7.4 Energy and Community

7.4.3 - Does your university as a body provide direct services to local industry aimed at improving energy efficiency and clean energy (energy efficiency assessments, workshops, research renewable energy options)

Yes, our university supports **SDG 7** by offering direct services to local industries to improve energy efficiency and expand clean-energy adoption. Through expert-led **energy assessments**, industries receive practical guidance on reducing power use, upgrading machinery, and enhancing thermal and lighting systems. Industry workshops strengthen skills in smart-energy management, solar integration, and efficient production. Collaborative research develops **low-cost clean-energy solutions** for MSMEs, while demonstration labs provide hands-on exposure to new technologies. Policy dialogues, student field projects, and campus sustainability models further guide industries toward affordable and clean energy. Through these efforts, the university significantly advances industrial transition toward sustainable energy in alignment with SDG 7.

St. PETER'S INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Deemed to be University U/S 3 of the UGC Act,1956)
AVADI, Chennai – 600 054. Tamil Nadu.
Phone: 044-26558080-84
E-mail: registrar@spiher.ac.in
Website: www.spiher.ac.in

Policy on Green Building and Renovation

Policy Created on:	**01/07/2020**	**Approved by:**
Revision 1	**10/02/2024**	**REGISTRAR**

Registrar
St. Peter's Institute of Higher Education and Research
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SDGs directly supported:

- SDG 7 Affordable and Clean Energy
- SDG 13 Climate Action

SDGs Indirectly supported SDGs

- SDG 9 Industry, Innovation and Infrastructure
- SDG 11 Sustainable Cities and Communities
- SDG 12 Responsible Consumption and Production
- SDG 4 Quality Education

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Policy on Green Building and Renovation

Introduction

SPIHER's Energy Efficiency Policy reflects the Institution's ongoing commitment to sustainable campus development, integrating modern technologies, updated regulatory frameworks, and global best practices in green construction. This policy supports SPIHER's broader goal of achieving carbon neutrality by 2035.

Purpose

To strengthen compliance with updated energy codes and sustainability benchmarks, ensuring that all new buildings, retrofits, and renovations within SPIHER meet or exceed the latest national and international energy performance standards.

Scope

Applicable to all physical infrastructure projects undertaken by SPIHER, including academic, residential, research, and administrative buildings, as well as renovation, retrofitting, and major maintenance work. It applies to partnerships with public or private construction agencies.

Policy Standards

All projects shall comply with and, where possible, exceed the following:

- ISO 50001:2018 – Energy Management Systems (replacing 2011 version
- Energy Conservation Building Code (ECBC 2017, amended 2023)
- Bureau of Energy Efficiency (BEE)
- National Building Code (NBC 2016) – Energy Efficiency Provisions
- ASHRAE Standard 90.1-2019 for performance benchmarking
- IGBC or GRIHA 4-Star Green Building Rating System for institutional buildings

Implementation Guidelines

Design Stage: All proposals must undergo Sustainability and Energy Efficiency Review (SEER) by the SPIHER Sustainability Committee. Incorporate Building Information Modeling (BIM) to simulate and optimize

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energy performance, and prioritize passive cooling, solar shading, and daylight-responsive lighting systems.

Construction Stage: Use low embodied energy materials such as fly ash bricks, recycled aggregates, and low- volatile organic compounds (VOC) paints. Ensure on-site renewable generation meets at least 20% of total building energy demand.

Post-Construction Stage: Conduct green audit tests to verify compliance with design intent. Perform third-party energy audits and report findings in SPIHER's Sustainability Report.

Governance and Accountability

The Construction section shall oversee implementation and performance tracking. The Internal Green Campus Audit Committee will review annual reports and suggest corrective measures. All tenders and contracts must explicitly mention adherence to ECBC and ISO standards.

Monitoring and Reporting

SPIHER will publish periodic Energy Performance Report outlining achievements, challenges, and energy-saving metrics. Key indicators include energy use intensity (EUI), renewable energy share, and carbon reduction per square meter.

Policy Review

This policy will be reviewed periodically to incorporate future updates in standards and sustainability technologies. SPIHER remains committed to continuous improvement, aligning its infrastructure development with the United Nations Sustainable Development Goals (SDG 7 and SDG 13).

10.02.2024 **REGISTRAR**

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1. Introduction

St. Peter's Institute of Higher Education and Research (SPIHER) actively supports local industries like JP Solar Manufacturing Unit, Chengalpattu, M/s Samy Consultancy Pvt Ltd, Nanganallur improving energy efficiency and adopting clean energy solutions by providing direct technical services, consultancy, and training programmes. The university recognises that industrial participation is essential for achieving sustainability goals, and therefore extends its academic expertise, research capabilities, and laboratory resources to assist industries in reducing energy consumption, carbon emissions, and operating costs.

In alignment with the United Nations Sustainable Development Goals, particularly SDG 7 (Affordable and Clean Energy) and SDG 9 (Industry, Innovation, and Infrastructure), SPIHER plays a strategic role in strengthening sustainable industrial practices within the region.

2. Institutional Commitment to Industry Support

SPIHER works closely with local industries as a knowledge partner by offering:

- Energy-efficiency assessment services
- Industry-focused workshops and training
- Renewable-energy feasibility studies
- Technical consultancy on clean-energy technologies
- Student and faculty-led energy audits

By combining academic expertise with field-based implementation, SPIHER ensures that industries gain practical and applicable solutions.

3. Energy-Efficiency Assessment Services

The university provides professional energy audit and efficiency assessment services to industries, including:

- Electrical system analysis
- Load and power-quality assessment
- Identification of energy-loss points
- Equipment efficiency evaluation
- Recommendations for power optimisation
- Cost-benefit analysis for energy-saving measures

Faculty experts and senior students conduct on-site audits and prepare technical reports with actionable recommendations.

4. Industry-Focused Workshops and Training Programs

SPIHER regularly organises programmes for industrial personnel such as:

- Workshops on energy management systems
- Training on efficient electrical equipment usage
- Programs on waste-energy recovery and conservation
- Awareness sessions on clean-energy regulations and incentives
- Training programmes on carbon-footprint reduction
- Industries benefit from knowledge-sharing through expert lectures and hands-on sessions.

5. Clean Energy and Renewable-Energy Consultancy

SPIHER assists industries in moving toward clean-energy alternatives through:

- Feasibility analysis for solar and hybrid systems
- Advisory on grid-connected renewable systems
- Energy storage recommendations
- Technology selection guidance
- Implementation planning for renewable solutions

Special focus is given to industries interested in rooftop solar, energy-efficient automation, and LED transformation.

6. Research and Innovation Support

SPIHER integrates industry support with research expertise by:

- Applying research findings to industry challenges
- Joint research initiatives on clean energy
- Technology transfer support
- Prototyping and testing renewable-energy models
- Faculty consultancy services

The university's DST-funded projects further enrich technical support offered to industries.

7. Collaboration with Industry and Stakeholders

SPIHER maintains active partnerships with:

- Small and medium enterprises
- Local manufacturing units
- Power and energy service companies
- Government agencies
- Renewable-energy providers

These collaborations ensure region-wide sustainability development.

8. Impact and Outcomes

The services have resulted in:

- Improved industrial energy performance
- Reduced operational costs
- Increased awareness of renewable-energy opportunities
- Adoption of energy-efficient technologies
- Skill development among industrial employees
- Stronger industry–academia relationships

9. SDG Alignment

SPIHER's efforts contribute to:

- SDG 7 – Affordable and Clean Energy
- SDG 9 – Industry, Innovation, and Infrastructure
- SDG 12 – Responsible Consumption and Production
- SDG 13 – Climate Action

10. Monitoring and Quality Assurance

SPIHER ensures effective service delivery through:

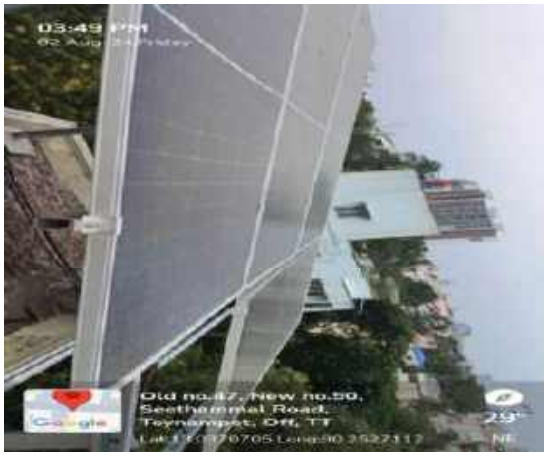
- Industry feedback collection
- Report documentation and follow-ups
- Continuous improvement cycles
- Impact review meetings
- Record maintenance

11. Conclusion

SPIHER actively supports local industries in transitioning toward sustainable energy practices through hands-on services, academic consultancy, and applied research. By providing training, audits, and technical solutions, the university contributes directly to industry efficiency, environmental responsibility, and regional economic development.

SPIHER remains committed to delivering energy-driven innovation and sustainable industrial transformation.

Workshop on installing thin film solar panels over Buildings for improving enery efficiency at Bajaj Showroom, Velachery



Workshop on installing thin film solar panels over Buildings for improving enery efficiency JP Solar Manufacturing Unit, Chengalpattu