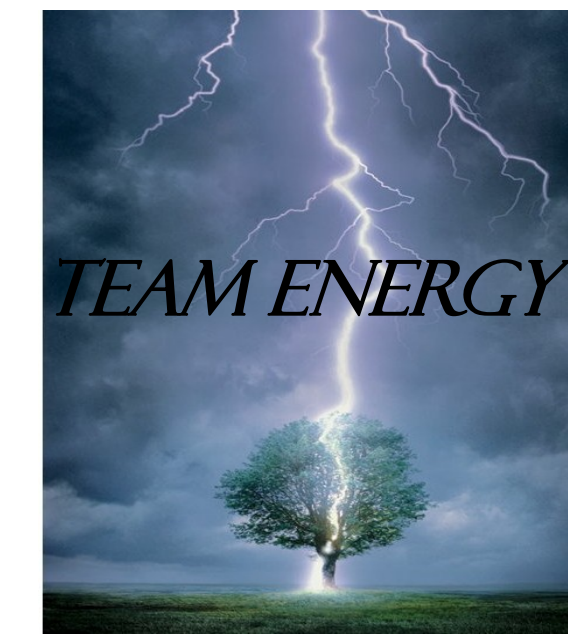


# Green Haven Apartments

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## Abstract

More focus is being aimed at "saving the planet" than ever before. This project intends to elaborate on this crucial problem by tackling one of the major challenges that contribute to the cause for concern; energy consumption and waste management in residential settings. Much of the housing infrastructure currently in place is far from environmentally ideal and even raises health concerns. The major problems include energy consumption, waste management, toxicity levels in building materials, recyclability of building materials and environmental impact. Through extensive research, we have constructed a solution to this complex problem. By combining a series of pre-existing technologies, we have created a more sustainable and desirable type of apartment complex.

## Background

Apartments today make up approximately 1/3 of all residences in the Northeast region of the United States.

Most apartments utilize few to none green technologies, and are quite inefficient.

This is a great potential for energy savings, and a great market for any entrepreneur who can create such a product first. Green Haven is designed to be this product.

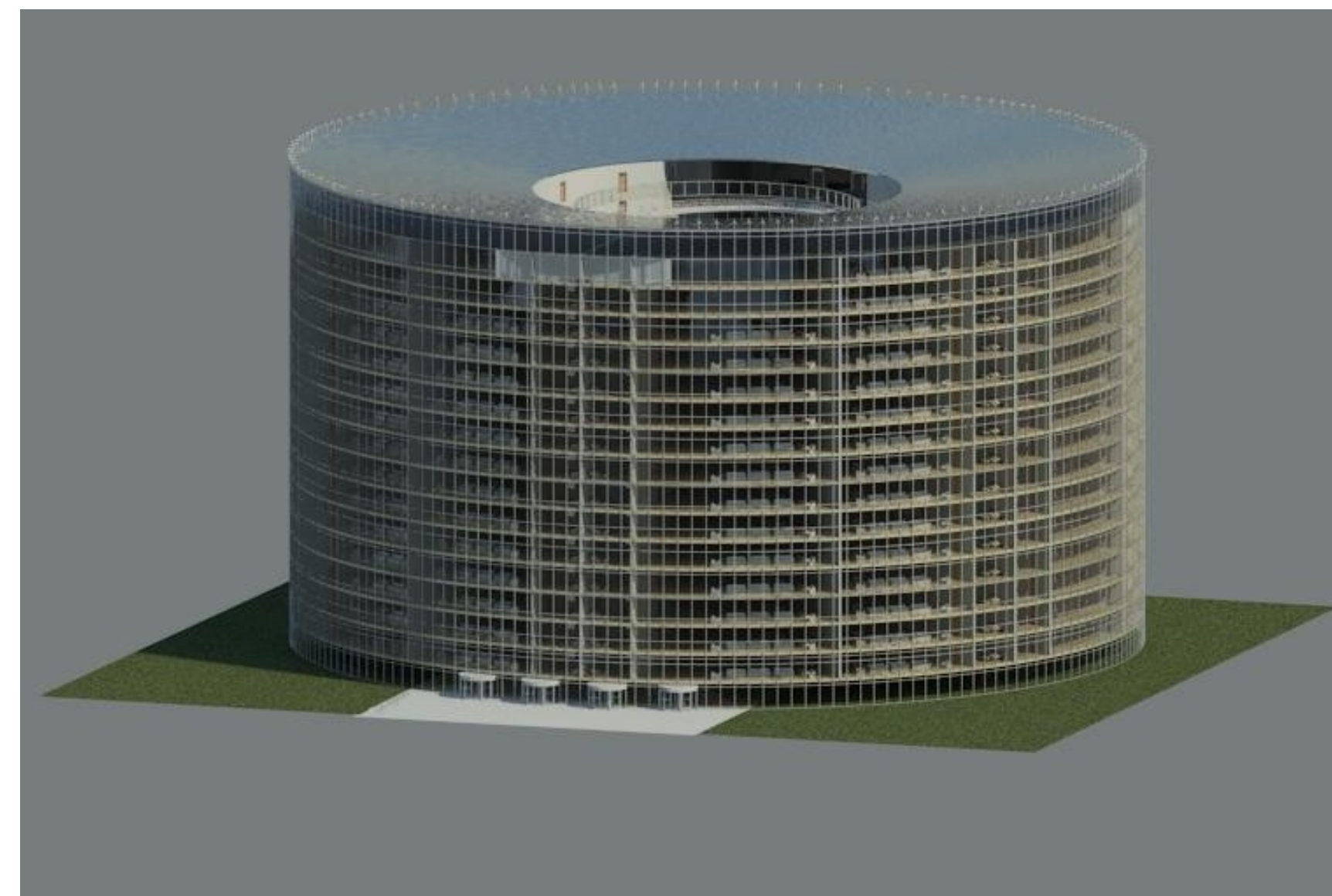
## Project Goals/Objectives

- Design an apartment complex which utilizes several different fields to increase overall efficiency, generate power, and increase recycling, all with sustainability and a healthy living environment.

## Methods/Process

Green Haven includes many different technologies, each of which were drawn from a different source. At the beginning of the project, it was decided that the three main areas of concentrated improvement would be upon energy generation and efficiency, recycling, and environmentally friendly design. To this end, the group researched and decided upon technologies which met their criteria, and integrated them into the design of the building.

After specific technologies were chosen, the group finalized the design in architecture software. The outcome can be seen below, and to the right. Notice turbines on the roof, as well as the solar panels. As for the overall design, a cylinder is second to a sphere in lowest surface area per volume, which decreases heating costs.



## Energy Production

- High efficiency Solar Cells
- Geothermal Heating System
- Wind Cubes
- Hydroelectric Apparatus(utilizing runoff water and gravity)
- Closed loop salt heating system

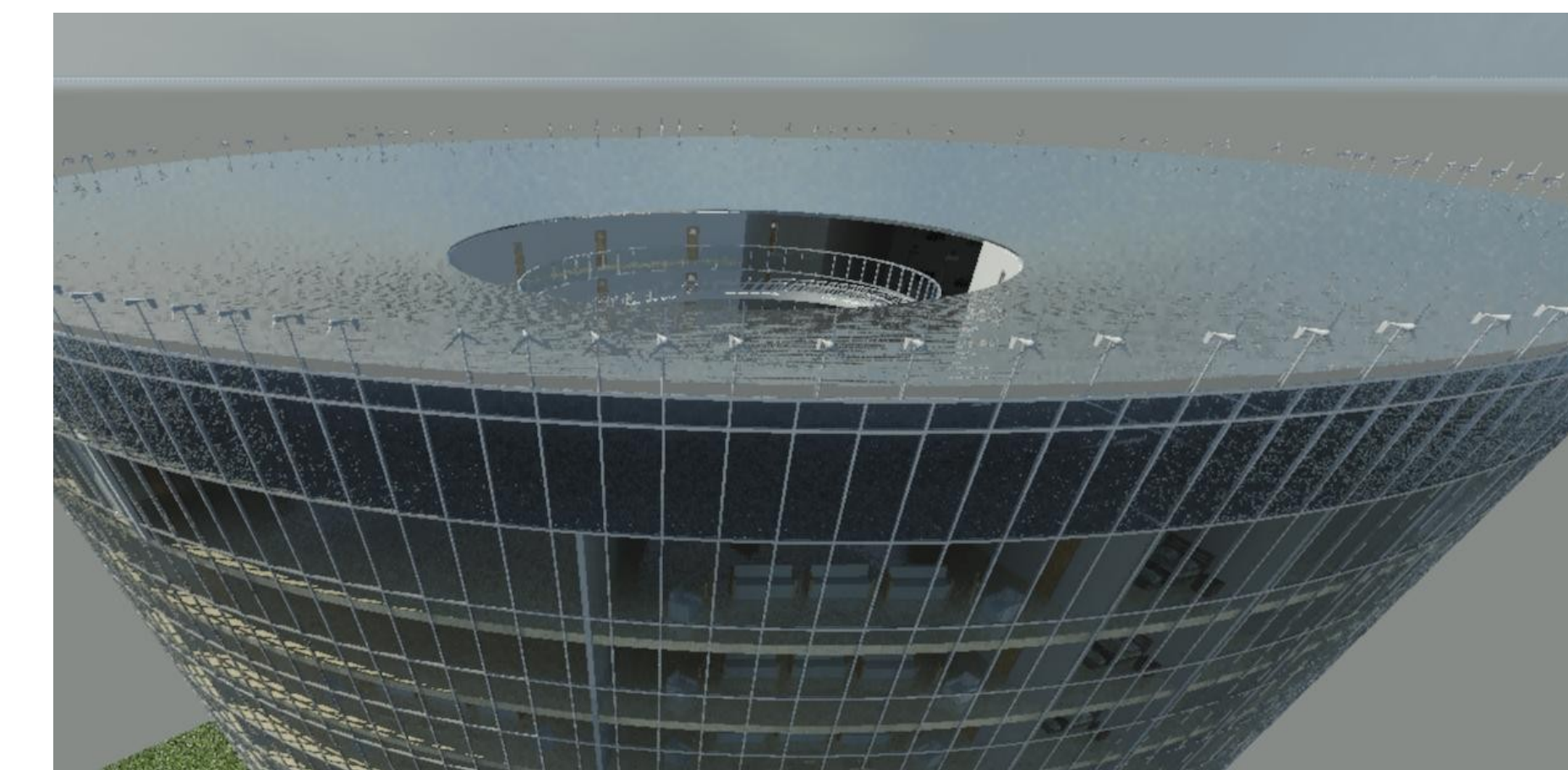


Figure 1-1: Rendering of Green Haven Apartments. Note the turbines on the roof.

## Material Science and Recycling

- Sustainable materials such as-concrete, steel, bamboo, ceramic tile
- New hybrid material ETFE-SPD
- Chute recycling and trash disposal in each apartment unit making recycling easy and convenient. Reducing waste and allowing Green Haven to have less of an impact on the environment.

## Acknowledgments

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## References

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