

Team Meeting

20TH NOVEMBER 2024 / 7:00 AM CALIFORNIA TIME / Zoom

Attendees

Pete Schwartz, Ronald, Salma, Joel Matthew, Andrew, Olawale

Agenda

Collaborator Check Ins

→ Pete:

- ◆ Heater and wire design:
 - Heater design relies on resistance specifications.
 - Commonly used wire gauges include 24, 25, and 26 gauge.
 - Observation: Thicker gauge wires need to be longer to meet resistance requirements.
- ◆ Concrete pot performance:
 - The bottom of the pot gets significantly hotter than the top.
 - The bottom of the concrete pot disintegrated due to excessive heat.
- ◆ The cooker has been tested daily, showing consistent functionality, performance highlights:
 - Delivers adequate heat for cooking purposes.
 - Power optimiser is functioning as expected, effectively boosting solar power output when conditions are suboptimal.

→ Ronald:

- ◆ Will begin exams next week, work on the project will resume after exams, including the installation of the heater.
- ◆ Current focus is on working with concrete for the project, shared photos of the progress in the group chat for review and feedback.
- ◆ Progress Update:
 - Current focus is on working with concrete for the project.
 - Shared photos of the progress in the group chat for review and feedback.

→ Salma:

- ◆ Community Engagement:
 - Plans are underway to meet with the communities to discuss project deployment.
 - Training is scheduled for **Saturday**, where People will be trained to oversee the cooking process.
- ◆ Materials were purchased from the market for the cooker fabrication process.
- ◆ Five cookers will be distributed in the Northern region as part of the project rollout.
- ◆ Concrete Heater Design Demonstration:
 - Presented the concrete heater with a built-in heating element.
 - The heater can achieve temperatures up to **350°C** by 1 PM.
 - The design uses concrete as thermal storage, maintaining heat for cooking.
 - The heater block has been in use for **more than three months** with consistent performance.
- ◆ Technical Specifications
 - The system uses **two 200-watt heating elements in series**.
 - The heater block is preheated before cooking begins.

→ Olawale:

- ◆ Collaboration Update
 - Professor is working closely with Joel Matthew on the project.
- ◆ Proposal Development
 - A proposal is expected to be completed and submitted within two weeks.
- ◆ Transition Plan
 - Another undergraduate student will take over responsibilities at the university level to ensure continuity.
- ◆ Undergraduate Student Status
 - Current undergraduate students have completed their exams.
 - Joel Matthew will continue contributing to the project virtually while undertaking national service.
- ◆ Proposal Development
 - A proposal is expected to be completed and submitted within two weeks.

→ Joel:

- ◆ Technical Specification
 - Pete was asked to specify the gauge of the nichrome wire used in the heater.
- ◆ Heat Retention

- Inquiry made about the duration the concrete heater block retains heat after heating.
- ◆ Concrete Heater Functionality
 - Questions were raised regarding the overall functionality of the concrete heater.

Action Points

- None