

Ocean Wave Energy Generation

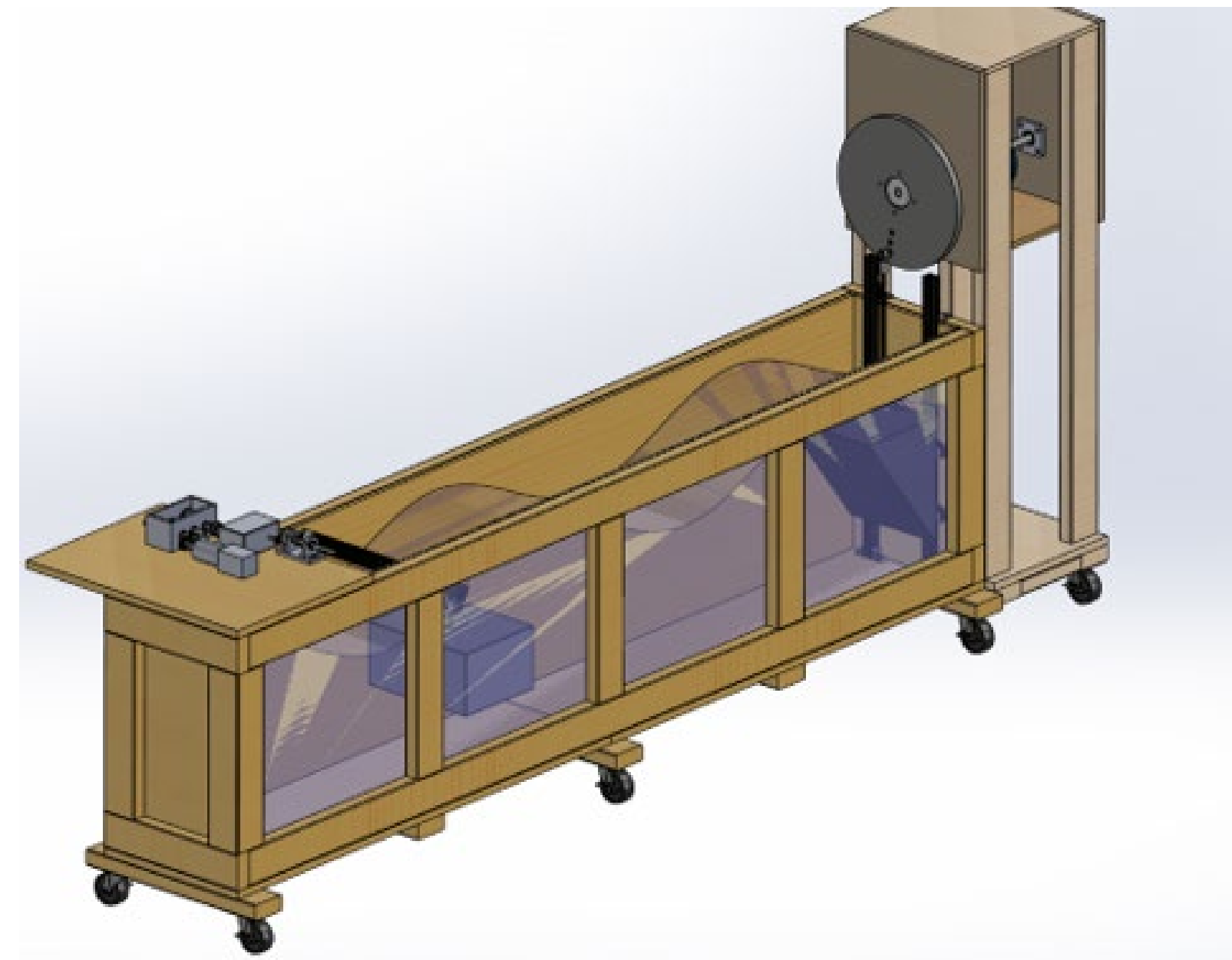
WRIGHT STATE UNIVERSITY

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Sponsors: Wright State University, Dayton Power & Light

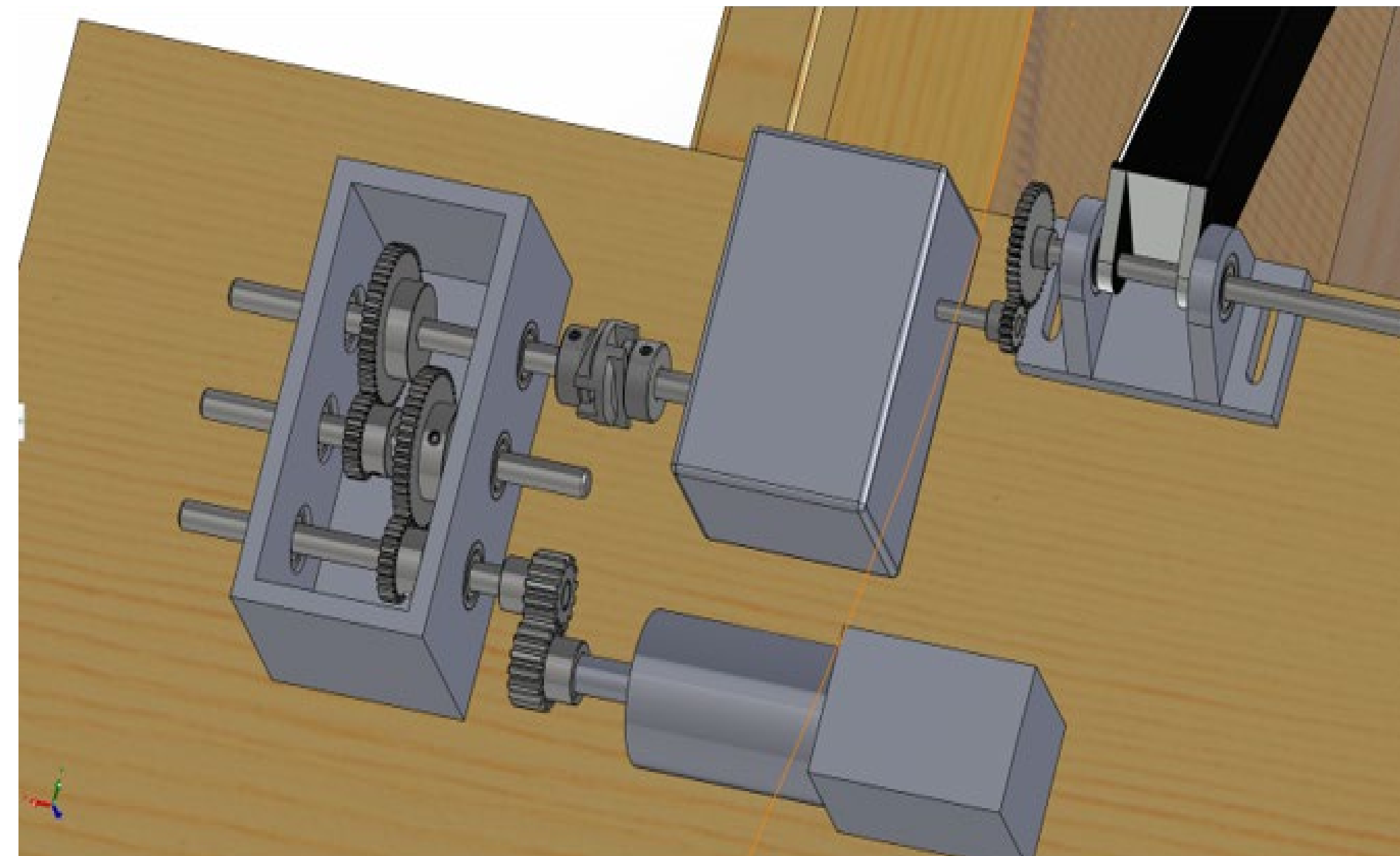
Our objective is to design and implement a new wave generator with the intent to improve upon the previous design. We hope to generate more consistent power with greater amplitude and to spearhead the practicality of wave energy.

Design Process:

3D Modeling



Our full CAD assembly including the transmission, buoy, and wave generator.



Our full CAD model of the transmission system.

Construction of Final Design



Initial tank and motor mount construction.



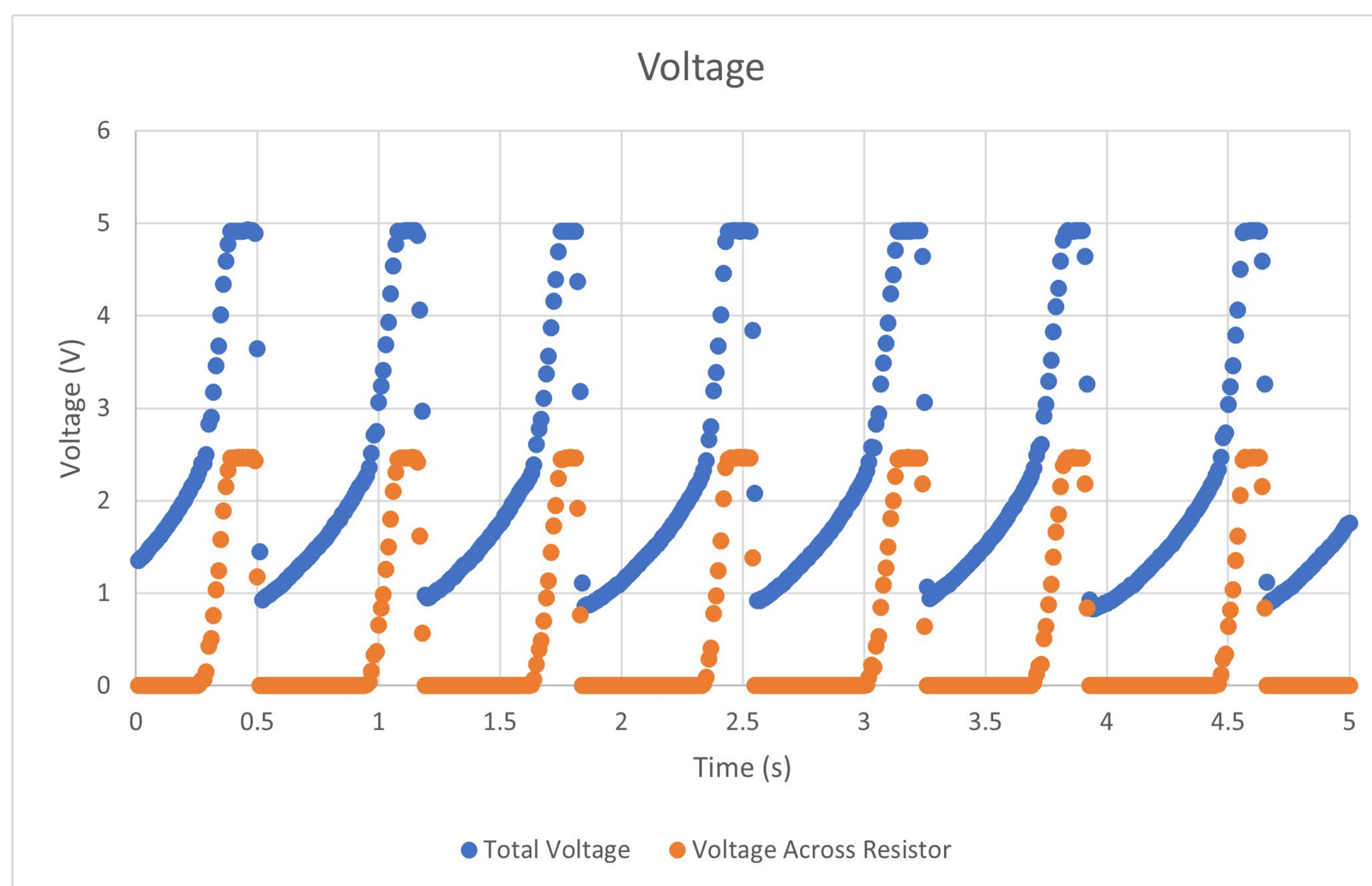
Transmission parts ordered to begin construction.



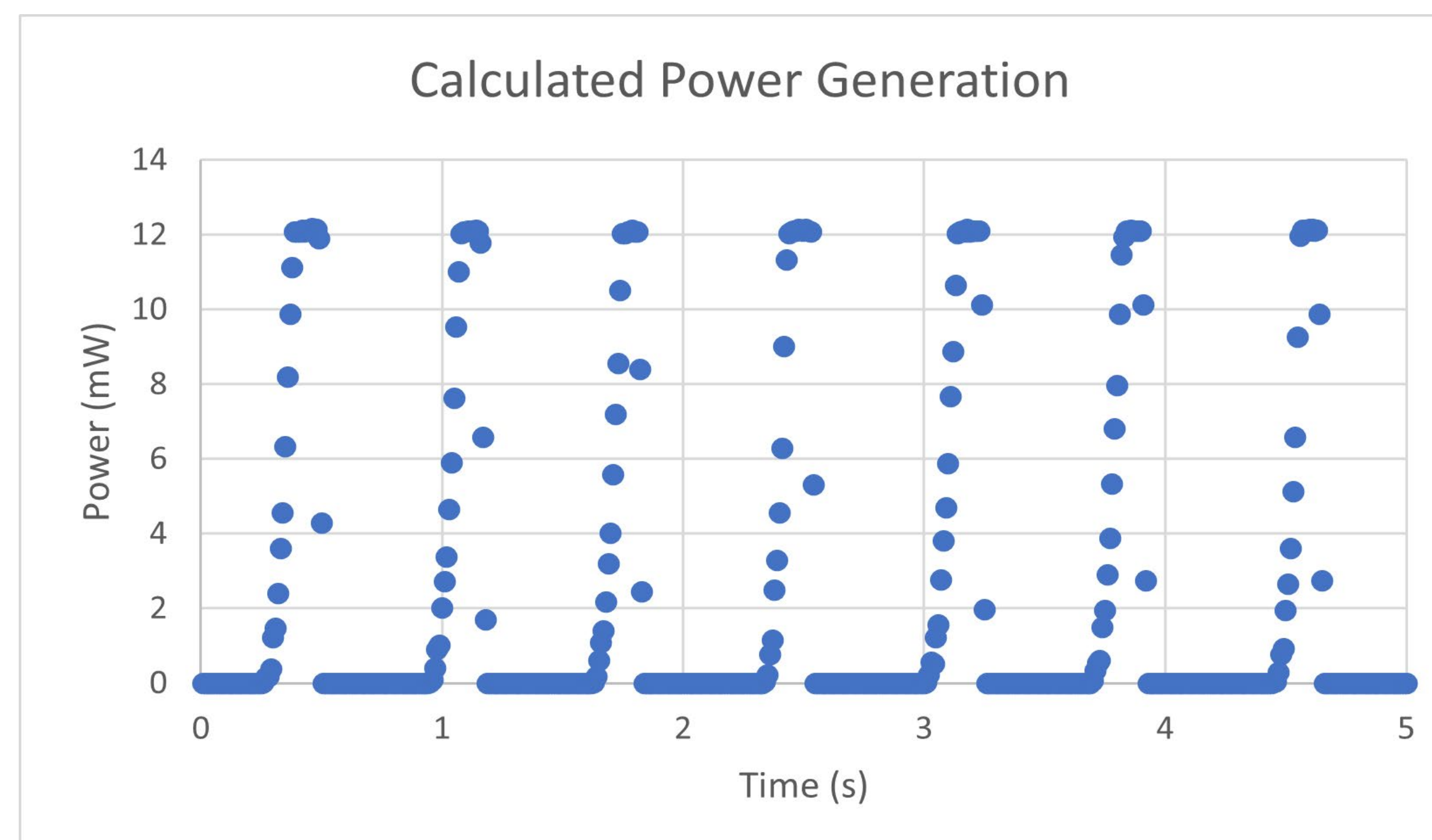
Final Design



Data Analysis



This graph shows the total output voltage of the system and the voltage across a known resistor. The voltage across the resistor is used to calculate the current. The current is used to calculate the power



This graph shows the calculated power output of the system.

The finalized design was able to perform as expected with the ability to produce steady waves and successfully power the four LED light strands surrounding the tank.

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Dr. Craig Baudendistel, Dr. Junghsen Lieh and David Kender for their guidance
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