

Background

Leon County developed a strategic approach to achieve energy sustainability by setting an ambitious goal of reducing the County's greenhouse gas emissions by 30% by 2030

Objectives

- A plan detailing the actions, strategies, and technologies needed to fully implement the project design
- A detailed report summarizing all research and efforts that motivate and support the design including load and economic analysis

Future Work

- Jan.**
 - Research Equipment to be used, gather quotes and data sheets
 - Model park electric usage, weather outlook
- Feb.**
 - Perform NREL Modeling
 - Finalize all quotes and equipment to be used
- Mar.**
 - Finalize Load Study
 - Finalize all associated costs
- Apr.**
 - Finalize Economic Analysis
 - Review with Leon County

Selected Concepts

1. Trash Compactor/Receptacle
2. Wi-Fi Hotspot/Canopy
3. Charging Station Bench
4. Pavilion making use of all three



Fig 1: Trash Compactor/Receptacle

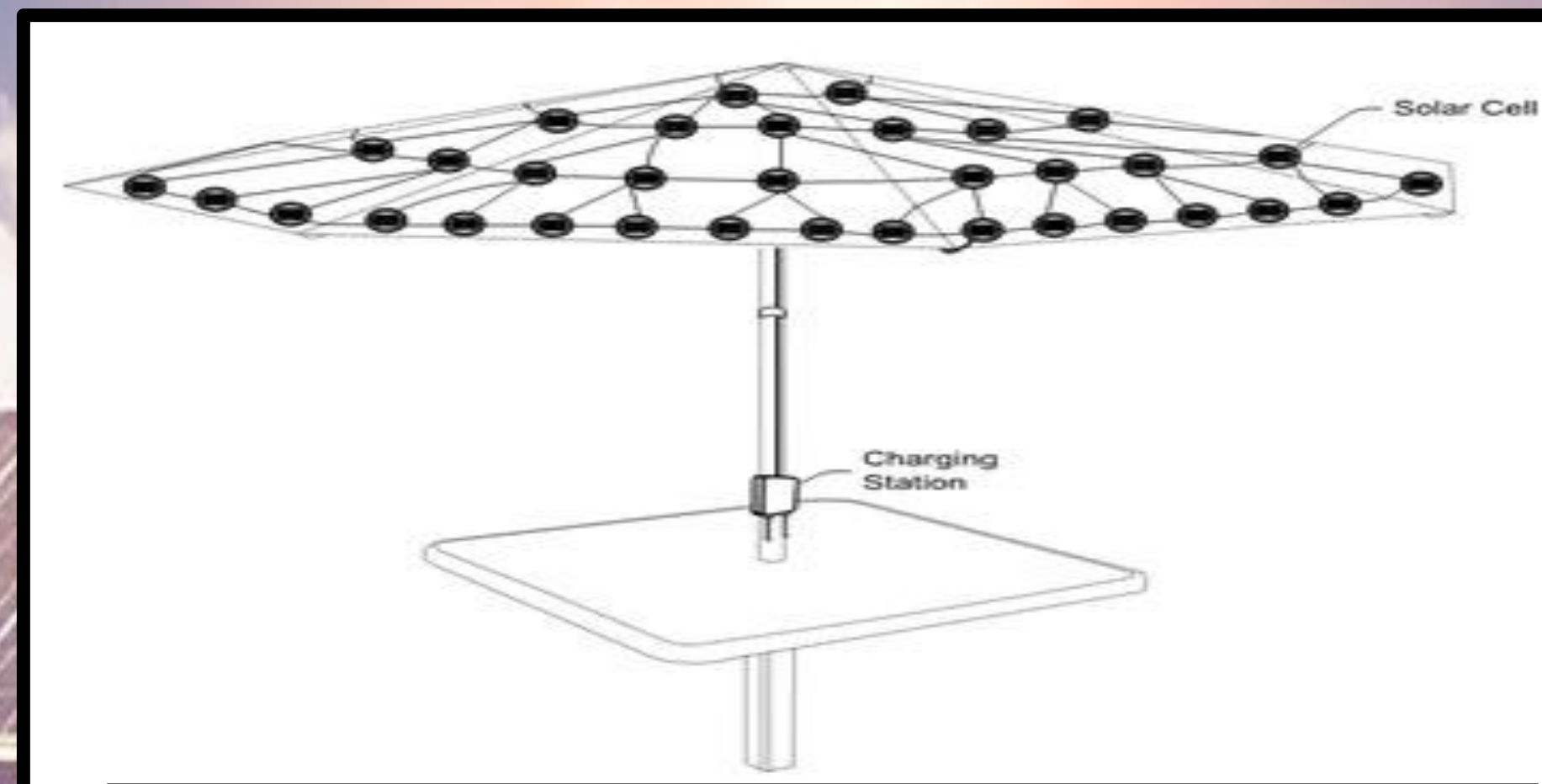


Fig 2: Wi-Fi Hotspot/Canopy



Fig 3: Charging Station Bench

NREL Developmental Tools

- System Advisory Model (SAM): A performance and financial model
- PVWatts Calculator: Estimates the energy production and cost of energy of photovoltaic (PV) energy systems

Determine kVA usage

Gather data from multiple manufacturers to create calculation estimates

Directly probe the current and voltage

Use time integrated usage recorders at installed facilities

Fig 4: Block Diagram of General Implementation for each concept