

## Solar Powered Microgrids

### Problem Statement

The quality of life of life in Africa is impacted by a lack of electricity.

### Solution

With the use of solar panels and energy storage solutions, microgrids can be built that can supply electricity to the nearby inhabitants.

### Project Specifications

Table 1: Available Solar Panel Sizes

|        | Small        | Rooftop        |
|--------|--------------|----------------|
| Size   | 7" x 7" x 1" | 10" X 25" x 1" |
| Weight | 2.5 lbs.     | 11 lbs.        |
| Cost   | 500–900      | 2,500–4,000    |



Figure 1: Small roof top solar panels

### Conclusion

Solar powered microgrids provide an opportunity to teach various forms of engineering while also making an impact to the quality of life for the local residents.