PROJECT TITLE: MEASURE ENERGY CONSUMPTION

PHASE 2: INNOVATION

STEPS TO BE TAKEN TO EVALUATE THE ENERGY CONSUMPTION:

1. START

2. DEFINE OBJECTIVES

- Determine the purpose of the energy consumption evaluation.

- Decide on the specific metrics you want to measure.

3. IDENTIFY ENERGY SOURCES

- List all sources of energy consumption (e.g., lighting, HVAC, machinery, transportation).

4. DATA COLLECTION

a. Install Energy Meters

- Place energy meters at key points of consumption.

- Set up sub-meters for individual systems or equipment.

b. Collect Historical Utility Bills

- Gather past utility bills for reference.

5. DATA AGGREGATION

- Integrate all data into a central database or software system.

6. NORMALIZE DATA

- Adjust for external factors affecting consumption (e.g., weather, production).

7. ANALYSIS

a. Benchmarking

- Compare consumption data to industry benchmarks or similar facilities.

b. Create Energy Profiles

- Develop profiles for different systems to identify high consumption areas.

c. Calculate Energy Efficiency Ratios

- Compute ratios like energy per unit of production or occupancy.

8. IDENTIFY ANOMALIES

- Use data analysis to detect unusual consumption patterns.

9. ENERGY AUDITS

a. Walkthrough Audit

- Physically inspect the facility for energy-saving opportunities.

b. Detailed Energy Audit

- Conduct comprehensive analysis, including equipment testing and simulations.

10. IMPLEMENTATION

- Implement energy-saving measures identified in the audit.

- Continuously monitor the results of these changes.

11. CONTINUOUS MONITORING AND REPORTING

a. Regularly monitor energy consumption.

b. Generate reports tracking progress toward efficiency goals.

c. Share results and findings with stakeholders.

12. FEEDBACK AND IMPROVEMENT

a. Continuously collect and analyze data.

b. Adjust strategies and practices to achieve efficiency goals.

13. DOCUMENTATION

- Keep records of all data, audits, reports, and improvements.

14. REGULATORY COMPLIANCE

- Ensure compliance with energy regulations and reporting requirements.

15. TRAINING AND AWARENESS

- Educate employees and stakeholders on energy conservation.

16. BUDGETING

- Allocate resources for energy-saving projects.

17. REVIEW AND REFINEMENT

- Periodically review and refine the energy evaluation process.

18. END