Illustration 1: Home made angle iron solar panel frame

I'm retired with a somewhat fixed income but did have a whole bunch of angle iron. I realized that the frame made from the iron, would be just too unstable and would probably crack the solar panels in some of the high wind storms we get around here..I came up with an idea to make the solar panels float on the frame as it twisted and turned in a storm..

This panel has been up now for almost a year and we have had some 86 km winds, maybe higher when I wasn't looking.. The solar panels did not crack and the frame is as tight as the day I bolted it together.

To make the panels float on the frame I used fan belts which I got at a local princess auto store for 20 cents each new..

Illustration 2: Back view of the solar panel

The solar panels are 15 watt units I purchased from Canadian Tire on sale..So total wattage of the unit is 60 watts.

Illustration 3: Close up view of rubber fan belts

I cut the rubber fan belts and mounted the panels on them..I also used a reverse bolt on the frame which you can see better on the next picture. By the way..drilling holes into the rubber is one hell of a hard job..That stuff is tough.

Illustration 4: Close up view of rubber and bolts..

Figure 4 shows the rubber bolted to the frame and the panels bolted to the rubber. In essence the panels are floating..Not easy to move the panels by hand because the rubber is so tough..but observing the panels in a wind storm proves they move quite a bit.

Illustration 5: Just another view of rubber and mount..

After a year, I checked for wear on the rubber or possibly some cracking from sun and wind..None..boy those fan belts are tough.

Illustration 6: Overall front view of completed frame.

The panel is mounted on a 2 inch thick walled iron pipe which I screwed into the ground..Yes, I actually drilled a hole in top of pipe, used a angle grinder to sharpen the point and put spiral grooves about a foot up the pipe..I then inserted some 5/8 inch six foot threaded rod through hole in top and literally screwed it into the ground about four feet. I can turn the whole panel and tilt it during the summer..not in the winter..I hope to be able to learn what to use for auto tracking this panel to increase the efficiency.

Illustration 7: Last pic of panels mounted in the garden.

The following pictures are of my air 403 mounted 47 feet on top of the tower and 20 meter beam. Yes, you guessed it...another ham..the wind generator was put up five years ago and so far seems to be performing well..I purchased it before I knew of Other Power.. I would have built my own from all the knowledge posted here..

Well, I hope this helps others to build cheap and dirty angle iron frames for solar panels. I really like this system because of the air circulation the panels get during hot weather..