


Energy-Efficient Construction and Renovation Policy		
	POL #: QA-ADM-35	Version No: 2.0
	Date of Approval: 16-09-2022	Review Date: 29-12-2023

## Introduction

SR University (SRU) is dedicated to sustainability and energy efficiency in its infrastructure development, aligning with the Sustainable Development Goals (SDGs), particularly SDG 7 (Affordable and Clean Energy) and SDG 11 (Sustainable Cities and Communities). This policy sets guidelines for ensuring all new constructions and renovations adhere to energy-efficient practices and outlines plans for upgrading existing buildings to achieve higher energy efficiency.

## 1. Energy-Efficient Renovation and Building

### Objective

To design and renovate campus buildings that optimize energy usage, reduce carbon emissions, and ensure a comfortable and healthy environment for students and staff.

### Policy Guidelines

#### 1. Ventilation and Lighting:

- Ensure all buildings are designed to maximize natural ventilation and daylight, reducing dependency on artificial lighting and air conditioning.
- Use architectural features such as open courtyards, shaded areas, and reflective roofs to enhance natural cooling.

#### 2. Energy-Efficient Practices:

- Adopt energy-efficient technologies and construction practices in all new projects.
- Employ sustainable materials such as insulated walls, low-emissivity glass, and heat-reflective paints to improve thermal efficiency.

#### 3. Standards Compliance:

- Follow the Energy Conservation Building Code (ECBC) guidelines for all new constructions and major renovations.
- Seek green building certifications like IGBC or GRIHA for newly constructed buildings to demonstrate commitment to sustainable development.

#### 4. Integrated Smart Systems:

- Install smart energy management systems to monitor and control energy consumption in real-time.
- Use energy-efficient HVAC (Heating, Ventilation, and Air Conditioning) systems with programmable thermostats for optimal performance.

## **2. Upgrading Existing Buildings to Higher Energy Efficiency**

### ***Objective***

To retrofit and upgrade existing buildings on campus to minimize energy consumption and promote renewable energy usage.

### ***Policy Guidelines***

#### ***1. Lighting Upgrades:***

- Replace all conventional lighting with LED lights to reduce energy consumption by up to 80%.
- Install solar-powered outdoor lighting systems for pathways, gardens, and other open spaces.

#### ***2. Solar Energy Integration:***

- Establish a campus-wide solar power plant to generate renewable energy for operational needs.
- Equip rooftops of existing buildings with solar panels to supplement electricity consumption.

#### ***3. Waste-to-Energy Solutions:***

- Develop and operate a biogas plant to convert organic waste into usable energy, reducing reliance on external energy sources.

#### ***4. Rainwater Harvesting and Reuse:***

- Enhance the existing rainwater harvesting systems to conserve water and reduce the demand for external water resources.
- Use harvested rainwater for landscaping and other non-potable purposes.

#### ***5. Water and Energy Conservation Features:***

- Install low-flow plumbing fixtures and sensor-based taps to minimize water waste.
- Retrofit buildings with water tank overflow controllers to conserve water efficiently.

#### ***6. Thermal Efficiency:***

- Add insulation to roofs and walls of older buildings to maintain indoor temperatures, reducing heating and cooling energy needs.
- Use energy-efficient windows and doors to prevent heat loss or gain.

## **3. Implementation Strategy**

### ***1. Monitoring and Compliance***

- Establish a committee to oversee policy implementation, conduct energy audits, and ensure compliance with national and global standards.
- Use Key Performance Indicators (KPIs) to measure energy savings and environmental impact.

### ***2. Training and Awareness***

- Organize workshops and training programs for staff and students to promote awareness about energy-efficient practices and technologies.

- Display real-time energy consumption data across campus to encourage energy-saving behaviors.
3. **Budget Allocation**
- Allocate a dedicated budget for energy-efficient renovations and renewable energy projects, with periodic reviews to assess financial effectiveness.
4. **Partnerships and Collaborations**
- Partner with government agencies, private sector entities, and international organizations to leverage funding and technical expertise.
  - Apply for grants under schemes like the Ministry of New and Renewable Energy (MNRE) and other sources for solar energy projects.

#### 4. Monitoring and Review

##### **Annual Audits**

- Conduct annual energy audits to evaluate the effectiveness of implemented measures and identify further areas for improvement.

##### **Policy Updates**

- Review the policy every three years to incorporate advancements in technology and evolving sustainability standards.



  
REGISTRAR  
SR UNIVERSITY  
(V) Ananthasagar, (M) Hasanparthy  
Dt: Warangal - 506371, T.S.