

Homework 6 Solar Power for Africa **Due Monday October 4, 2021**

The most expensive component for an off grid solar, wind or hydro power system is the battery backup. For solar or wind this must be able to provide power for several days. There are advantages and disadvantages to each battery type. Batteries are generally heavy and much of the cost involves transport and customs duties. Further, there are disadvantages to the import of batteries to a country like Ethiopia such as the lag time to delivery, inability to use credit cards to pay for foreign materials in Africa, lack of financing for a large cost such as batteries, no technical support or guarantees if there is a failure in the battery, and other issues. There might be some advantage to the manufacture, installation, and maintenance of battery systems using Ethiopian manufacturing, distribution and support compared to imported batteries.

- 1) Consider the battery technologies mentioned in class as well as those you can find on the internet. Be sure to consider the Edison battery, iron-nickel and other metal flow batteries, lithium ion batteries, lithium metal batteries, lithium air batteries and lead acid batteries. Choose one of these technologies as a good candidate for manufacture, distribution/sales in Ethiopia. Consider the market and the source of materials. Give an argument for your selection.
- 2) Sketch a business plan that based on an on-line or free software or form like <https://www.sba.gov/business-guide/plan-your-business/write-your-business-plan>

or

<https://www.inc.com/jeff-haden/how-to-write-perfect-business-plan-a-comprehensive-guide.html>

or

https://formswift.com/builder.php?documentType=business-plan-v2&ses=555a4a564e8a30aa8d22ffaa4cc505d1&key=190587148&utm_source=google&utm_medium=cpc&utm_campaign=static_business_plan_search&utm_adgroup=business_plan_b&utm_device=c&utm_country=us&utm_producttype=formstemplatesdotcom&utm_product=business_plan&utm_landingpage=2020cp1&headline=Create+A+Free+Business+Plan+Online&experience=whitelabel&utm_sitelinkid=600969&gclid=Cj0KCQjwwNWKBhDAARIsAJ8Hkhf387CUF-TqnrTVUJBwegyDSam90G8vsaTsyzuIZ8bor5U-p0mZtRQaAvUiEALw_wcB#0

Try to spend a few hours sketching this out. It does not need to be a finalized document. I'll take a look at these and possibly use these for next week's homework if they look interesting.