

Sustainable Development Goal 7 focuses on ensuring access to affordable, reliable, sustainable, and modern energy for all. It emphasizes the global shift from traditional, polluting energy sources to cleaner alternatives like solar, wind, and hydro power. Achieving this goal is essential not only for reducing environmental impact but also for boosting economic development and improving overall quality of life. The scope of our project is on a local level where the user can check up on energy consumption and production done by their smart devices at home.

This SDG was selected as over 85% of the energy used by us comes from non-renewable fossil fuels which harms the planet by producing greenhouse gases. Our website aims to help people realize and manage their energy consumption to reduce pollution due to fossil fuels and smoothly switch to cleaner and renewable source of energy.

Problem Statement: Helping users identify and calculate energy consumption and production of their various smart devices.

Objectives:

1. To develop a web-based dashboard that shows devices' energy consumption.
2. To implement a support forum with proper backend for a feedback system.

Technologies Used:

1. Frontend: HTML, CSS, JS, Tailwind, JSDelivr
2. Backend: SQL, Python, Java
3. Database: SQL
4. Tools: Github, ChatGPT, WSL, Flask, Nutika, Buildozer, Kivy



**Monitor.
Manage.
Save.**

Supporting SDG 7
Affordable & Clean Energy

[Getting Started](#)

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SURAJ

Take control of your energy production and consumption. Regardless of solar panels, inverters, or traditional electrical systems, our app provides real-time insights to help you reduce waste, lower costs, and move toward a cleaner, sustainable future.

SURAJ Energy Dashboard

[Export CSV](#) [Reset](#)

Track smart device consumption & renewable generation — aligned with SDG 7.

Filters

Metric

Consumption & Production

Devices

- ☒ Smart Thermostat
- ☒ Solar Camera
- ☒ Smart Plug (Various)
- ☒ EV Charger (Home)
- ☒ Smart Fridge

Date range (months)

Last 12 months

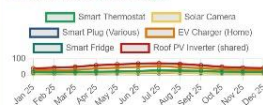
Legend

Consumption Production

Monthly Energy Breakdown



Device Trend (Total Energy)



Production vs Consumption

