

# URJA VYAPAAR

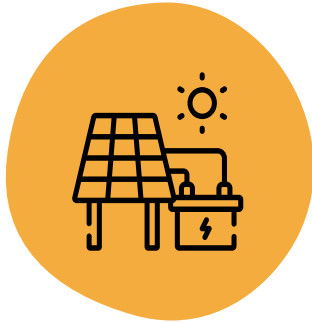
The Renewable Energy Exchange Platform

**Presented by - Team STUxNET  
LNCT COLLEGE**

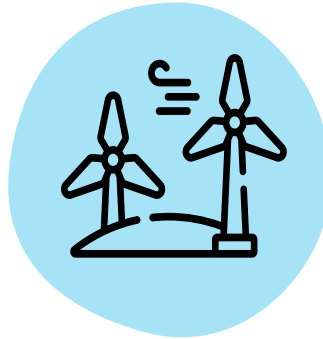
# Problem Statement

## Renewable / Sustainable Energy

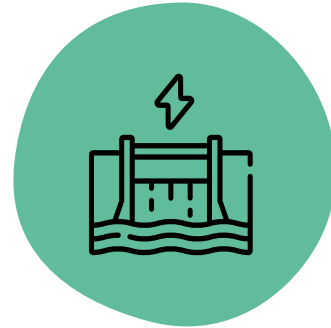
**Student Innovation : Promoting renewable energy sources and developing platform for communities to trade renewable/sustainable energy.**



**Solar Energy**



**Wind Energy**



**Hydroelectric Energy**



# Problem Description



- 1) The combustion of non-renewable sources releases toxic gases like sulphur dioxide, nitrogen oxides etc.
- 2) Burning fossil fuels releases carbon dioxide that is a major contributor to global warming and climate changes.
- 3) Pollution from non-renewable energy sources can lead to respiratory diseases and other health issues.
- 4) Fluctuating prices of non-renewable sources can impact economies and industries, leading to uncertainty in energy costs and affecting various sectors.
- 5) Non-renewable sources are finite and will eventually run out after some sort of time.

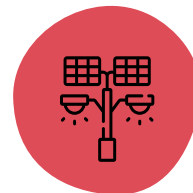
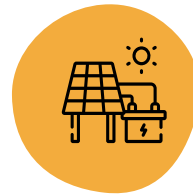


# Proposed Solution



## URJA VYAPAAR: The Renewable Energy Exchange Platform.

1. Our proposed solution “URJA VYAPAAR” is a comprehensive and easy to use Renewable Energy Sharing Platform that enables individuals, households, and businesses to actively participate in the clean energy revolution.
2. This platform leverages technology, data transparency, and community collaboration to create a self-sustaining ecosystem that benefits both users and the environment.
3. Participants and peers can generate renewable energy through solar panels, wind turbines, or all the other available sources any excess energy can be traded with other people in the network.
4. It contains smart contracts which will ensure the automated and tamper-proof execution of transactions, enabling seamless energy exchanges.





# Description



- 1) To understand how energy trading can occur between individuals using a peer-to-peer model, enabled by smart meters and blockchain technology.
- 2) The process benefits both energy producers and consumers while contributing to a more sustainable energy ecosystem.

**Real Life Example** - Imagine a residential neighbourhood with multiple houses equipped with solar panels. Each house generates excess solar energy during sunny days and can potentially sell this surplus energy to neighbours who may not have their own solar panels.

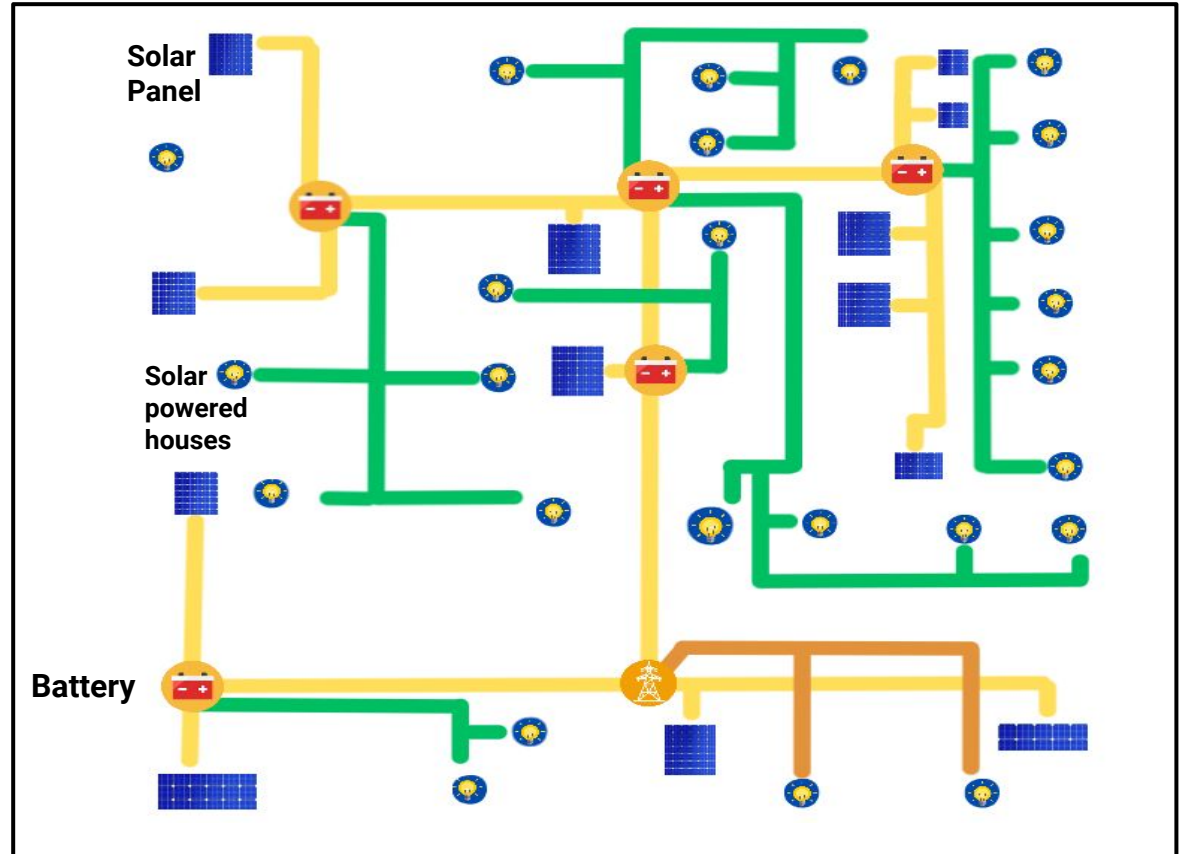


# Energy Network Visualisation

## Introducing our transformative Energy Trading Network –

A vision brought to life. Picture a vibrant residential neighborhood adorned with solar panels on each rooftop.

With our innovative platform, excess solar energy generated during sunny days becomes a shared resource, empowering homeowners to seamlessly exchange energy.



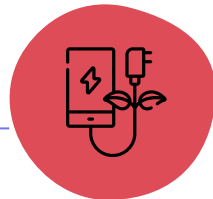
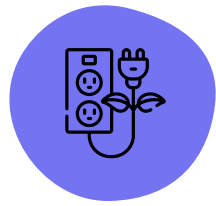
# Key Features of - 'URJA VYAPAAR'

- **Dynamic Pricing:** Smart algorithms adjust energy prices based on real-time demand, making clean energy affordable for all.
- **Educational Insights:** Learn about the environmental impact of renewable energy and make informed choices.
- **Empowerment:** Become an advocate for sustainability, while saving on energy costs in the process.
- **Blockchain Security:** Ensure transparent and secure energy transactions with cutting-edge blockchain technology.



# Key Features of - 'URJA-VYAPAAR'

- **Revolutionize Energy Sharing:** Our platform transforms solar-equipped neighborhoods into self-sustaining energy communities.
- **Nearby Collaboration:** Picture houses generating excess solar energy sharing it with those without solar panels.
- **Seamless Trading:** Easily buy, sell, and share energy within your local community.
- **Real-time Monitoring:** Track energy production, consumption, and shared transactions with intuitive tools.





# Figures And Facts Related To INDIA'S Adoption Of Renewable Energy:

01

Presently, Bengaluru has over 35,000 solar rooftop installed, also Hyderabad has over 20,000 solar rooftops installations. Cities like this can be some places that can be focused.

02

Telangana govt. solar policy aims to achieve 5,000 MW and Karnataka govt. solar policy aims to achieve 4,000 MW of solar power capacity by the end of 2022.

03

Pavagada Solar Park in Karnataka, Bhadla Solar Park nearby Rajasthan and many others are there that supply energy alone but we can empower individuals to do so.

04

Many corporate and industrial entities in cities like Hyderabad and Pune have embraced solar energy on their premises to reduce energy costs and environmental impact.



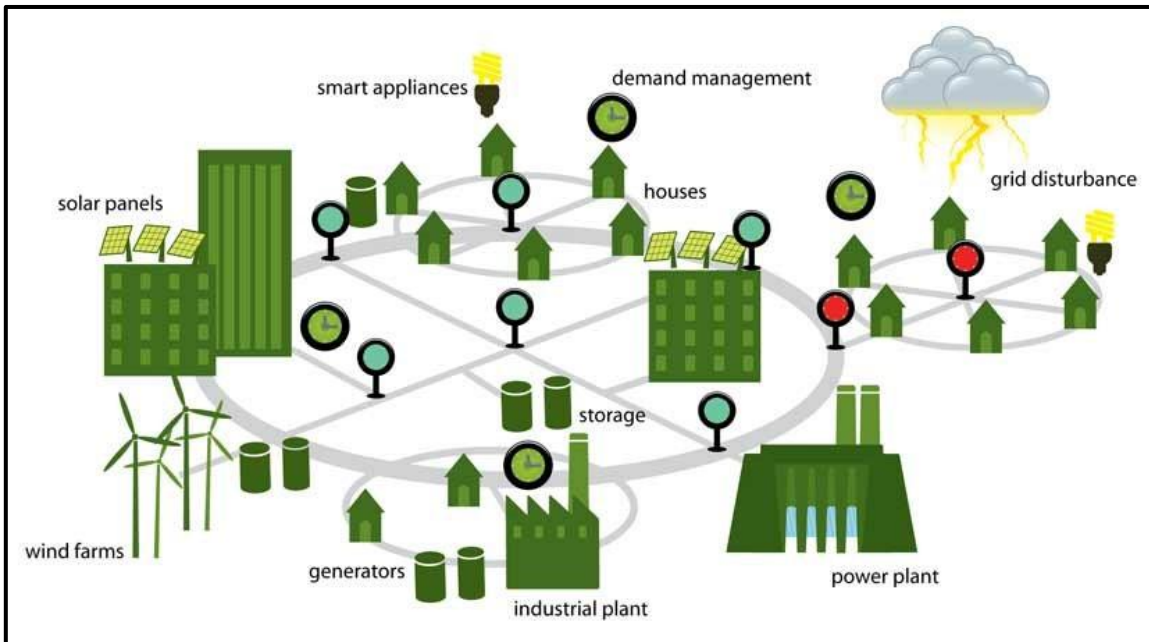
# MAKE IN INDIA - VISION

## Revolutionizing Energy Distribution:

Bridging Communities, Storing Power, and Illuminating Unreachable Corners of India Through Our Innovative Energy Sharing Platform.

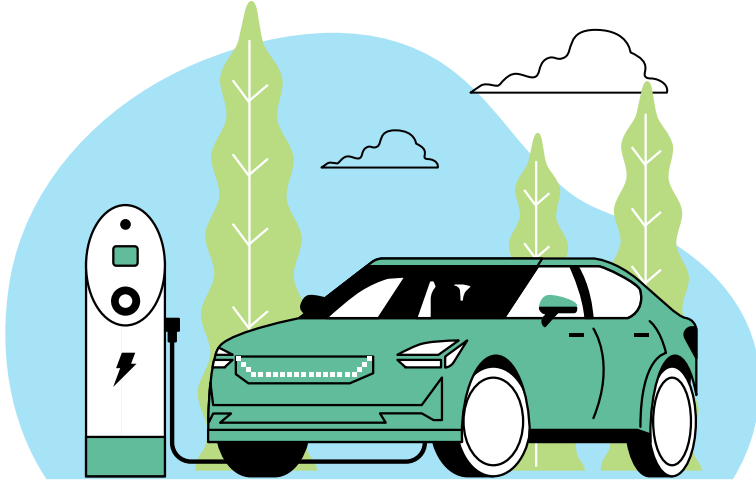
## Linking Homes Across India:

Transforming Residences into Energy Hubs, Enabling Earnings from the Comfort of Home.





# Future- Scope



- **Decentralized Autonomous Organizations (DAOs):**
- **AI-Powered Energy Optimization**
- **Impact Tracking**
- **Gamification Elements**
- **Regulatory Compliance Solutions**
- **Dynamic Pricing Algorithms**
- **Energy Forecasting**

## **URJA VYAPAAR - THE NEW REVOLUTION**

# Thank You!



**Earn While Empowering:** Join Us to Share Excess Energy and Earn Extra Income, Leading the Way to a Greener Future Together.

**Elevating India's Renewable Energy Landscape:** Together, Let's Soar to New Heights of Sustainability and Progress.