



# Sustainable Energy Transition Program

## Why Sustainable Energy Transition?

The increase in the global energy demand is inevitable and Asia plays a key role given its rapidly growing economy and population. The global sustainable growth scenario needs energy access for all with the upscaled renewable energy and enhanced energy efficiency. Similarly, energy sector is grappling with the aims of the Paris Agreement on Climate Change which requires zero GHG emissions from energy supply by this mid-century. Given dynamism and economic growth of Asia, the urgency to put energy sector into the sustainable pathway is an evident challenge.

Pathways to sustainable energy transition needs societal scale change with new values, system thinking, technical and modeling skills, business models, policies and governance. In this context, the Asian Institute of Technology's "Sustainable Energy Transition" program aims to prepare future leaders capable of delivering these energy transitions ensuring sustainable progress for humanity.

The Sustainable Energy Transition Program is an inter-disciplinary program encompassing technological, 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, skill sets and tools, and research skills to support technology, market, business, finance, and policy development and to make them future-ready to deliver solutions-oriented knowledge.



## 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)

## ED86.01 Energy Technology, Transition and Sustainability

### Objective:

This course aims to present details for sustainable energy transition by discussing the current energy system and how it is likely to develop in the future, their multiple dimensions and pathways, namely energy resources and technologies, policies and economics within the new paradigm of sustainable development. Specifically, what are the implications for designing any new energy transition pathways and how such transition can reconcile with wider sustainability objectives will be discussed. Key energy technologies and their development, and the major challenges in terms of resources availability, accessibility, security, and impact to the society, economy, jobs and environment will be presented. The role of energy in sustainable development and the SDGs framework as an operational tool will be explained.

### Learning Outcomes:

This course will enable students to;

- ◆ Explain the renewable energy (solar, biomass, wind, hydro and geothermal) resource availability, conversion (technologies) and applications, also with fossil fuel (coal, oil and natural gas) origin, extraction and conversion and the status of their utilization,
- ◆ Discuss the targets of SDG 7, and explain the technology status, policies and the measures adopted to meet the energy challenges of energy access, renewable energy adoption and energy efficiency improvements by 2030,
- ◆ Discuss the urgency and enabling conditions for transition in the context of Paris goal and connected challenges, and explain the multidimensionality of energy transition, and
- ◆ Use methods to calculate total economic value in project design with examples from various countries.

## ED86.02 Energy Access in Rural and Isolated Areas

### Objective:

This course will help students to understand the status of energy access in rural and isolated communities, specifically; related to provision of electricity for basic appliances (lighting, communication, recreation, etc.) and for clean cooking, and to rural livelihood activities, such as agriculture and industries. Students will learn how to estimate local energy resource; what are the technologies and their working principles for providing energy access; and what are the social, economic and environmental benefits, and applications/impacts of energy access. Policy aspects and financial models to promote energy access in rural and isolated areas will be dealt with. Case studies will provide a deeper illustration on the concepts.

### Learning Outcomes:

This course will enable students to;

- ◆ Explain the SDG 7 goal and 7.1 targets and status,
- ◆ Expound energy consumption and energy supply in rural and isolated areas,
- ◆ Describe the sustainability issues (social, economic and environmental) due to energy access,
- ◆ Design solar home system using PV and explain the influences of factors on PV cell/module outputs observed from experiments,
- ◆ Design clean cooking systems and explain the influences of factors on its performance based on experiments, and
- ◆ Able to use appropriate software for evaluation and design of electricity supply and clean cooking systems.

## ED86.03 Smart Energy Buildings

### Objective:

This course will enable students to understand the concept of smart buildings with integration of advanced technology and their systems such that the buildings' whole life cycle can be remotely operated and controlled with convenience, comfort, and in a cost-and-energy-efficient manner. This course is designed to help students to identify and assess the energy requirements in buildings, to explain the characteristics of smart buildings, to identify and chose the components and systems involved, and apply AI, Big data and Analytics in energy management of buildings.

### Learning Outcomes:

This course will enable students to;

- ◆ Identify and assess the energy requirements in buildings,
- ◆ Able to explain the characteristics of smart buildings,
- ◆ Discuss about the components including sensors and IoTs and systems involved in smart buildings, and
- ◆ Apply AI, Big data engineering and Analytics for efficient energy management of buildings

# Courses Offered

## ED86.04 Energy and GHG Emissions Accounting and Modelling in Cities

### Objective:

Energy consumption in cities accounts for over two third of the global final energy use and over seventy percent of energy-related CO<sub>2</sub> emissions. With rising global urban population, cities serving as economic growth engine in developing world, and rising income, cities are already and will further play a critical role in sustainable energy transition at all scales. Cities are also frontrunners in technological, policies and governance experimentations with large opportunities to support sustainable energy transition. In this context, this course aims at imparting knowledge on past, present and future energy use in cities and options for sustainable energy transition in cities through analytical, accounting and modelling approaches. Energy use and emission diagnosis, hot-spots identification, options and pathways for the future are focus of this course.

### Learning Outcomes:

This course will enable students to;

- ◆ Deliberate on the trends, patterns, and hotspots of energy use and GHG emissions in cities and the related policies and options at multiple scales,
- ◆ Quantify the past and present energy use in cities and related GHG emissions following established global protocols and frameworks, and
- ◆ Develop future scenarios and models to evaluate the technological and policy options and pathways for sustainable urban energy transition.



## ED86.05 Economics of Clean Energy Transition

### Objective:

Rising sustainability concerns, pro-active government policies, emerging renewable energy targets, falling costs of renewable energy and improving technologies, amongst others, are transforming energy system. In this context, the objective of this course is to empower students to grasp the economics of clean energy transition and able to understand and conduct key analysis also for scenario making, pathways determination, cost comparisons, and impact assessment of clean energy transition.

This course will enable students to;

- ◆ Deliberate on the trends and patterns of ongoing energy transition and future trends,
- ◆ Develop scenarios and choose appropriate modelling methods for clean energy transition visioning and pathway analysis,
- ◆ Compare the costs of emerging technologies and interventions towards clean energy future, and
- ◆ Conduct impact analysis of clean energy transitions.

## ED86.06 Power System Modeling and Analysis

### Objective:

To pursue in-depth study leading to a career in electric utility or related organizations, it is essential to understand the tools for analysis and the phenomena in electric power systems. This course is intended to introduce students to advanced analytical tools for analysis of power systems under normal and disturbed conditions. The course aims at computer modeling power systems, mathematical techniques development and use of application software for system studies. Major advancements in the field shall also be discussed.

### Learning Outcomes:

This course will enable students to;

- ◆ Relate the steady state characteristics of power system components to mathematical modellings,
- ◆ Analyze power flow solutions for steady state analysis of transmission and distribution power system,
- ◆ Evaluate balanced and unbalanced fault conditions by short circuit analysis, and
- ◆ Explain the Automatic Generation and Control (AGC) in power system.

## ED86.07 Microgrid Design, Control and Applications

### Objective:

A Microgrid refers to distributed energy resources and loads that can be operated in a controlled, coordinated way; they can be connected to the main power grid, operate in "islanded" mode or be completely off-grid. Microgrids are low- or medium-voltage grids located at or near the consumption sites. They can generate power from both renewable and conventional sources and although they are mainly electrical systems, they can also incorporate a thermal energy component, such as combined heat and power. Microgrids are increasingly being equipped with energy storage systems, as batteries become more cost competitive. The system is controlled through a microgrid controller incorporating demand-response so that demand can be matched to available supply in the safest and most optimized manner. A flywheel or battery-based grid stabilizing system can be included to offer real and reactive power support. The aim of this course is to learn aforementioned features and overcome the technical barriers that impede adoption of the new paradigm of distributed energy resources represented by microgrids.

### Learning Outcomes:

This course will enable students to;

- ◆ Explain about Microgrid definition, types, drivers, benefits, and as one of the major forms to supply distributed clean energy to isolated and/or grid connected communities,
- ◆ Understand the technical, non-technical and business model selection challenges in implementation of a microgrid,
- ◆ Explain about integration of clean energy sources such as solar PV, wind, microhydro, Fuel Cell, Microturbine, biofuel based generations, and energy storage into the Microgrid on a household, building, or community basis,
- ◆ Explain about how Microgrid can operate, control and manage the distributed resources (DR) in the manner of "virtual power plant (VPP)," so as to adapt to the increasing penetration of distributed clean energy and improve the grids' capability to accommodate these energy forms,
- ◆ Identify suitable protection schemes, communications and monitoring systems, safety assurance and earthing mechanism for Microgrid, and
- ◆ Explain about cost/benefits of DC Microgrid and its potential applications.

## ED86.08 Design and Operation of Transmission and Distribution Systems

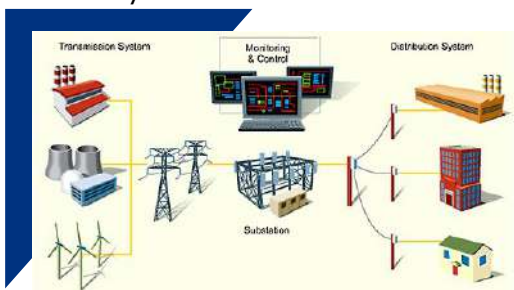
### Objective:

Power system networks are experiencing rapid growth in their size requiring and increased interconnections between different utilities. The operation of interconnected systems requires formulating proper design as well as protection criteria for setting up of new generating plants, EHV transmission networks to evacuate power from remote locations (solar wind, etc.) to load centers and grid substation. Similarly, the distribution system is an important portion of power systems due to its high investment and its direct effect/impacts on customers. This course is intended to expose the students to some of the design and operation practices being adopted in the modern power system networks including the characteristics and configurations of the transmission and distribution systems, power quality requirements, protection measures, reliability and automations, and SCADA systems.

### Learning Outcomes:

This course will enable students to;

- ◆ Explain design principles of EHVAC and HVDC transmission line/system to meet the new challenges as well as future load growth requirements,
- ◆ Explain design principles of protection schemes of Generators, Transformer and Transmission Lines, and explain about various substation troubleshooting schemes,
- ◆ Explain design principles of distribution substation with proper bus-bar and feeder schemes to supply power reliably and economic way to present demand as well as future load growth requirements,
- ◆ Analyse and apply various power quality control techniques to improve quality of power supply and minimize productivity loss as well as enhance customer satisfaction,
- ◆ Design an advanced and customized level of power supply system for specific applications by applying various available techniques,
- ◆ Apply various methods for the real power loss and voltage drop reduction, apply various over-current protection devices and its coordination techniques to minimize the outages and productivity losses, and
- ◆ Explain about various DA tools and new SCADA systems suitable in Smart Grid environment and analyse reliability of distribution systems with improvement suggestion.





# Courses Offered

## ED86.09 Energy Systems, Economics and Policy

### Objective:

This course is intended to provide fundamental understanding of energy system and emerging issues in energy access, technologies, economics, market and policies for students. The course is aimed to provide broader knowledge that surrounds energy transition. Key systems covered here are power system, rural and urban energy systems. The course is designed to accommodate students from all disciplines to develop a common knowledge base.

### Learning Outcomes:

The course will enable students to;

- ◆ Interpret the economic behavior of demand and supply side and market rationales of the energy system,
- ◆ Understand the underlying energy access challenges to search for sustainable solutions,
- ◆ Comprehend the emerging nature of power systems operation and new emerging technologies to benefits from, towards the sustainable energy transition,
- ◆ Compare and contrast the merits of alternate policies, business models in their local contexts, and
- ◆ Grasp the rapidly changing nature of the energy market.

## ED86.10 Energy Efficiency for Sustainable Energy Transition

### Objective:

This course is designed to help students know the process of conducting energy audit, application of engineering principles in analyzing data for improving and optimizing system outputs. The status, trends and energy use of common appliances and processes will be dealt with. The energy consumption of important sectors, namely, building, industry and transport and the ways to improve energy efficiency will be discussed. The principles of Internet of Things and Big Data for energy analytics will be presented. The importance of improving energy efficiency for addressing the SDG 7 targets as well as to meeting climate mitigation targets, and the policies in the countries facilitating energy efficiency will be detailed. Case studies and hands on experience in conducting energy audit will provide clearer illustration of energy audit and energy efficiency improvements.

### Learning Outcomes:

This course will enable students to;

- ◆ Prepare and organize an energy audit,
- ◆ Explain the energy efficiency opportunities of common devices and systems,
- ◆ Analyse energy data and adopt techniques to measure, analyze and quantify losses,
- ◆ Apply methods and techniques for the optimization of energy use in industrial systems,
- ◆ Discuss opportunities for energy management, GHG mitigation and SDG 7 targets, and
- ◆ Explain the policy instruments for promoting energy efficiency.



## ED86.11 Smart Grid and Variable Renewable Energy Integration

### Objective:

Smart Grid is a promising concept and philosophy, which in combination of technology and energy management skills leads to transform and offers multiple benefits for consumers, environmentalists, and the energy industry as a whole. Therefore, the objective of this course is to present the drivers, cost/benefits analysis and regulatory/policy/technical challenges involved in the Smart Grid project implementation. This course also elaborates about solar PV and wind power generation technologies and their integration challenges in power grid followed by the utilization of large scale renewable energy sources by using energy/load management based upon dynamic pricing and demand response.

### Learning Outcomes:

This course will enable students to;

- ◆ Explain the Smart Grid various drivers, benefits and apply new electrical energy management skills to reduce bottlenecks at various levels in electric power supply industry,
- ◆ Analyze impacts of intermittency of renewable energy on grid operation and apply Smart Grid idea to increase utilization of solar and wind energy at greater scale,
- ◆ Explain synergies among various energy sectors and flexibility for energy integrations,

# Courses Offered



- ◆ Explain various Information and Communication Technologies devices to design a Smart Grid for efficient energy management systems,
- ◆ Apply Demand Response including battery storage from Electric Vehicles for better renewable resource utilizations as well as green environment,
- ◆ Design suitable pathways for Smart Grid project implementation,
- ◆ Apply economic criteria to evaluate Smart Grid technology and projects, and
- ◆ Apply power electronics technologies and its control techniques to integrate solar and wind energy for smooth operation of power grid.

## ED86.12 Impact Evaluation of Energy Interventions: Concepts, Methods and Applications

### Objective:

Impact evaluation is an important means for developing effective energy interventions. Impact evaluation provides information about the impacts produced by an energy intervention which could be desirable, undesirable, intended, unintended, direct and indirect. Many governments, utilities, development banks and agencies are now recognizing and emphasizes the need for knowledge creation for effective formulation and implementation of energy interventions through systematic evidences from the past interventions. In this context, the objective of this course is to provide systematic knowledge on concepts, methods and applications of impact evaluation of the energy interventions.

### Learning Outcomes:

This course will enable students to;

- ◆ Deliberate on the concepts of impact evaluation and its needs and strengths,
- ◆ Conduct impact evaluation following step-by-step process, from designing impact evaluation processes to choosing right methods and quantifications, and
- ◆ Manage the impact evaluation process in government agencies, development organization and private sector.

## ED86.13 Power System Restructuring and Economics

### Objective:

The organization of the electric sector in the world has been changing dramatically to allow for competition among generators and to create market condition in the sector, seen as necessary conditions for increasing the efficiency of electric energy production and distribution, offering a lower price, higher quality and secure product. This course is aimed at providing fundamental understanding to different types of power system restructuring process of the world with special emphasis to the Asian countries.

### Learning Outcomes:

This course will enable students to;

- ◆ Explain evolution and analyze the impacts of restructuring on Electric Supply Industry,
- ◆ Apply economic criteria in power market and explain asset and portfolios,
- ◆ Evaluate the impacts of restructuring on power system operation and control,
- ◆ Apply electricity trading principles in physical and financial electricity markets,
- ◆ Adopt AI and Big data tools for load and electricity price forecasting,
- ◆ Apply appropriate transmission pricing schemes in open access transmission systems,
- ◆ Make an investment decision on generation and transmission expansion planning,
- ◆ Identify key questions for and explain various types of power sector modeling approaches, and
- ◆ Apply asset management basics to power utility business.



# Courses Offered

## ED86.14 AI Applications in Power and Energy Systems

### Objective:

The course shall provide the fundamental foundation for the concept and application of optimization and their importance in power systems. Major advancements in the field and the prominence of AI-based algorithms in the field, shall also be discussed.



### Learning Outcomes:

The course shall enable the students to,

- ◆ Have clear information regarding the control and operation of power systems,
- ◆ Be familiarized with the opportunities for improvement in power systems,
- ◆ Understand and apply advanced optimization to power systems problems,
- ◆ Comprehend and shall use AI-based methods for advanced studies and research, and
- ◆ Be enables to apply optimization into their work while pursuing research.

## ED86.15 Bioenergy

### Objective:

The demand for energy produced from biomass (bioenergy) is constantly growing due to its wider spectrum of applications. There are numerous technologies for the conversion of biomass into useful forms of energy. With the recent rapid development of biomass conversion technologies and increasing demand for decentralized, low-emission generation, the knowledge of efficient applications of modern bioenergy systems is important in the context of energy shortage and climate change. This course will help students to identify and characterize different type of biomass sources, identify and select suitable technologies for converting the biomass in to energy and carry out techno-economic-environmental analysis of bioenergy systems.

### Learning Outcomes:

This course will enable students to;

- ◆ To identify and characterize different types of biomass
- ◆ Understand the different technologies to transform biomass into energy,
- ◆ To assess the resource requirement, sizing the system, and carry out technical analysis, and
- ◆ Identify and analyze socio-economic implications of bioenergy.



## ED86.16 Energy Storage

### Objective:

Energy systems play a key role in harvesting energy from various sources and converting it to the energy forms required for applications in various sectors. Unlike fossil fuel based systems, most of the renewable energy sources need to be harvested when available and stored until needed for usage. Applying energy storage can provide several advantages for energy systems, such as permitting increased penetration of renewable energy and better economic performance. Energy storage systems are one of the possible solutions for mitigating the effects of intermittent renewable resources on networks and providing flexibility for managing future electricity supply/demand challenges. This course will help the students to understand and identify different technologies for energy storage, designing/sizing of appropriate energy storage technologies for specific circumstances and compare of and discuss the challenges and issues facing the energy storage technologies.

### Learning Outcomes:

This course will enable students to;

- ◆ Identify appropriate technologies for energy storage and their typical applications,
- ◆ Design/size/choose energy storage technologies for specific circumstances with consideration of cost and environmental issues, and
- ◆ Discuss the challenges and issues, as well as the solutions of energy storage technologies.





# Courses Offered

## ED86.17 Solar Electricity Systems: Design, Installation and Performance Evaluation

### Objective:

Solar energy is a clean, renewable resource that is cost competitive in terms of electricity generation which requires little maintenance, promotes energy security, reduces greenhouse gas emissions, and promotes a sustainable energy future. The solar PV systems help reduce peak loads, thus postponing or preventing the need for additional baseload energy generation and distribution infrastructure, and hence, increasingly installed in large scale – both off grid and grid connected systems in land, roofs and water. This course will help students understand the status of solar electricity systems where the design principles, assumptions and constraints, and Installation and performance will be explained and discussed in detail. Policy aspects and financial models for solar PV electricity will be discussed. Case studies will provide clearer illustration.

### Learning Outcomes:

This course will enable students to;

- ◆ Explain the principles of electricity generation by solar PV systems and solar thermal electricity generation systems and their working,
- ◆ Assess resource availability, and be able to size and design the components of PV system, and analyze the performance of components and the whole system for higher efficiency,
- ◆ Explain the features and system of solar thermal electricity generation, and
- ◆ Discuss the financing options for solar based electricity generation projects.



## ED86.18 Energy Demand and Pricing

### Objective:

The course is designed to provide in-depth knowledge about the fundamentals of energy market, trade, demand and services, why price continues to be a strong signal for managing energy demand and market, understanding demand discourse in the context of SDG 12 addressing sustainable production and consumption, what are the non-price incentives that can influence demand and why are they needed, and what are the agent based models and how to model the preferences of various socio-economic categories: households, industries, transport/mobility. Frontier areas in the field will be addressed. Students will be familiarized with the computer application packages for solving problems.

### Learning Outcomes:

The course will enable the students to;

- ◆ Develop skills to build energy demand side models which can help in project evaluation, policy analysis, price/tariff, subsidy, tax designs,
- ◆ Analytically understand energy market mechanisms, and
- ◆ Use the model and policy analysis tools in various socio-economic contexts and new paradigms of sustainable development.



## ED86.19 Electric and Hybrid Electric Vehicles

### Objective:

This course is designed to address the emerging problems of air pollution, climate change, fossil fuel depletion, etc. by providing clean, efficient and safe transportation alternatives, e.g., electric and hybrid electric vehicles, and fuel cell vehicles, which are emerging out to replace the conventional vehicles in the future. The course covers the topics related to electric and hybrid vehicle types; vehicle performances; challenges and opportunities of electric vehicle deployment; battery storage technologies, charging schemes and charging infrastructures for electric vehicles; Fuel cell based electric vehicle technology; impacts of Grid-to-Vehicle and Vehicle-to-Grid on power grids and integration of intermittent type of renewable sources.

### Learning Outcomes:

This course will enable students to;

- ◆ Explain about characteristics, driving cycles, and performance parameters of the vehicle,
- ◆ Explain about electric and hybrid vehicle types, architectures and operation,
- ◆ Explain about characteristics of various energy storage technologies and apply suitable combination of storage technology in electric vehicle for better performance,
- ◆ Apply appropriate type and size of the electric machines and power electronics drives for electric and hybrid electric vehicles,
- ◆ Explain about series and parallel combination of powertrain in electric vehicles,



# Courses Offered



- ◆ Apply regenerative braking system in electric vehicles to improve fuel efficiency,
- ◆ Explain fuel cell operations and apply it in fuel cell based electric vehicle design,
- ◆ Explain about various types of battery charging mechanism and design of charging/swapping station, and
- ◆ Analyses the impact of G2V & V2G applications on integration of intermittent type of renewable sources and power grid operations.

## Our Faculties



**Dr. P. Abdul Salam**

ASSOCIATE PROFESSOR AND HEAD OF DEPARTMENT,  
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*Sustainable & Renewable Energy, Climate Change Mitigation, Clean Coal Technologies, Waste to Energy*



**Prof. Sivanappan Kumar**

PROFESSOR, kumar@ait.ac.th  
*Renewable Energy Resource and Technologies, Climate Change and Green House Gas Mitigation, Solar Energy, and Energy and Sustainable Development*



**Prof. Weerakorn Ongsakul**

PROFESSOR, ongsakul@ait.ac.th  
*Power System Control & Analysis, System Optimization, Restructuring*



**Prof. Joyashree Roy**

BANGABANDHU CHAIR PROFESSOR,  
joyashree@ait.ac.th  
*Economics of Pollution and Climate Change, Modeling energy demand, Water Pricing*



**Prof. Shobhakar Dhakal**

PROFESSOR AND ACADEMIC CHAIR (CCSD),  
shobhakar@ait.ac.th  
*Cities & Climate Change, Energy Policy & Economics, Climate Mitigation*



**Dr. Jai Govind Singh**

ASSOCIATE PROFESSOR AND PROGRAM CHAIR,  
jgsingh@ait.ac.th  
*Smart Grid and Microgrid, Renewable Energy Generation and Integration, Electric Vehicle Technologies*



**Dr. Brahmanand Mohanty**

VISITING FACULTY, mohanty@ait.ac.th  
*Energy Conservation, Efficiency and Management, Clean Energy Financing*

Sustainable Energy Transition Program at AIT has been training 1400+ minds from every corner of the globe since 1979. International recognition of our faculty can be observed through their memberships and participation in global networks, panels, editorial boards of international journals, invited presentations, reviewers, etc. Their linkages with energy professionals in the region and beyond have positioned the Sustainable Energy Transition program to be a regional hub for energy-related issues.

Get more details about our faculties and their areas of expertise log on to:

<https://eccc.ait.ac.th/sustainable-energy-transition-program/>

## 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 Production**
- **Climate Change Mitigation from Energy Sector**
- **Low Energy and Low-Carbon Cities**
- **Energy and Climate Policy Modelling**
- **Renewable Technology Diffusion and Integration**
- **Regional Electricity Trade, Grid Integration and Barriers**
- **Power Sector Modeling with Variable Renewable Energy Sources Energy Efficiency and Barriers**
- **Smart Grid for Large Scale Variable Renewable Energy Integration, and Microgrids**
- **Challenges and Opportunities in Electrification of Transport Sectors**
- **Application of AI and Machine Learning in Energy Systems**
- **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, 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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