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MOVING FORWARD

Model Home Project

What the model home is and benefits

- The model home is a tiny home built by the ATC (Area Technology Center)
- This home was designed for Disabled Veterans and/or victims of Human Trafficking
 - Disabled Veterans
 - Victims of Human Trafficking
 - Wheelchair accessible
 - Rehabilitation
 - So they could have a safe place
 - Easier to maintain
 - Small and sustainable

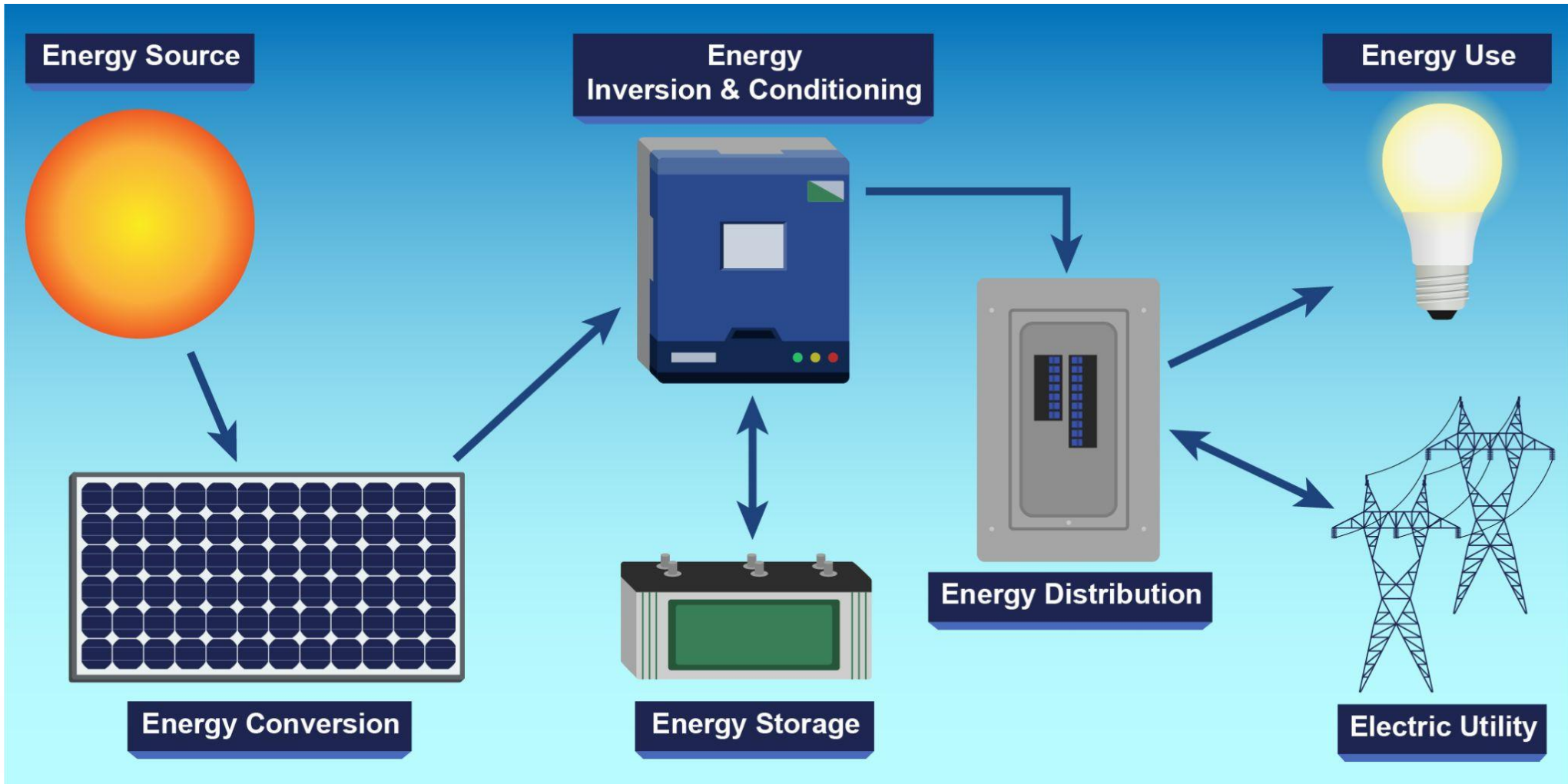


Solar Photovoltaic Systems

- Solar Photovoltaic Systems are power systems that convert sunlight into electricity
- This is a process in which semiconducting materials generate voltage and current when exposed to light.
- They can be off grid/on grid (used with or without having outside utilities)
- They need to be as self sufficient as possible
- We had to include batteries, charge controllers, the panels themselves and an inverter.
- transfer switches and inverter if including grid tie
- Inverter converts the DC voltage to AC voltage



Photovoltaic system Diagram



Innovative problem solving

- Induction Stove top had to have its own breaker for use
- Had to change the layout a couple of times
- Apply code for single family dwelling and mobile home
- Communicated to see the best resources to use for the tiny home



Productive Collaborator

- We communicated and collaborated with the Engineer(Mike Ekbundit)
- We collaborated with Carpentry to help build the tiny home
- We also collaborated with the Principal Mr. Vincent of the ATC for granting access to the Model Home
- We collaborated with our teacher Mr. Ashford who helped us with any trouble we had with this project



NFPA 70



National Electrical Code
International Electrical Code Series

2017

**Why this project should
be brought to other
schools**



- It is a really good way to experience real life world problems and get real world experience
- Benefits the people that need them because there can be more made for them
- Can have more tiny homes built for the people that need them and we get experience from not only the NEC(National Electrical Code) code but hands on experience too

Things about Mike Ekbundit(Engineer)

- Mike has a Bachelor and Masters Degree in Mechanical Engineering
- Mike began his career by supporting NASA's International Space Station Program
- Direct Manager of the Edison Engineering Development Program
- Mike joined GE Appliances in 2010 as a Design Engineer in Clothes Care
- Stakeholder in the entire Engineering Talent Pipeline at GEA
- Went to the heavy trucking industry where he designed various vehicle suspension
- Joined a startup company in the optical industry as an R&D Engineer





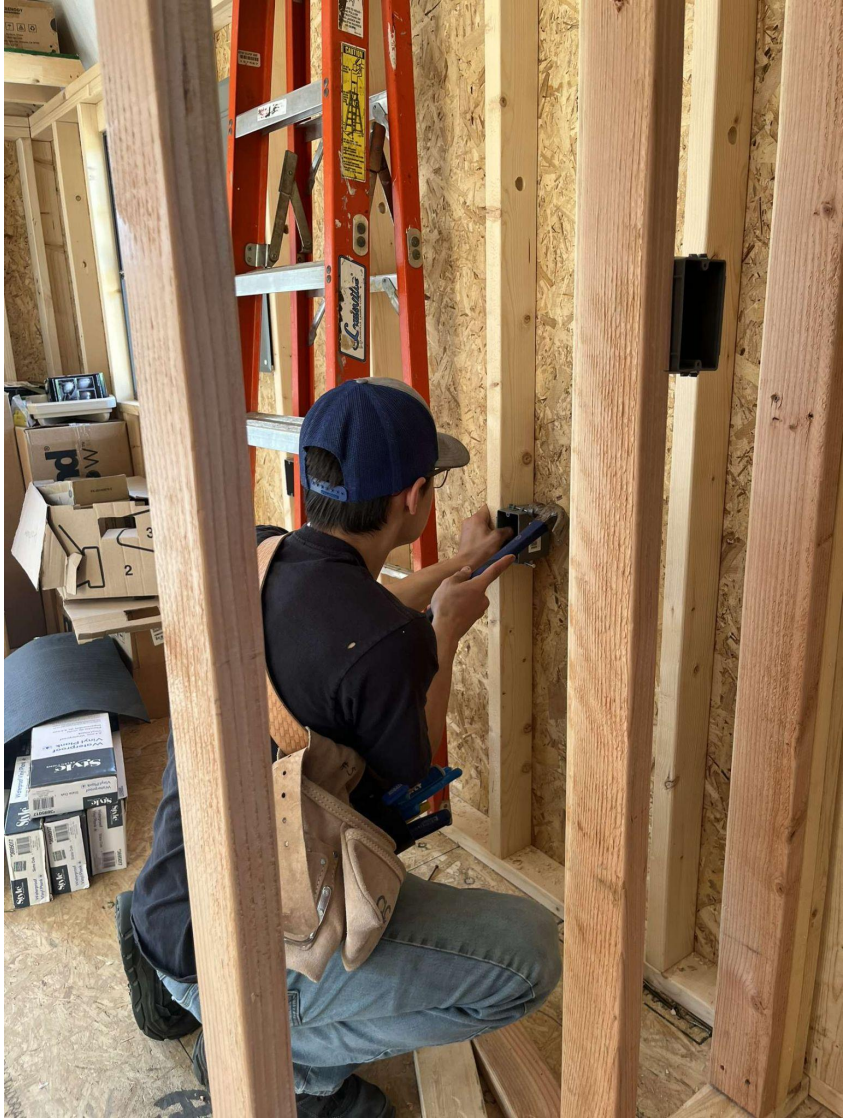
















Any questions?