HYDRO CUBE

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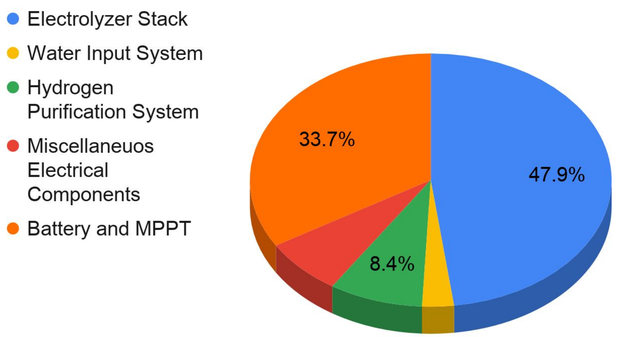
Background

Electrical energy production has increased recently. Unfortunately, much of this energy is lost because batteries are inefficient form of long term storage curenty. Power to gas is a recent method that has surfaced to solve this issue. Power to gas comes refers to the concept of transferring electrical energy into a gaseous fuel source.

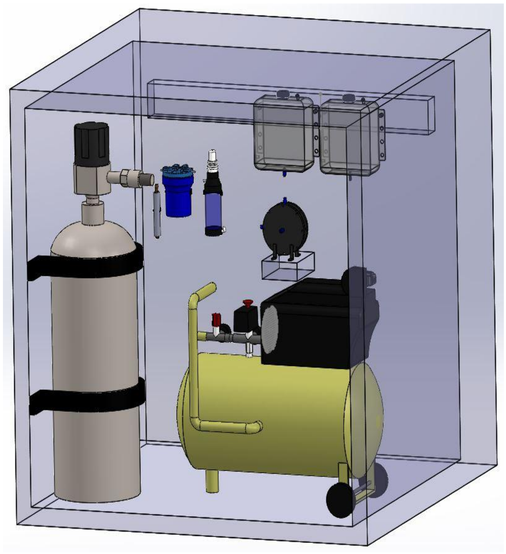
Goal

The goal of this project is to create an efficient long term energy storage system by taking the excess energy generated from solar panels and producing hydrogen through the process of electrolysis. This hydrogen will then be stored in a safe, compressed form for extended periods of time.

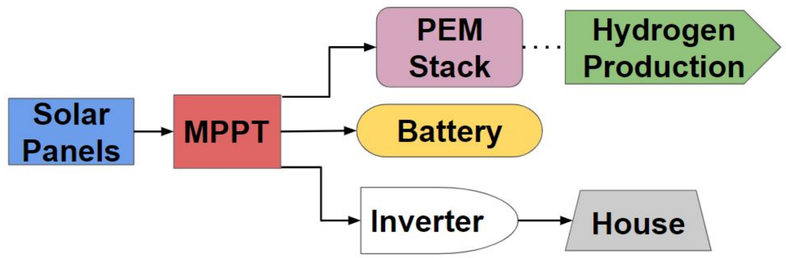
Budget



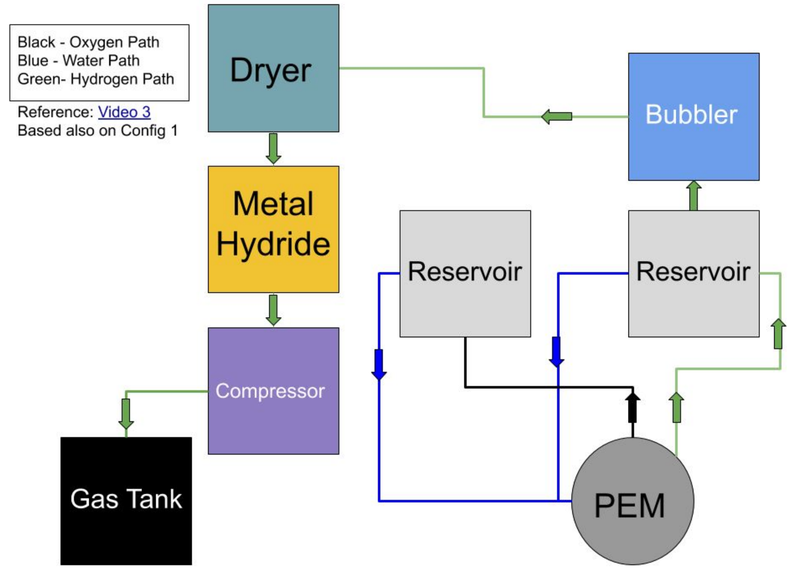
Hydro Cube Model



Circuit Diagram



Hydrogen Production System



PEM Electrolyzer Stack:
Produces hydrogen from water and electricity.

HHO Bubbler:
Removes excess electrolytes. Serves as flash back arrestor

HHO Dryer:
Removes excess moisture. Serves as flash back arrestor

Metal hydride:
Removes oxygen

Project Timeline:

Design the Water Input System → Design the H2 Purification System → Design the control system of Stack → Finalize Computer Model of Stack → Finalize Hydrogen Storage System → Assemble the H2 Production System → Begin H2 Production Testing → Finalize the control system