InCERT: SOLAR PANELS - one person's experience

July 2025

My first experience with solar was the purchase of the Texas Instruments Solar Calculator T1-1895 in 1984. I used it almost every day for my entire work career. At 41 years old it still works like a charm, and I use it often. I hope my children will eventually use it and pass it onto their children, just to see how long a good quality calculator can work. I knew solar had potential, though the last few years, I have had experience with poor quality solar in outdoor lighting, that doesn't last more than a few years giving solar a bad name.

BECOMING SOLAR READY: We bought our first LED light bulb 25 years ago (maybe more) and it lasted 20 years as an open exterior lightbulb at our back door. I recall it costing $20-$25. At the same time, we started buying energy star appliances and installed a high efficiency furnace. When we redid our heaving basement floor, 13 years ago, we needed to gut the basement and had to convince the contractor to install LED lighting, but with this change we became solar ready including changing the electrical panel and adding a new panel in the garage.

SOLAR PANELS: Our household panels were bought in 2019 and installed in 2020 with help from the Wascana Solar CO-OP. Sixteen panels run our entire two-person household. Today's panels are stronger, and if you bought top of the line panels only 8-10 panels would be required. They produce energy with a much smaller carbon footprint than using natural gas, oil or coal. I have heard criticism of these panels and though some of the criticism has merit, change is inevitable and the adoption of solar throughout the world has consistently surpassed predictions. Solar is here to stay. Eventually governments will come around and when they do, be solar ready with a good understanding of what is needed and your homework done. By now everyone should have LED lightbulbs and choosing energy star appliances.

TECHNICAL DETAILS: Before solar, our 2016 yearly electricity bill was $1040 per year, using 5106 kilowatt hours (kWh) or averaging 425 kWh per month. In 2018 the cost was $1109.98 and 4903 kWh were used. We now have 16 panels at approximately $1010 each. It is considered **a 5.92kw roof mount** solar system. We have a 1190 sq. ft. bungalow and all our lightbulbs are LED's with a few left-over fluorescents. It is not ideal solar orientation facing E to SE and it is on a garage roof with a typical lower slope. We had a panel in the garage, because we had installed one 5 years earlier. Because we invested so much, we turn off the lights when not needed.

The paper work was done in 2019 which means we received the 20% rebate. The panels themselves cost $16,181.82 less 20% rebate = $13,312.51. With taxes, $15,368.07. It is important to note the following components would not have occurred without the help of the solar coop. I have no aptitude for electrical lingo or special knowledge of solar requirements. It included:

1. 16 - 370w Hanwha solar panels (made in US/ Germany/ South Korea)
2. 4 - QS1200 Microinverters
3. Talon racking
4. Installation
5. Electrical work
6. Rodent protection

7. Monitoring system app (shows how much energy has been generated per hour/day/month/year)
8. 2yr labour warranty,
9. Extended Inverter warranty $350.00 (This is apparently the first thing to go)
10. Electrical permit $150.00
11. Roof engineering $400.00
12. City Building permit $100.00
13. Wascana Solar Coop fee $588.57 (worth every penny in accessing their knowledge and specifications)
14. Lifetime Labour warranty $500.00 (Not sure the company will still be in business)
15. In addition, SaskPower Permit fees had to be paid ($315) and a SaskPower Bi-directional meter installed for ($498).

We have prevented approximately 4 to 5 tons of carbon annually. In 2025 – our current bill is $36 per month. If we didn't have the solar panels our bill would be approximately $100-$105 per month ($1200-$1260 dollars per year). We generate more electricity than we need in 8 months giving the extra to SaskPower and then borrow power for the four winter months. This is accomplished with the SaskPower bi-directional meter.

ARE WE BEING FAIR?

Many people say we are not paying our fair share of the grid and poor people will eventually suffer. People suffer with climate change and poor air quality, lost homes and livelihoods. We can see that with the current forest fires and floods. Medical systems need to deal with asthma, and farmers with drought. The Food Grains Bank was at the recent COP meetings advocating for less carbon because of the devastating effects of unpredictable rains for farmers in Africa. Low lying countries that are affected by climate change (such as flooding) are demanding reparations**.** Climate Change costs money. The oil and gas industry has also received incentives and subsidies and still does so today. It seems hypocritical to deny a clean energy source an incentive, when oil and gas have received billions over many years.

Another criticism is that we are getting rich. In year 10 and 20 we renegotiate our contract with SaskPower. We will not have paid for those panels until somewhere between year 12 and year 15. **In Year 20, SaskPower can charge us the fair going rate for power, leveling the playing field and having achieved the goal of a more sustainable grid.** We would have been further ahead financially, had we invested the money. I once calculated that our solar investment might make 5-6% over 20 years and this assumes all will go well and no repairs must be made. 5% is a very conservative investment goal. Our motivation was to reduce carbon pollution. We also pay a minor insurance cost on those panels and clean them of snow from time to time, otherwise the avalanche of snow obstructs our walkway. If they should ever break in a storm, we would spend time getting them repaired. And when they are finished their lifespan, we will have to replace them and may have to pay for recycling or disposal. Solar panels can be recycled, though a recycling facility may not be in your area.

So far, our only error was not getting enough panels to pay for a future electric car. The public has not made the connection between carbon and health of our planet. It was not a federal election issue. With this inCERT we hope you will consider solar panels as a Christian Response to Climate Change and have provided practical information. Considering solar? For further questions email ingridt@sasktel.net in Regina.

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