

## Request for Technical Assistance: Value-added solar greenhouse kits

Solar panels have become a commodity. America is not known as the land of low-cost manufacturing, but it is a hotbed of innovation. Americans add value. We need to get away from trying to compete in a commodities market, and move toward creating new, value-added products where solar panels are part of a larger technology solution.

The innovation is to integrate solar panels into greenhouse “kits” that are sold as a comprehensive agricultural solution. Being designed to work together, solar panels and greenhouses can be engineered to obtain efficiencies such as shared load-bearing units and foundations and utilizing the solar panels as a roof and for water catchment. By pairing solar with agriculture, the solar energy has a built-in use, and does not need to be connected to the grid. By having its own source of energy, greenhouses are more cost-effective.

This pairing also enables solar panels to be much more efficient because the panels can be used not only for electricity (typically less than 25% of the sun’s energy) but also for heat (typically more than 75% of the sun’s energy). We want to use the “waste heat” from the solar panels for heating and cooling applications.

We need technical assistance to help obtain these hoped-for efficiencies.