

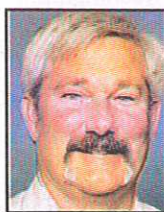
Each of us can build a sustainable future, save energy

There is more energy hitting the earth in one day than mankind can use in a year. Yet we only utilize less than 2 percent of our energy from a renewable source in the United States. 49 percent of our energy comes from coal and 40 percent of the energy we consume is used in our homes. I heard the term "building a sustainable future". Net zero energy homes is a worthy of a sustainable future for the world.

One viable way of working toward a net zero energy home is to install a solar system. But it doesn't stop there. Even before you install a solar system there is many things to do to make a difference in the energy used in a home or commercial building.

Compact fluorescent lights are a great way to start. Some worry about the mercury in these lights. But the truth is a coal fired power plant will put out over 4 times the mercury into the atmosphere than there is in a compact fluorescent to burn an incandescent light.

Energy star rated appliances. We will spend a few more dollars for these appliances but what they will save offsets the price with better efficiency. Installing better or more insulation and



Stewart Somerville
Alternative Power Systems

better windows can make a big difference. Installing solar screens on the windows. Attic fans can keep the attic cooler so heat is not transferred through the ceiling to the living space.

Turning out lights when not in the

room is a great start. Looking for phantom loads that is not being used at the time. Unplugging battery chargers or appliances that are seldom used but have lights, transformers or fans that run all the time.

Conservation is a key component to reducing our energy needs.

Utilizing tax credits for these improvements will help them pay back even faster. You can go to www.apssolar.com click on design and installation and then click on the dsire site.

Solar has some great tax incentives and rebates. The federal government will allow on a residential installation 30 percent up to 2000 dollars and the state has 25 percent up to 2000 dollars. On

commercial this is even better. A commercial solar system can be installed for 45 cents on the dollar. There is no cap for federal and a 50,000 dollar cap for state. In most commercial builds the bulk of the energy used is in day

light hours. Solar would offset not only Kw hours but demand also on a commercial installation.

In St George and Washington cities there is a 2.00 a watt rebate available on top of the tax incentives. For residential up to

3000 watts and commercial up to 10000 watts. Hurricane also offers a rebate of 25 percent of the permit of the meter base. The combination of tax incentives

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and rebates can bring the time of pay back for a solar system way down. With raising energy cost around the corner pay back on a

system will be even in a shorter time. Typically over the last 30 years an increase of 5.5 percent on the average for energy cost. We have seen Washington city increase 20 percent and Rocky Mountain has submitted an

increase.

One unrealized fact about solar is "there is a pay back." This investment will not cost you every month it will put money in your pocket. Reduce your carbon foot print and reduce our dependency on oil.

When sizing a solar system we need a year's record of power bills. Take 12 months of utility bills, add them all together divide by 12. This gives us an average monthly usage. Then divide that by 30 day in month and divide that by the average hour of sun we get and we come up with a rough estimate of how large a system we need to totally offset out utility bill.

The next step is to have a site assessment done and determine how much will fit on the roof or on the ground. Once we have that, the big question is what is the budget?

Systems can be as small as 1 Kw. I do not recommend going any smaller because of inverter inefficiencies. Systems can be designed to be expandable. No matter the size the system it will offset the energy used from a non renewable source. If we start today we can reduce our energy needs.

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