



Drive Accessible Clean Energy & Raise Awareness for Sustainable Energy Use

7 AFFORDABLE AND
CLEAN ENERGY



OVERVIEW

NIDA has adopted a Net Zero Emission policy and promotes clean energy use in education, research, and institutional energy management while raising consciousness among students and staff to encourage sustainable energy practices.

RESEARCH/ FUNDING

Joint research with NASA to advance Thailand's clean air

NIDA's faculty members collaborate with international organizations on research that advances clean energy and environmental sustainability. For example, Prof. Dr. Siwatt Pongpiachan, Director of the Center for Research and Development of Disaster Prevention and Management, School of Social Development and Management Strategy, has conducted joint research with the National Aeronautics and Space Administration (NASA) under the project "Clean Air Act for Thailand: Sustainable Solutions to Air Pollution and Its Root Causes." This research aims to address air pollution, particularly PM2.5, to protect public health and the environment in a sustainable way.

Research promoting eco-friendly restaurants

Additionally, NIDA has implemented Fundamental Fund (FF)-supported research programs focusing on developing environmentally friendly, low-carbon restaurant businesses to enhance competitiveness. Studies have examined consumer behavior in restaurant businesses on Koh Samui, Surat Thani Province, to promote low-carbon, eco-friendly practices; explored BCG-based business transformation in the restaurant industry; and developed communication models to drive low-carbon business concepts in the region.

Research for climate innovation & sustainability at COP29

Furthermore, Prof. Dr. Siwatt Pongpiachan was invited to present research from the Future Earth Thailand network—funded by the Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B)—at the 29th United Nations Climate Change Conference of the Parties (COP29) in Baku, Azerbaijan on November 11–22, 2024.

Discussion topics included "Sustainable Growth: Thailand's Climate Commitment—Leveraging Innovation in Blue Carbon, Carbon Capture Storage, Air Pollution Mitigation, and Beyond Banking for a Green Future" and "Innovative Approaches to Sustainable Agriculture, Forest, and Water Management." Panelists shared their visions and commitment to leveraging innovation in blue carbon, carbon capture, air pollution reduction, and financial innovation to advance sustainable development goals. <https://nida.ac.th/nida-joins-cop29/>

TEACHING & LEARNING

Fostering visionary leaders for sustainable development

The School of Environmental Development Administration offers a Master of Science in Environmental Management, designed to produce visionary environmental leaders with analytical, research, and policy expertise. The curriculum integrates global environmental knowledge and the Philosophy of the Sufficiency Economy to support sustainable development.

One of the key courses, Clean Technology and Energy Management (J.S. 7204), focuses on principles of clean technology, waste generation assessment, mass and energy balance, pollution estimation, and clean technology alternatives. It also includes topics such as life-cycle assessment, eco-design, environmental labeling, policy instruments for resource efficiency, and national and international energy management strategies.

Students also participate in field learning at Khao Yai National Park and the EGAT Lam Takong Learning Center, applying their knowledge to real-world environmental and energy management practices for organizational and societal benefit.

<https://nida.ac.th/nida-sustainable-energy-ghg-reduction/>



COMMUNITY ENGAGEMENT

“Low Carbon High Future” seminar for green tourism

NIDA hosted a seminar titled “Low Carbon High Future: Tourism Pathways Toward a New Ecosystem for a Sustainable Society” at the Plant Genetic Conservation Project under the Royal Initiative, Sikhio District, Nakhon Ratchasima Province.



The seminar engaged local communities from Khlong Phai and Nong Ya Khao subdistricts in green tourism initiatives aligned with the BCG (Bio-Circular-Green) Economy Model. Activities included organic vegetable cultivation, composting food waste, waste separation, community-based food production, reduced burning practices, and local tree planting to foster sustainable eco-tourism.

OPERATION

Net Zero initiatives toward energy sustainability

NIDA's Net Zero Emission policy is supported by a Net Zero Steering Committee responsible for implementing, monitoring, and communicating energy practices across the Institute to achieve net-zero greenhouse gas emissions by 2027. The committee also works to improve energy efficiency, optimize resource use, and promote campus-wide participation, emphasizing that all members share responsibility for this goal.

Additionally, NIDA's campus design integrates natural ventilation and daylighting, reducing the need for artificial lighting during the day. All buildings have adopted LED lighting, which lowers power consumption and air-conditioning load. A Building Energy Management System has been implemented, and solar panels are installed on the Navamintradhiraj Building's rooftop, producing 1.06% renewable energy.

Lastly, NIDA is equipped with EV charging stations for electric vehicles used on campus by staff, students, alumni, and the public—supporting zero-emission mobility and affordable clean energy use.

