FarmAfield Labs

Technical Assistance Request

Summary

Concentrated animal feeding operations (CAFOs) face increasing pressure to minimize emissions and increase efficiencies. This need, paired with underutilized solar capacity in rural areas, makes the agricultural sector a promising growth opportunity for solar photovoltaics (PV) systems. CAFOs offer the benefits of concentrated power demand alongside open land, with added synergistic benefits to livestock health coming from the shade and shelter provided by the panels. In light of these factors, there is a critical need to develop a singular, synergistic system that allows cattle producers to increase shade in open pens as well as to capture the solar potential that exists there. By creating solar mounting hardware that integrates with existing CAFO infrastructure, there is a unique opportunity to enable solar installations in feed yards while capitalizing on the synergies that exist between CAFOs and solar markets. Long term, this technology can serve to 'open the door' for external solar developers and help 3rd parties enter the sector more quickly and decrease their time and costs from concept to commercialization.

FarmAfield Labs is currently piloting a hardware and software solution in the state of Nebraska with cattle operations.

Unique Challenges and Opportunities for Partnership

Advisory services on leasing process

> Once our Solar Cattle Shield™ installations are completed at the demonstration sites to satisfy their on-site power demands, we will work with each producer to determine the unused fence line installation capacity that can be offered to outside developers and investors. These demonstration projects will be strategically located in areas with favorable net metering policies, so we will finalize power purchase agreements between the feedlot and utility companies for excess power generation. We will assemble a list of solar developers who want to expand into the livestock feeding sector, and work with them to develop project proposals and lease agreement rates and terms. We will install additional Solar Cattle Shield™ units on the demonstration sites to fill the remaining fence line capacity and then use our Solar Farm Finder™ platform to track the power output of the solar modules and pass the power purchase earnings back to the solar developers. We have conducted significant customer interviews in the renewable energy space but recognize the need involve additional experienced commercial professionals

Local Manufacturing Partnerships

> Once we have finished our design and are confident in our IP protection, we can proceed to finalize a working partnership with our initial manufacturing partner. It is possible that our product sales volumes increase beyond our initial manufacturing partner's capacity, thus increasing manufacturing lead times. Our team has strong experience in supply chain

management in Fortune 100 business but also recognize that the rural solar opportunities will bring new challenges.

Interstate Regulatory Experience

Starting with our utility overlay maps, we will identify the best candidates in various regions to trial our Solar Cattle Shield™ technology. Using our long-standing relationships with key industry partners (extension agents, feedlot consultants, etc.), we will gain referrals to producers willing to begin our onboarding process. Many of our early partners are in Nebraska. We recognize this presents a strong opportunity to build a local customer base but also will force us to build a knowledge base of other states' energy and regulatory standards as commercial operations expand.