

## At 1-year mark, home solar-energy unit dazzles

By Lalita Malik

Three months after signing on many dotted lines, the final approval from Central Hudson was received. Bryan McGurn from Lighthouse Solar arrived with a folder containing all the documents for the solar-energy unit, including instructions.

We walked outside to the control box for the solar panels and flipped the switch. My system was finally live. Yippee. I stared at the Net Meter Central Hudson has installed to see if it was spinning backward. The movement was so slow it was barely perceptible. This was not a practical way to monitor when electricity is going into the grid and when I am using more than I am producing.

McGurn and I came back in and opened up a web browser. I typed in the web address McGurn gave me, and I stared in excitement at the screen. It was alive with green area showing electricity produced and red showing consumption. Graph also showed emissions saving, CO2 saved, miles not driven and trees grown. At the bottom, I could see arrows showing electricity from my panels going to the house and the grid. This was fun. I can track this from anywhere.

In November, I produced more electricity than projected. I was pleased. My system's capacity was 75 percent of my energy use, so I still had an electricity bill. December brought snow. The green area on the display disappeared. There was no production. I called Bryan and asked why my production was zero. He told me when there is snow on the panels, no light gets through and hence no production. He assured me there was no system failure.

A few days after the snowfall, I was woken early in the morning by a loud clatter followed by a thump, outside my sliding glass door. Simultaneously my burglar alarm went off. The phone rang and Vector Security asked if I needed the police. Heart thumping I said I do not know yet, and went to check. The sliding glass door was undisturbed. I checked the deck outside and saw the snow was messed up. I was sure an intruder had tried to get in. Still on the phone with Vector, I

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walked to other windows and looked for footprints on the rest of the deck and stairs. Snow was not disturbed anywhere else. I breathed a sigh of relief. It was the snow sliding off my panels that had made the loud noise. The alarm should not have gone off. Vector came next day to check it out and fix the connection. After that, after every snowfall, I listened for sounds of an avalanche and as soon as I heard it, checked the light gauge monitor as it gradually showed electricity production. In addition to production, the light gauge monitor shows how much energy is being used. My consumption never seemed to go below 600 watts. I defrosted my freezer, which made a slight difference. I purchased a Kill a Watt meter and tried to analyze which appliances and lights were using so much power. It was a time-consuming and futile attempt. A friend suggested I turn off one breaker at a time at the main panel and watch its effect on power consumption. I performed the experiment, watching the light gauge monitor as I flipped switches. The culprit was identified when the consumption dipped after breaker six was turned off. I checked every room and outside lights and outlets to see what was affected by that breaker. They were all working fine. I considered asking an electrician to trace where the power was going, but since a circuit was off, it could do no harm, so decided not to bother.

In March, electricity generation peaked. With reduced consumption, for the first time I was producing more power than I was consuming and started selling electricity to Central Hudson. This continued until air-conditioning season started, and the pool was opened. I had built up a healthy amount of electricity sold balance, so even though I was drawing more from the grid, I was still in the black. I paid only basic connectivity charges from March to September to Central Hudson.

I knew solar had been a good option when I received a check for \$ 87.75 dollars from Central Hudson in September — the anniversary of the solar- system installation. I was on track for a payback on the cost of the system in eight years.

**Next: The quest continues**