



# Sustainable Energy Transition Program

## Why Sustainable Energy Transition?

The increase in the global energy demand is inevitable, with a rapidly growing economy and population growth in Asia. The global sustainable growth scenario depicts the need for zero emissions from energy supply and use by mid-century. In Asia, with greater access to energy and further economic development, the urgency to make energy sector sustainable is an evident challenge.

In order to address this transition phase for energy sector which needs societal scale change with new values, system thinking, technical and modeling skill, business, policy and governance, the Asian Institute of Technology's "**Sustainable Energy Transition**" program aims to prepare a large number of future leaders capable of meeting the emerging needs of energy transitions ensuring sustainable progress for humanity.

The Sustainable Energy Transition Program is an interdisciplinary program encompassing new technologies, policy, social, and management aspects, addressing the rising challenges of energy transitions and providing energy access to all physical and geographical areas. The program is aimed to prepare students to face the impending challenges in the global energy sector through strategic state-of-art knowledge, tools, and research skill to support technology, market, business, finance, and policy development and make them future-ready to deliver solutions-oriented knowledge and innovative practices for cleaner energy transitions for human progress.

## Degrees Offered

- **M.Eng./M.Sc. in Sustainable Energy Transition**  
(2 years, Coursework & Research)
- **M.Phil. in Sustainable Energy Transition**  
(2 years, Only Research)
- **Masters in Sustainable Energy Transition**  
(1 year, Coursework & Research)
- **D.Eng./PhD. in Sustainable Energy Transition**  
(3.5 years, Coursework & Research)

## Courses Offered

- **Energy Technology, Transition and Sustainability**
- **Energy access in rural and isolated areas**
- **Smart Energy Buildings**
- **Energy and GHG emissions accounting and modelling in cities**
- **Economics of clean energy transition**
- **Power System Modeling and Analysis**
- **Microgrid Design, Control and Applications**
- **Design and Operation of the Transmission and Distribution Systems**
- **Energy Systems, Economics and Policy**
- **Bioenergy**
- **Energy efficiency for sustainable energy transition**
- **Smart Grid and Variable Renewable Energy Integration**
- **Impact evaluation of energy interventions: concepts, methods and applications cities**
- **Power System Restructuring and Economics**
- **AI Applications in Power and Energy Systems**
- **Energy Storage**
- **Solar electricity systems: Design, installation and performance evaluation**
- **Energy Demand and Pricing**
- **Electric and Hybrid Electric Vehicles**

## Research Areas

The program undertakes research that are of local, regional and global relevance from the perspective of understanding and enabling energy transition for sustainable development in the (energy focus) areas of Resource, Environment, Technology, Innovation, Economics, Regulations, Policy, Finance, Institutions, and Society. Some of our research topics (but not limited to) include:

- Improving Energy Access considering SDGs
- Bioenergy and Biofuel Productions
- Climate Change Mitigation from Energy Sector
- Low Energy and Carbon Cities
- Energy Storage Technologies and its Applications
- Energy-economy Modelling in Developing Countries
- Renewable Technology Diffusion and Integration
- Regional Electricity Trade, Barriers and System Integration
- Regional Power Grid Integration and Management
- Application of AI and Machine Learning in Energy Systems
- Power Sector Modeling with Variable Renewable Energy Sources
- Energy Efficiency and Barriers
- Smart Grids and Microgrids
- Smart Grid for Large Scale Variable Renewable Energy Integration
- Challenges and Opportunities in Electrification of Transport Sectors
- Electric and Hybrid Electric Vehicle Technologies
- Application of IoT, Big Data, and Blockchain Technology in Energy Systems

## Some Of Our Alumni



Ms. Tenzin Choden, Masters in Energy (2019)  
Druk Green Power Corporation, Bhutan



Mr. H. M. Enamol Haque, Master in Energy (2018)  
Sub-Divisional engineer at Bangladesh Power  
Development Board, Bangladesh



Ms. Rotchana Intharathirat, Ph.D. in Energy (2017)  
Ministry of Natural Resources and Environment,  
Thailand



Dr. Nikhil Sasidharan, Ph.D. in Energy (2016)  
Assistant Professor, Department of Electrical  
Engineering, National Institute of Technology Calicut,  
Kerala, India



Ms. Sandar Myo, Master in Energy (2015)  
Research Assistant at International Institute for  
Energy Conservation (IIEC), Myanmar

## Apply Now!

### Documents Checklist

- AIT Application form \*
- Research Proposal
- Degree Certificate & Transcripts
- English Test Score
- 2 Recommendation Letters  
(For Doctoral only)

*\*We accept only online applications & all documents must be in English (certified translated documents are also accepted)*

### English Proficiency Test

As a part of the application you must provide a valid English test score\*. It can be:

- IELTS (6)
- TOEFL (550, 213, 80)
- AIT-EET (6)

For more info visit <https://www.ait.ac.th/admissions/eligibility/>

*\*Criteria for English requirement varies with different scholarships*

### Scholarships Available

Asian Institute of Technology offers a wide range of scholarships and RTG fellowships for the Masters and Doctoral programs. Our scholarships are highly competitive which are awarded to selected applicants depending on their qualifications and merit.

Get more details @ <https://www.ait.ac.th/admissions/scholarships/>

Application Deadline: ♦ August Intake - 30 June ♦ January Intake - 30 November

Apply Online: <https://www.ait.ac.th/admissions/application-form/>



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