Technologies

This page will be filled in with technologies we come across, whether that means technologies developed from within the IEEE Smart Village ecosystem, or simply technologies commonly used within this ecosystem. This is to provide useful resources to existing and future teams either exploring improvements to their current technologies, or looking for gaps in the industry that may need solving through startups and other innovative approaches.

Generation

Solar Photovoltaic

Solar Photovoltaic (PV) is the most common Generation source chosen for Smart Village projects. With no moving parts, these systems require a small amount of maintenance, and can last for decades.

Sun Blazer and PBK

One set of Solar PV technologies developed through ISV is the Sun Blazer III and the Sun Blazer Lite, which utilize the Portable Battery Kit. Designed to fit in the back of a standard pickup truck, these systems are designed for easy transportation and deployment. In addition, they were designed to make use of regular construction materials that are widely available and low cost in many underdeveloped regions.

Hybrid Solar PV and Diesel Generator (DG)

One presentation we received was from a project in India that used PV and DG for cooking Jaggery (sweetener in India). Technical diagrams will be included when presentation is uploaded.

Charge Controllers

Charge Controllers — Inclusive Energy

Solar Thermal

Wind Turbines

Hydroelectric

Geothermal

Transmission

Distribution

System Monitoring

Check out our Smart Meter Case Study. This section could be managed better. Feel free to plug in.
Victron
New Sun Road
Schneider (Wiser Energy)
SteamaCo
Jinco
GroWatts
Studer
Deye
Solarman
Fronius CircuitSetup LilyGo

OpenEnergyMonitor

Meshtastic

Emerging Web3 Solutions

Powerledger

Power Trust

Data Flow Options

G3

MQTT

Safety

Here are a few pammphlet put together by ESFi (Electrical Safety Foundation International):

Solarman MQTT: https://github.com/mpepping/solarman-mqtt