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STUDENTS ENGINEERING
A BRIGHTER FUTURE

Multifaceted Energy System in Rural Communities: Gabriel Gurule, Elexis Panas, Nerissa Ucab, CJ Evans, Megha Ben, Dante Yang.

Objective/Problem Statement

What problem are you solving?

- Multiple Faceted Energy System
- Make use of smaller scale wind turbines.
- Works at any wind speed vs it's larger versions
- Bringing energy for rural areas or tribal communities

Potential Partner Organizations?

Are you partnering with a non-profit or community organization? Please describe shortly.

- oRed Cross
- oUgandan Government
- oTeam Rubicon
- oNative Tribes such as Navajo Nation

Proposed Solution

Briefly describe your solution. Are you partnering with a non-profit or community organization?

- Targeting tribal communities to power internet and other amenities that use energy
- Uses sustainable materials
- Recyclable and better disposal of materials
- Adapted from existing research vs created from scratch
- Building the grid and aim to be self sufficient

Proposed Team

Skillsets/background

- Power systems
- Systems engineer
- Materials engineer
- Background and knowledge of 3D printing
- Community college mentors
- High school participants
- Possible university level involvement

Proposed Timeline

Aimed schedule- when do you start and when do you aim to finish? Any milestones?

What happens to the project after its deployed and the team that worked on it has graduated?

Product development – 2 Months

Implementation – 1 year

- Training for equipment (about 1 month)
- Improvement of materials (about 3 months)
- Data collection (Several months)

Proposed Budget

A rough estimate of your project

#	Item	Cost
1	Solar panel (x3)	~\$100 each (\$300)
2	3D Printer	~\$300
3	Types of Communication ports (x3)	~\$50-\$60 (\$150-\$180)
4	Printer materials	TBD
5	Energy storage unit	TBD
6	Inverter	TBD
7	Cables and extensions (TBD)	TBD

References

Any similar studies or projects that you have come across.

Prior research done by interns for Sandia National labs.



Thank You!

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