into play only as matter interrupts or interferes with radiant heat transfer. As the matter absorbs radiant energy, it is heated, develops a difference in temperature, and results in molecular motion (conduction in solids) or mass motion (convection in liquids and gas).

How this process takes place within your house is quite simple. As the radiant heat from the sun heats your roof, the heat is conducted through the roof material to the underside of the roof decking. Since there is no more material for the heat to conduct through, it re-radiates into the attic airspace, or in the case of a cathedral ceiling it re-radiates into the airspace between the roof rafters, deck and drywall. The heat then is conducted by the ceiling and is finally re-radiated into the living area where it continues its journey downwards.

The Radiant Barrier industry is fast growing and Pacific Solar Technologies (PST) is a professional company with experts available to help you make a dramatic impact on your current, and future energy costs. AND PST has a product that has been proven to STOP THE HEAT! K-Shield is a Reflective Aluminum Foil Radiant Barrier that is extremely strong, tear resistance with a fire retardant added for your protection.



PST combines space technology and other high tech ideas to provide significant savings in home cooling costs. Their NASA-derived K-Shield Radiant Barrier is designed

to reflect away 95 to 97 percent of the sun's radiant energy.



It is normal to question any investment decision, yet too many times, for lack of knowledge, customers talk themselves out of valid decisions that would have improved their lives. Radiant barriers are generally one of the very best investments you can make in your home.

Not only will you be cooler, but also you will save on utilities from the very first day. PST can also wrap your hot water heater and pipes to save you even more. If you

need qualified advice to make your decision, call one of our Energy Analysts.

TELE: 808-330-1194

