JSS AHER's Support to Government in Clean Energy and Energy-Efficient Technology Policy Development

Academic Year: 2024–2025
Institution: JSS Academy of Higher Education & Research (JSS AHER), Mysuru, Karnataka, India

Introduction

JSS Academy of Higher Education & Research (JSS AHER) continues to play an active and evidence-based role in **informing, demonstrating, and strengthening government strategies for clean energy transition and energy efficiency** during the academic year **2024–25**. Through its large-scale renewable energy installations, ISO-certified energy management systems, biogas and waste-to-energy infrastructure, academic–government collaborations, and community-based technical outreach, the institution acts as a **regional model and knowledge partner** in the implementation of national and state clean energy policies.

JSS AHER's contributions support and operationalise the goals of:

- National Action Plan on Climate Change (NAPCC)
- National Solar Mission
- National Mission for Enhanced Energy Efficiency (NMEEE)
- ECBC / Energy Conservation Act of India
- Swachh Bharat Mission & Circular Economy Framework
- Karnataka Renewable Energy Policy
- Smart Cities and Climate-Resilient Urban Planning Initiatives

1. Data-Driven Demonstration to Support Government Renewable Energy Policies

JSS AHER's campus-wide solar installations generated **nearly 1 million units of renewable energy (973,708 kWh)** in the year 2024–25, significantly reducing grid dependency.

Campus / Institution	Solar Energy Generated (kWh)	Total Consumption (kWh)	Grid Electricity Offset (kWh)
JSS Medical College	403,500	477,654	74,154
JSS Dental College & Hospital	357,865	298,548	Grid-negative
JSS College of Pharmacy, Mysuru	212,343	249,889	37,546

This quantitative data has been shared in:

- Institutional sustainability reports
- Government-linked discussions
- Academic–policy presentations
- Public awareness events

By maintaining **monthly and annual performance tracking**, JSS AHER provides **replicable evidence** to government departments and institutions considering large-scale rooftop solar deployment.

Policy relevance:

- Supports **National Solar Rooftop Programme**
- Strengthens **Karnataka Renewable Energy Development targets**
- Provides operational proof for **public institution solar adoption models**

2. Circular Economy Support through Biogas and Waste-to-Energy Systems

JSS AHER operates biogas plants (total **300 kg/day capacity**) that convert organic waste into renewable energy and bio-manure.

- **200 kg/day unit – JSS Medical Institutions**
- **50 kg/day unit – JSS College of Pharmacy, Mysuru**
- Produces approx. **20–25 kWh/day** of renewable energy
- Reduces dependency on LPG:
    - JSSMC: 16,754 kg/year
    - JSSCPM: 14,600 kg/year
    - JSSCPO: 19,865 kg/year

This model has been showcased to:

- Municipal bodies
- Educational institutions
- Hostels and hospitals
- Rural entrepreneurship and piggeries

Policy contribution:

- Supports **Government of India's Waste-to-Wealth Mission**
- Supports **Swachh Bharat Mission (Urban and Rural)**
- Provides local evidence to strengthen:
    - Bioenergy promotion
    - Organic waste segregation mandates
    - Decentralised energy generation policy

3. Energy Management Model Supporting National Standards (ISO + EDGE + ECBC)

JSS AHER is certified with:

- **ISO 14001:2015 – Environmental Management System**
- **ISO 50001:2018 – Energy Management System**

Under these frameworks, the institution:

- Conducts **green and energy audits**
- Identifies **high-energy-loss zones**
- Implements **LED retrofitting, daylight harvesting, passive cooling, motion sensors, and smart load scheduling**
- Aligns all new builds with:
    - **ECBC (Energy Conservation Building Code)**
    - **EDGE / IGBC / LEED standards**

These practices directly inform:

- Local urban planning departments
- Institutional infrastructure guidelines
- Government infrastructure sustainability programs
- Climate-resilient building policy updates

JSS AHER's campuses serve as live policy labs where officials and planners can observe the **integration of ECBC & national efficiency standards in real-time operations**.

4. Academic–Government Collaboration in Environmental & Energy Systems

In 2024–25, students and faculty from the **School of Public Health** undertook structured academic field engagements to government-controlled infrastructure directly related to energy and environment efficiency:

Sewage Treatment Plant – Mysuru (May 2025)

- Capacity: **67.65 MLD**
- Energy-efficient aeration and process automation
- Reuse of treated water for irrigation
- Reduced pumping and freshwater energy load

Vani Vilas Water Treatment Plant – Mysuru (May 2025)

- Optimized filtration and chlorination
- Efficient backwashing mechanisms
- Reduced operational energy wastage

These visits generated:

- Academic reports shared with local authorities
- Knowledge dissemination among municipal staff
- Integration of findings into environmental planning studies

This directly strengthens evidence-based input to government planning in:

- Resource efficiency
- Public infrastructure optimisation
- Energy-conscious water treatment systems

5. Knowledge Input through National & State Platforms

JSS AHER actively participated in public and governance-linked platforms such as:

- **SEVA SANKRAMANA 2025**
- **Youth for Governance Conclave**
- **Public health and sustainability workshops**
- **Radio and awareness campaigns**
- **School and college system outreach**

These platforms involved:

- Local government officials
- CSR bodies
- Policy leaders
- Municipal authorities
- NGOs and planners

Through these interactions, JSS AHER contributed:

- Policy-aligned sustainability models
- Community-focused clean energy practices
- Integrative approaches linking **health, environment and energy security**

6. Technical Inputs towards Clean Energy Awareness & Regulatory Alignment

JSS AHER:

- Educated communities and institutions on:
    - Government subsidies for solar
    - Clean cooking energy transition
    - EV readiness
    - Sustainable infrastructure planning
- Aligned internal operations with:
    - **CPCB standards**
    - **Energy Conservation Act**
    - **Swachh Campus guidelines**
    - **National Smart Infrastructure vision**

This supports Government efforts to:

- Increase citizen participation in clean energy
- Improve compliance at institutional level
- Encourage decentralised sustainable development

Impact Statement

In the academic year **2024–2025**, JSS Academy of Higher Education & Research has evolved from a participant to a **demonstration-based policy influencer** in the domain of clean energy and energy-efficient technologies.

Through:

Large-scale renewable data generation

Waste-to-energy implementation

ISO and ECBC-aligned energy management

Applied academic–government learning

Circular economy practices

Community–policy interface

JSS AHER has provided both **technical insight and operational proof** to government bodies working towards a low-carbon future.

The institution continues to support India's transition to a **resilient, energy-efficient and sustainable economy** by bridging the gap between **policy intention and on-ground implementation**.