Chris' Energy Story

My energy story goes way back to when I was about eight years old. I was visiting my grandfather who lived in San Diego. It was summer vacation and he took me to Disneyland. Above and beyond all the amazing rides and exhibits, one experience stands out against the rest as it altered the course of my life.

Tomorrowland - That's where it happened. I remember vividly standing in front of the 'house of the future'. In front there were 6 huge solar panels and as you were able to see into each of the rooms the narrator informed me that this entire house was powered by the energy harvested from the sun.

I stared at the animatronic figures in the kitchen; a mom cooking pancakes on the electric range as her son sat at the table waiting for his breakfast. And all this was being accomplished by these marvelous deep blue panels on the front yard.

I didn't know how at the time, but I was convinced that someday I would be a part of this solar phenomenon.

Flash forward a few decades and you will find me talking solar with a good friend who used to run one of my companies. Turns out her brother was running a very successful residential solar company in Sacramento, California fueled by a robust set of rebates and incentives as offered by SMUD (Sacramento Municipal Utility District). As a marketing and organizational expert, she asked me if I could help with them moving from being a residential EPC to commercial.

This was way back in 2002 and I really had no working knowledge of solar, but the moment she said the word 'solar', I was all ears and ninety percent in. I spent a week in Sacramento learning the industry, getting up on roofs with the installers, sitting with their executive team as they discussed things like Power-Purchase-Agreements and Solar Leases.

I was hooked. The next year I assisted them by creating Quantum Energy Group which became their commercial division. Not much later the company was purchased by World Water and Power, an international energy company who built the 2 megawatt system at Denver International Airport; along with numerous large scale projects here in Colorado.

My mentor in all this from the beginning was Dr. Neway Argaw, world solar energy authority - His design was used on the first Mars rover. Dr Argaw was also one of the developers of solar adapted power purchase agreements. After the company was purchased, I discontinued consulting them but continued my commercial contracting activities.

Later that year I was offered the opportunity to open a satellite office for SolSource of Colorado. At the time, SolSource was the largest solar installer in the state. I opened a field office in Breckenridge, Colorado and then one in Littleton, Colorado focusing on the residential market.

During that time I was working an event in Park County, CO when I was approached by a couple of faculty members of Red Rocks Community College in Golden, CO. They liked my

presentations and approach and wondered if I would be interested in teaching a class at the college. The class they needed filling was “Estimating for Energy - 201”. I met with them the following Monday and agreed to ‘hire on’. I asked when the first class was and they said, “the day after tomorrow.” Yikes… that was soon, next question…. “Do you have a class syllabus?” The answer was ‘No, we were hoping you could help with that too.’

So, I created the curriculum and delivered it every Wednesday evening from 6-9:30pm for four years. Ultimately, the course was used as the basis for the NABCEP Solar Sales certification.

At Red Rocks I was head-hunted by SolarCity. I joined their sales team and within 6 months qualified for the first time for the Elon Musk / SolarCity All Star Team (top 1% of all sales reps in the company). Qualification happened every 6 months and one had to have at least 100 installations to make the cut. I was fortunate to be on the team three consecutive periods before I went on to Sunrun.

My former boss at SolarCity had moved over to Sunrun to take over the Mountain West region. At the time the Colorado group was continually hovering at the bottom of the leader board nationally. As a matter of fact, on several occasions the company had intended to shut down the office in Denver due to ‘no path to profitability’. It was a hard challenge, but I accepted it.

I was fortunate enough to have an amazing resource at Sunrun. The company focused on personal development and cultural alignment. They had hired Dr. Ian Peters to assist sales leadership develop more productive teams. Dr. Peters and I then set off to develop the ultimate in Talent Mobility and Performance Pipeline strategies.

Because of this campaign, I was able to take the team from the bottom to the top - we were recognized as the flagship team for Sunrun- by changing revenue from around $400k per month to over $5mio within 30 months. We changed our referral and self generated sales from 10% to over 65% in the same period.

An interesting thing occurred which enabled me to achieve these results. Along with the Performance template, we did a lot of work on culture. Our philosophy was that with a Noble Cause and the right Language, we could accomplish anything. Once language shift changed everything in our referral business.

On our sales KPI reports the category for referrals and self generated business was RSG. One day I was thinking about the priority and shifted the R to the end… SGR… to me that looked like an abbreviation for Sugar… Self Gen - Referral - We rebranded our efforts to generating Sugar - (Referrals paid twice the commission than company supplied leads - we called it the sweet money). Before too long our SGR business exploded through working what we called the Sugar Refinery where we would sort out lead generation opportunities. These efforts caused the company to change the KPI from RSG to SGR and the entire sales force adopted Sugar as the ‘battle cry’.

They say that all good things come to an end. That is true of my Sunrun story as well. When I hired on, the leadership team supported a strong entrepreneurial environment. As we grew and ultimately took over the number one spot in residential solar, the company became typically corporate. The climate became one of mechanism opposed to allignment… It was time to move on.

Enter Pure Harvest Corporate Group (PHCG)... The day after my last day with Sunrun I got a call from my former construction partner. He was bidding on a renovation and tenant improvement for a local indoor cannabis cultivation company. Pure Harvest was in the process of acquiring a local grow operation and wanted to create an environmentally sustainable brand. This included adding solar energy to their facility. So, being the local solar SME I was brought in to assist with the energy side of the operations.

I designed a 100 kilowatt system and when we laid the solar production over the buildings usage we were all quite shocked. This $250,000 system was only able to cover 8% of their energy usage and a meager 4% of their electrical billing. (Ref: Demand vs Usage in Commercial Solar) This translated to 16+ years to achieve breakeven. The project owners were quite disappointed as they thought that the offset would be much greater. The problem with these indoor agricultural operations is that they pack a large number of lighting fixtures into a very small space. Not only is the electrical draw for the lights robust, the energy required to cool these rooms is also quite hefty.

One of my former SolarCity/Tesla colleagues heard that I was bidding on the cannabis operation and had a potential option for me. One of his professional acquaintances was developing a low voltage LED light that required three times less energy to produce the same amount of light that a conventional high-intensity-discharge lamp does. I was introduced to No Grid Energy company, Erik Mickelbust & Matt King. They were indeed working on new Direct Current to Direct Current technologies which focused on maintaining energy source and energy draw in a native DC environment.

Logical, since solar panels create DC electricity, Batteries store and distribute energy via Direct Current. LED’s require a direct current charge. It only made sense that if one wanted to create a low voltage, low wattage, low carbon cultivation environment, then the DC to DC option seemed not only logical, but the most intelligent use of solar power.

The folks at Pure Harvest decided to create a separate company to handle the energy challenges of cannabis cultivation. They hired me to develop the company and create a support team to handle their expansion and inclusion of renewable energy and DC optimized appliances. Thus, Solar Cultivation Technologies was born. I was negotiating with the owner of No Grid when we came to an impasse. The company simply did not fully land the DC to DC lighting fixture and ownership did not want to create the fixture and switches I needed for our value proposition.

From my dealings with them, it was clear that the operations officer, Matt King, was the individual who was driving the results and became very frustrated that he did not have the company support to deliver to us our product. It was at that time that I asked Matt to join the SCT team to head up

the development of our low voltage LED powered by renewable energy. I dubbed this new fixture the “Infinilight”.

The next phase of challenges manifested as we continued cracking the DC to DC code. We were able to create a pure DC to DC environment with conventional commercial lighting. The problems cropped up with two issues: DC distribution at 48 volts and high amperage switches. Keeping an entire load center powered by direct current and staying native DC is difficult. One of the other problems is that of the winter/summer dillema. When engineering an non-grid tied DC system, everything is really run through the batteries. We need a DC enviroment day and night. For the engineer the question becomes, do I design for the worst day in winter (shortest amount of daylight) or for the best day in summer (longest day - most daylight)? If we design for summer, then we don’t have enough solar power for winter and need to have an alternative source of power (the grid). If we design for winter, then in the summer we have three times the solar energy we need… just bounces off the panels back to space.

Pure Harvest ended up selling 60% of the company to one of their investors and they doubled down on solving the distribution and switching issues. Just prior to my leaving the company due to their desire to move out of the cannabis arena and simply in to supply house distribution, I strongly recommended they solve the winter/summer dillema via AC integration. Once this is solved, then the company can really open things up.

As my resume vitae indicates, I am now engaged with my new energy venture. I have formed two companies to solve the high demand / high usage problems within the indoor agridcultural world; Hypergrid Technologies, LLC and Sun Light Research & Testing, LLC. Hypergrid exists to help companies integrate the best of direct current energy sources and to optimze the best of alternating current appliances that are connected with intellegence. Sun Light Research and Testing exists to create an environment were testing of agricultural lights can occur without loss of revenue to cultivators and to provide a training enviroment to assist the cannabis community at large how to reduce grid demand and drastically lower carbon production.

Get realtime updates at either of these sites:

Hypergridtechnologies.com
Sunlightresearchandtesting.com

I wish you all great success and happiness….

Chris