

Team Meeting

31st JULY 2024 / 8:00 AM CALIFORNIA TIME / Zoom

Attendees

Pete Schwartz, Matthew Church, Salma, David, Elena, James, Joel

Agenda

Collaborator Check Ins

→ Pete:

- ◆ Presented the power curve of a solar panel connected to a power optimiser compared to a direct connection to a solar panel
- ◆ Observed that the difference between the data points should be larger
- ◆ Aims to get the curve close to the theoretical curve which will signify that maximum power is generated by the power optimiser throughout the day
- ◆ Will test the power optimiser made and compare it to a commercial power optimiser
- ◆ Presented progress of the publication on the power optimiser

→ Salma:

- ◆ Did cooking tests, achieved impressive results
- ◆ Used a power optimiser from Germany
- ◆ Trying to test 3L boiling of water
- ◆ It took 1hr 45min to boil 3L of water using 350W of power
- ◆ Power source used was an AC/DC convertor connected to the grid
- ◆ They always get a glassy finish on the inside
- ◆ One of the main aims is to make an ISEC that can feed about a family of seven

→ David:

- ◆ Been working on making moulds from concrete
- ◆ Got a glassy finish at the bottom and outer surface for one of the moulds
- ◆ Aims to achieve the same glassy finish for the top surface

- ◆ The mould was buried in a hole in the ground until it dried
- ◆ Sand castle doesn't give a smooth surface making it hard to clean
- ◆ Plastic buckets are better

→ Elena Venner :

- ◆ Able to get data
- ◆ Working on the power optimiser
- ◆ Have the basic circuit
- ◆ Still needs to improve the efficiency of the power optimiser such as heat reduction

→ Matthew:

- ◆ Cost of mosfet is cheap
- ◆ Components used in the built power optimiser are cheaper than buying a power optimiser on the market
- ◆ Asked Pete the current theory of why the power curve generated is not as was expected
- ◆ Recommended getting an on market power optimiser and comparing it with the built power optimiser
- ◆ Recommends using PSpice software for basic simulations

→ James:

- ◆ Professor at the Federal university of technology Niger state in Nigeria
- ◆ Looking forward to working on the ISEC project

→ Joel:

- ◆ Engineering student at the Federal university of technology Niger state in Nigeria at the Infrastructure and process faculty
- ◆ Looking forward to working on the ISEC project

Action Points

- None