PROJECT PROPOSAL SEMINAR

DESIGN AND IMPLEMENTATION OF SOLAR POWER SYSTEM FOR RESIDENTIAL LODGING

BY:

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PRESENTATION OUTLINE

- INTRODUCTION
- PROBLEM STATEMENT
- AIMS OF THE PROJECT
- OBJECTIVE OF THE PROJECT
- METHODOLOGY

INTRODUCTION

The unending collapsed of the National Grid in recently has plunge the Nation into:

- Blackout
- Loss of finance
- Failure of critical equipment etc.

This has led to used of gasoline generators as backup to the mains However:

- CO2 emission
- High Cost of Fueling and Maintenance etc.

And it has become a problem that looks unsolvable.

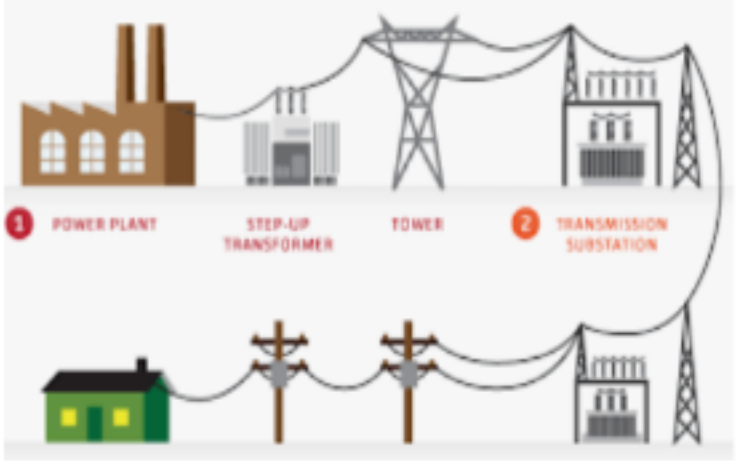

Figure 1: Simple Transmission Line

Figure 2: Gasoline Generator

INTRODUCTION (Cont'd)

- Solar inverter system is renewable
- It fit into the Green energy advocation
- It require no cost of maintenance etc.

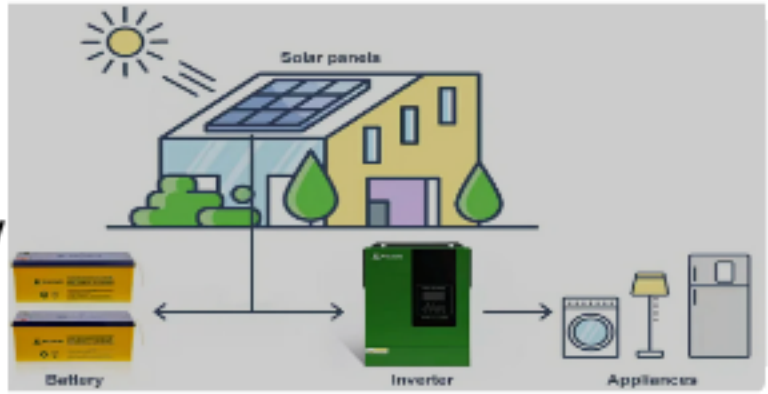

Figure 3: Solar Inverter System

Basically the inverter system comprises the solar panel, charge controller, battery bank and the inverter which all work together to produce an AC supply from the battery and solar panel DC input.

PROBLEM STATEMENT

The mains and the gasoline generator system of backup have recorded tremendous challenges of:

- § grid collapses
- § hike and instability in price of the premium motor spirit
- § CO2 emission etc. in recent times

Therefore, this project will create a better alternative and solve the problems posed by the mains and gasoline generator by providing a design and construction of pure sine wave power inverter system.

AIM OF THE PROJECT

This project aim to locally design and construct a 2.5 kVA/12 Volts power inverter system for residential lodging.

OBJECTIVES OF THE PROJECT

The objectives of this project are as follows:

- To design, construct and install solar a 2.5 kVA inverter system in a residential lodging
- To enlighten the household about the benefits of solar energy and promote sustainability of electric power supply for home used.
- To reduce energy costs for household and redirect saved funds towards improving other resources.

METHODOLOGY

Objective 1: To design, construct and install solar a 2.5 kVA inverter system

- Review work on past projects will be done to study pasts project's limitations and gaps for possible improvement
- Recreation of roadmap for a better inverter system will be engaged by leveraging the block diagram of (Fig 4)
- Circuit design and best component's selection will be done for an improve inverter system

METHODOLOGY (Cont'd)

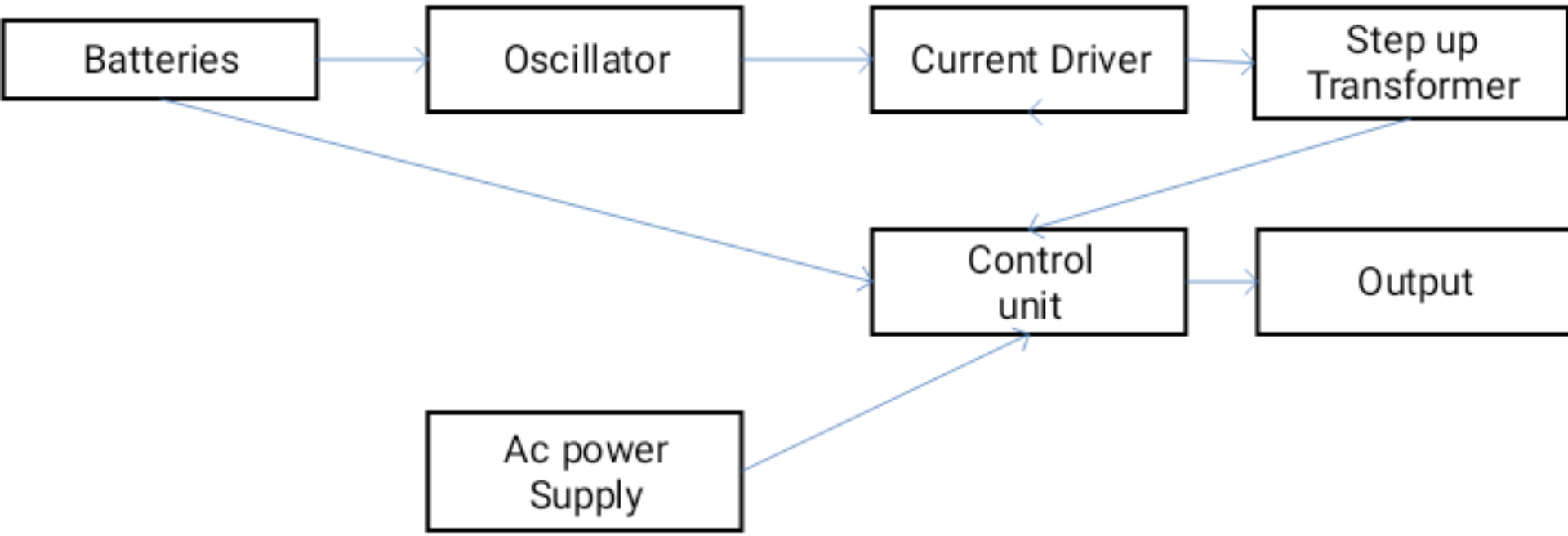

Figure 4: The Block Diagram of the Propose 2.5 kVA Inverter System

METHODOLOGY (Cont'd)

Objectives 2: To enlighten the household about the benefits of solar energy and promote sustainability of electric power supply

- To conduct an energy audits by assessing the household energy consumption and provide recommendations
- Regular cleaning of the solar panel against dust and air particles for optimum charging.

METHODOLOGY (Cont'd)

Objectives 3: To reduce energy costs for household and redirect saved funds towards improving other resources.

- Encouraging energy-efficient appliances: Promote and provide access to energy-efficient devices.
- Energy-saving behaviors: Educate households on simple energy-saving practices (e.g., turning off lights, using power strips).
- Weatherization: Provide resources for weatherizing homes (e.g., insulation, sealing air leaks).