

SOLAR POWER

Coastal Solar is setting the standard for renewable energy in the agriculture industry

by Mollee D Harper, Coastal Solar, USA



Alternative power sourcing is one of the hottest topics in the poultry business today, and not just in the UK and US, but all over the world. The effects of solar-powered applications are also changing the farming landscape in unexpected ways. The financial benefits are life-changing for some, because solar energy reduces and/or eliminates the need for high electric consumption and the high utility costs that have plagued the agricultural industry for many years, causing many to go under.

One of the surprising effects to powering a poultry farm with renewable energy is that the growing operations themselves also become exponentially more efficient. The reduced monthly costs often free up farmers to make equipment upgrades and other much-needed, operational improvements to strengthen the quality of their brand. This, in turn, reduces high mortality rates and strengthens that farmer's supply chain. It is an investment that

directly affects the bottom line.

Clay Sikes is the owner and CEO of Coastal Solar Power LLC, headquartered out of Hinesville, Georgia, USA. Clay leads a team of construction management professionals, who have spent the past five years focused on PV solar solutions for American integrators, farmers and suppliers.

In this article, Clay shares the secrets to his success in the Southeast, how he's been able to help farmers overcome the initial investment, and what mobility now means for the agricultural business, not just in being able to move a solar unit around on the farm, but delivery of solar internationally to help create sustainable food sources. We also learn the importance of this ongoing tandem project to offset runoff and CO2 emissions through a reforestation effort to plant one million trees.

The hardworking agriculture industry deserve a miracle

Farmers have suffered some of the greatest losses as a result of high fuel and electric costs, since before the recession of

2008. Coupled with the resurgence of farm-to-table living, organic produce and locally sourced food, the demand for their toils and their challenges have never been greater.

Committed to the land and delivering its bounty to our tables, renewable energy applications were traditionally cost-prohibitive to many farmers worldwide. As solar energy has evolved, the benefits have too. It seems the tide has finally changed in favor for the men and women who work tirelessly to feed us.

Helping american poultry farmers find their ROI with solar

The agriculture industry is one of the greatest-poised to take advantage of the financial benefits of the ongoing solar energy movement. Yet, the initial investment has been one major barrier for farmers, integrators and poultry growers to make the switch to renewable energy. Over the past several years, the numbers have finally tipped in favor of the US farmer, through the USDA REAP grant program.

In 2016, the USDA announced nearly US \$1.9 million in

USDA grants for farmers to make their move to solar power. With numerous tax credits (at the state and federal level) and USDA REAP grants available, farmers are now able to offset their solar conversion costs by more than 50 percent. By reducing dependency on electricity by up to 70 percent, most farmers are seeing full cost recovery in just a few years' time.

Once farmers have added solar energy, their savings on utility



bills are considerable allowing rural businesses to move out of the red, in many cases, for the first time in years.

Clay Sikes, CEO of Coastal Solar Power LLC offers, “in the last five years, we helped many poultry farmers move forward with solar solutions, and as a result they were able to save a significant amount of money. We had a 98 percent success rate in acquiring USDA REAP Grants for these poultry farmers, as well as receiving tax credits that equal 55 percent without any state incentives. Between grants and tax incentives, our poultry customers are realizing a full return projected within a few years.”

Mr Sikes continues, “I am fortunate I have been able to assemble the industry’s most experienced construction management team, whose entire focus is to help our farmers get out from underneath this heavy burden with a custom-fit solar solution, that is not only environmentally responsible, but one that affects their overall sustainability, quality of product and profitability.

“By helping our customers apply for REAP grants and assessing their unique business model and utility expenses, we have had great success helping farmers overcome the financial hurdle to move to renewable energy. By doing this, we have helped to free them up from worrying about high utility bills, so they can focus on quality of brand and growth.”

“One thing that really helps us stand out from others in the USA, is our personal design capability that allows us to visit any farm, and analyse what that specific farmer needs. We consider ourselves a boutique solar company”, Mr Sikes continues.

“We custom design every system to meet the needs of the individual. In many cases, in designing systems, it is not the production capabilities of solar, but the financial needs of the farmers that we impact the most.”

“To that point, we often spend more time with the farmers’ accountants than we do with the farmers themselves. When the design is complete, it is not just a design that meets the farmer’s needs, but also financials that meet their needs for long-term sustainability.”

“Coastal Solar is now a supplier to the poultry industry. We can provide pre-engineered, packaged solar systems, ground or roof mounted, for domestic and international customers. This is based solely on the solar production capabilities of the systems’ kWh (electricity generated by the solar).”

Mr Sikes explains, “keep in mind that there will still need to be an additional power source, whether it is grid power or in remote locations batteries or generators for the system to operate effectively. We will also include the on-site consulting, as well as design-build capabilities, utilising local labor forces, at an additional cost. All of this will be built around an initial intake form or questionnaire so that we can build a system based on their individual needs.”

Expansion of mobile solar units - On the farm, and abroad

Mr Sikes continues, “in the process of our efforts to positively affect the farming industry in the US, we developed a mobile solar device we call ‘The Unit’. The Unit was designed to offset power needs for pivot irrigation. As farmers know too well, pivot irrigation pumps use a lot of electricity.

During the summer, the power company may reduce the voltage to meet load demand in other areas that limits the electricity to the pump. In some circumstances, farmers are limited to certain hours of the day that they can irrigate their crops. Our mobile solar unit can be taken to the pump where the power is needed. This allows that pump to run uninterrupted.”

“Our mobile solar unit can be used all around the farm because

it is mobile. It basically functions as a solar powered mobile generator. In certain circumstances, it can be taken to the barn, to the house, to the field, and it can be used for irrigation, light, heat, and more. We believe this unit will become as common to a farm as a tractor. By adding a battery or generator system. It’s an independent power source that really functions like a miniature power factory that can be used anywhere that it is needed”, Mr Sikes explains.

“We are beginning to get inquiries for our mobile solar unit from foreign countries, and even governments. They are interested in us packing this in a container form and shipping to that country, specifically Africa, Brazil and New Guinea. We have experience working all over the Caribbean and Africa. We have also done a lot of mission work in Haiti over the last 30 years. We see the need for what we are doing all over the world.”

Infrastructure for distribution

“We are sitting in an area designated as a key distribution hub in the US for exports to foreign countries. Our home base is close to four major ports – Savannah, Charleston, Brunswick, and Jacksonville. We have nearby access to the CSX railroad. We front on I-95, a main North-South corridor. We have nearby access to I-26 leading into the Carolinas, I-16 leading into Atlanta, I-75 and I-85 and I-10 going all the way over to California.”

“We have thousands of square footage of warehouse space that we can use for this mission. And, our near goal is to become a distributor of renewable energy all over the world. Why is this important? It allows us to always have product at the absolute best price available. Most solar companies buy wholesale from distributors. But, rarely do any of them buy straight out of the manufacturing facility, like we do.”

“We are in a contracted partnership with a logistics firm in Charleston, SC that handles all our shipping, trucking and transportation needs – from Singapore to Georgia. We can service the complete distribution, getting solar energy to farmers here at home, as well as those who are combating hunger in countries all over the world. No other solar company can compete with this.”

“We do buy American as often as we can. We are in a freeport zone so we can hold high amounts of inventory without paying a high inventory tax at the end of the year. We also take advantage of tariff-free zones to bring our product into to avoid the high cost of tariffs on renewable energy products.”

Mr Sikes concludes, “all of these factors have really come together for us this past year. We see ourselves as a global company that can go anywhere we are needed in the world.”

Environmental stewards and one million trees

Mr Sikes shares, “part of the global warming issue is green house gases. One of the greatest offsets to green house gases is solar energy because you are using no fossil fuels with solar energy. You don’t contaminate the air with fossil fuels.”

“The other side to that is the trees. Trees absorb a great deal of carbon monoxide. We are planting one million trees in three years. We are 75 percent of the way to that goal. We are doing this in Florida and Georgia. We have a correlation with our efforts on both sides of the house – renewable energy as well as environmental stewardship. We have planted 90 trees for every panel we put up. Our goal is to plant one million trees. We’ve planted 650,000 trees and have another 350,000 to go.”

“We are serving the earth and doing our part to offset runoff damage, CO₂ emissions and global warming. We do that through conservation, tree planting, along with our solar efforts. To that end, we brought in Dane Smith to serve as an agricultural

consultant. His background includes knowledge on this process exactly. Dane is spearheading our tree planting initiative, covering site preparation through everything else that goes in to creating a true conservation system.”

Dane Smith, Agricultural Consultant for Coastal Solar Power, LLC explains the service; “I have worked with the Natural Resources Conservation Service (US federal agency) for 23 years. My life’s work has been in environmental stewardship. I have wanted to go into solar and alternative energy for some time. I studied how to take each acre of land, determine its full potential for use and maximize its natural resources for man.”

Smith continues, “Trees are a natural resource. We can always bring them back. Even with digital today, there probably isn’t a desk without paper on it. There is always going to be a need to put the trees back. Environmental stewardship to bring these urban areas back into natural forestry is a great thing for many reasons.”

The Natural Resources Conservation Service, formerly known as the Soil Conservation Service, is an agency of the United States Department of Agriculture that provides technical assistance to farmers and other private landowners and managers.

Smith adds, “the benefits of reforestation are tenfold. This is not only an important effort to combat global warming and erosion that negatively affect the earth, but they also affect our water supply, the animals, plants and people who live on it. We also do conservation easements on large development tracts. What we do there is we take land that is previously ear-marked and approved for development. We take it out of development and put it back into forestry.”

“If you reclaim 1000 acres of land that was marked for development, it has probably already been bulldozed. To put

that land back into use in forestry, you have to create the best atmosphere for the landowner and the land itself.”

“When the trees mature, they will absorb 40 tonnes of CO2 annually, offsetting huge affects of global warming produced by man, over time. We can offset erosion, clean up our streams, preserve a better water quality, foster new plants, support the prosperity of our wild life, as well as keep the earth aesthetically pleasing to people.”

Clay Sikes, CEO of Coastal Solar Power, LLC concludes, “our commitment to the earth is deep, and our stewardship ongoing. Integration of the agricultural services in our mission at Coastal Solar was important to us personally and professionally. We are now discussing benefits with our poultry farmers about tree service and solar together. This is also a differentiator for us.”

“The whole reason I got into this business was the potential to serve others. The entire Coastal Solar effort, the primary objective, was never about making a lot of money. It was to be a blessing and help others with this great technology. I think this is really important for others to understand. Virtually everyone here on my team has that same heart. We are not here for the money. We are committed to make a difference through environmental stewardship.”

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