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| ASME, GVSU Chapter |
| SDC Design Report |
| 2023 Wind and Sun Student Design Competition |

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# Project Description

## Functional Requirements

Key functional groups:

* Mobility and (mechanical) chassis design
* Power management and electrical design
* Communication and controls design

# Design Development

## Budget

Below gives an itemized budget for components by general category. A more detailed budget may be made available once components are purchased.

Figure 2.1- General Project Budget



## Bill of Materials (BOM)

# Appendix A

The following table can be used to input any useful information such as videos, websites, pictures, etc. The topic column should be filled in with a brief description of what the entry contains and the content column contains whatever information was found be it a link, picture, or a longer text entry. Note: picture width should not exceed 4.3”.

Table A-1 – Research Files

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| --- | --- |
| Topic | Content |
| * How do solar panels work * How would a basic solar panel circuit be built? | [Electronic Basics #29: Solar Panel & Charge Controller - GreatScott!](https://www.youtube.com/watch?v=sU-hSFFwSmo) |
| * How to design a Windmill power generator | [Interactive Windmill - Instructables](https://www.instructables.com/The-Interactive-Windmill/)  Wind Charge Controller Circuit Diagram |