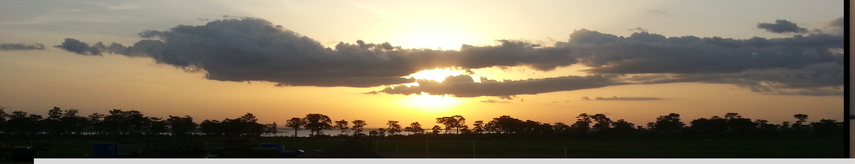
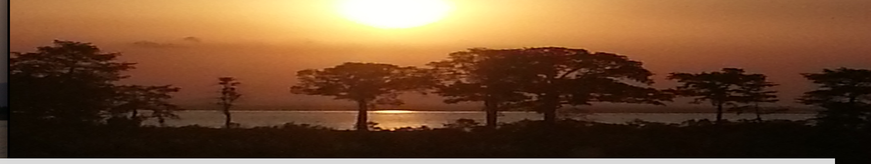




PHOTOVOLTAIC ICE ROOM, COMMUNITY CENTER AND WATER FILTRATION/IRRIGATION SYSTEM

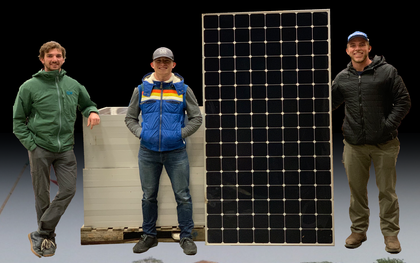
PROJECT OVERVIEW

Cal Poly San Luis Obispo's motto has long been, "Learn by Doing" and for Cal Poly's National Electrical Contractors Assoctiation(NECA) Chapter, this isn't simply an motto, but a directive for proactive change. NECA has embodied and actively emulated this motto through international community relief projects across the globe. As my senior project I led the design and construction of a 5-7 kW photovoltaic array, community center, refrigeration /freezing center and water filtration/irrigation system in the renote fishing village of Agbokpa, Ghana.

AGBOKPA, GHANA

Agbokpa is a remote fishing village located on the coast of Lake Volta, Ghana. It's circumstances are not uncommon to other fishing villages around the lake and around the world, as they are cut off from the power grid. Lake Volta is essential to Ghanaians' everyday lives providing food, revenue, and hydroelectric energy. The villagers of Agbokp`on the natural resources of the lake but their lack of electricity greatly reduces their economic potential.

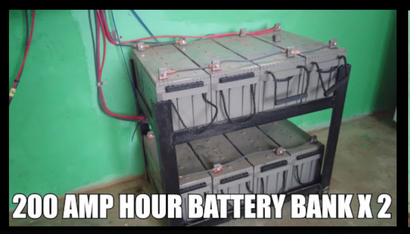
There are approximately 500 residents that farm or fish in the village of Agbokpa and these people's income is dependent on making their way across the lake to sell their produce and fish on market days in the larger village of Kotoso (pictured below). Therefore, it is essential that the fish and produce stay fresh until market day. Currently, villagers of Agbokpa have no access to refrigeration or ice, and are storing fish in nets in the water in hopes of keeping them alive as long as possible, inevitably resulting in vast spoilage.



PROJECT TIMELINE

	2019									
Task Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Project Fundraising										
NECA Presentation										
Design										
Procure Material										
Prefabrication & Testing										
Ship Materials										
Commissioning										
Trip Preparation										
Journal Paper										
Installation										
Operation/Monitoring										
Data Analysis										
Council Presentation										

At the end of August 2019 Will Myers and I traveled to Ghana, transported all of our materials to site and installed the complete electrical system we designed.



Market Village Kotoso, Ghana

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