

# SOLAR TECHNOLOGY IN THE LOCAL ONTARIO AGRICULTURAL SECTOR

Throughout this class I have been curious as to how the green technology revolution has affected the local agricultural sector as well as residential areas in Southern Ontario. I knew that the Canadian population of farmers is steadily aging, with the average age of Ontario farmers being 49-52 years old, and the percentage of farmers under the age of 35 dropping to 9.1% (Canadian Federation of Agriculture). As often older generations are more reluctant to embrace new technologies and processes in their industry, I hypothesized that that green technology is not as readily embraced in the agricultural sector when compared to the residential and corporate divisions. To investigate my theory further I sought out a local farmer named Harald DeJonge who had recently implemented solar technology on his poultry farm.

The massive solar system is 32 feet wide and stands 36 feet off the ground. It has 52 separate 230 watt micro inverter panels that are set up on a rig to track the sun rather than sit stationary on a rooftop. All together the entire system generates 11.96 kilowatts. DeJonge's system is tied directly to the Ontario grid and he has a contract with the Ontario Power Authority that ensures that he will be paid 80 cents for every kilowatt hour that is given to the grid. DeJonge undertook this \$85 000 project last year.

When asked why he decided to go with solar, he answered that he had desired to introduce a green technology to his farm for a long time, "I've been wanting to do *something* for 20 years, but windmills are too expensive and break down too often, pyrolysis is too complicated, and until recently solar was too expensive. Before the government stepped in, the return on your investment [into solar technology] was much too slow. For the average farmer it is now in reach to financially offset the costs, it is now feasible". Now it only takes 5-7 years on average for a farmer to make their investment back, "The great thing about solar is that the system is very durable and requires very little maintenance and upkeep. It'll keep running for 20 years minimum and normally last 50!"

I was curious as to what the other farmers in the area thought when they saw the massive solar tracker being installed last summer. DeJonge laughed, "At first they thought I was crazy! They didn't believe me and thought the whole thing was too good to be true! They didn't trust it at first; they didn't think they could get a

return on their investment and make it viable”. For weeks after it was up, farmers were constantly dropping by to have a peak and ask questions, he chuckles as he remembers it was hard to get the farm work done with all the unexpected visitors. DeJonge fondly remembers that despite their initial hesitation, “once it caught wind, it took off like wild fire!”

As a younger farmer, I thought that maybe DeJonge and those he knew were the exception to the rule so I went to a booming company called Sentinel Solar that manufactures and sells solar technology to many different sectors. I talked with the senior accounts manager Jason Cohen about who the buyers of solar technology are and what purchasing in this industry looks like. Most people looking to adopt solar technology to a residential or corporate framework are interested in getting the cheapest technology installed as quickly as possible, “It’s a very interesting industry right now. Most people don’t care. In fact, I would say most people don’t even know what they’re buying”. This is also largely due to a grab for cheaper foreign product as the Ontario government has mandated that every year a higher percent of the equipment incorporates into solar systems must be manufactured in Canada. The point of this policy is not only to create jobs in Canada, but to push a higher quality of technology on consumers so that it will last longer and be more efficient. Despite these extra costs every year, business at Sentinel Solar is thriving. Three years ago the company did approximately \$800,000 in business, last year \$10 million, and forecasts for this year are estimating anywhere from \$30-60 million.



Broken piece of a solar panel given to me by Sentinel Solar

Cohen revealed that while recently the residential market has increased, the majority of the company’s clientele was originally and continues to be farmers. Cohen also says that from his personal experience farmers, as well as hobbyists, tend to be the most knowledgeable about the technology and very concerned

about the efficiency and quality of the product, “This is an industry driven by [farmers] . . . who are passionate people, who are looking for efficiency wherever they could find it”. Farmers not only a large percentage of those implementing the technology, but they are also those who are buying products that are the most efficient and will last the longest amount of time.

When I asked DeJonge why he believed it was farmers latched onto solar so quickly he explained, “farmers are and have always been innovators, they are always building or inventing something. When they needed a tool that no one made, they made it themselves”. Cohen agrees with DeJonge that it is the pioneering spirit and asserts that this combined with familiarity has led to farmers embracing solar technology, “Farmers are first adopters, primarily I think because they are not afraid of a government program . . . and they understand taking equity and turning it into something that’s working for them, and growing something. Putting a tracker into the ground isn’t much different from planting something”.

Through discussion with both a local farmer and a manufacturer I was happy to discover that my initial hypothesis was proven wrong. Despite the aging population of workers in the Ontario agricultural sector, the innovative mindset has led to farmers being on the cutting edge of implementing solar technology.

Source : <http://www.sassweb.ca/3bb3/solar/solar-technology-in-the-local-ontario-agricultural-sector>