



Ensure Accessible, Reliable, Sustainable and Modern Clean Energy for All

7 AFFORDABLE AND
CLEAN ENERGY



OVERVIEW

NIDA prioritizes proper management of clean energy by communicating energy-saving measures to ensure that everyone understands and adheres to them. This approach guarantees access to modern energy that is affordable, reliable and sustainable. Moreover, clean technology is a key aspect of environmental management, serving as a pillar of sustainable development.

RESEARCH/ FUNDING

Tackling air pollution, carbon emission, & sustainable waste management

NIDA has produced notable research, including a study on Thailand's "Clean Air Act" aimed at addressing air pollution and its root causes while seeking sustainable solutions. This research was funded by the Office of the Science Promotion Commission, Research, and Innovation (TSRI) and conducted in collaboration with the National Aeronautics and Space Administration (NASA) to tackle air pollution, specifically PM2.5, and to genuinely and sustainably protect the health of Thai people and the environment.

Other research studies include:

- Characteristics of PM2.5 at a High-Altitude Remote Site in the Southeastern Margin of the Tibetan Plateau in Pre-monsoon Season
- Relationship Between COVID-19 Infection Rates and PM2.5 Levels in Ambient Air of Bangkok, Thailand
- Impacts of Biomass Burning in Peninsular Southeast Asia on PM2.5 Concentration and Ozone Formation in Southern China During Springtime - A Case Study.

In addition, NIDA has secured funding for fundamental research (Fundamental Fund: FF) aiming to solve environmental issues, reduce carbon emissions, and promote clean and eco-friendly energy. Projects include initiatives to overhaul plastic waste management at national and local levels toward efficient and sustainable practices, and studies on developing low-carbon restaurants with an environmentally friendly and competitive business model to ensure sustainability within the restaurant sector.

OPERATION

Towards zero waste with energy efficiency & clean transportation

NIDA emphasizes maximizing the value and benefits of resources by implementing an environmentally friendly policy under the project "Moving toward Zero Waste Lifestyle @NIDA."

Buildings at NIDA are designed to optimize natural ventilation and allow ample natural light, minimizing the need for artificial lighting during the day. Energy efficiency is prioritized across all buildings through the use of LED lights with low power consumption, reducing the cooling load on air conditioners. High-efficiency inverter air conditioners and Variable Speed Drive (VSD) controls for chilled water pumps are installed, along with a Building Energy Management system. Solar panels are installed on the rooftop of the Navamindrachiraj Building, generating 1.06% of the energy as renewable energy. Additionally, NIDA supports the use of electric vehicles (EVs), promoting zero-emission technology to reduce pollution. EV charging stations on campus further enhance convenience and affordability for EV drivers.



The institute also organizes informative seminars, such as a discussion on "Electric Vehicles: A Real Solution to Climate Change in the Transportation Sector?" conducted by doctoral students from the 20th batch of the Environmental Development Administration Program.



TEACHING & LEARNING

Training visionary leaders in environmental & clean technology

NIDA's core mission in education is reflected in the Environmental Development Administration Program, which offers unique curricula to train visionary and skilled environmental managers to analyze, research, formulate policies, and plan to address environmental crises at all levels. These curricula are grounded in international knowledge and guided by the late King's philosophy for sustainable development. For example, the Master of Science in Environmental Management offers courses on Clean Technology and Energy Management, covering principles of clean technology, waste generation assessment, mass and energy balances, pollution estimation, clean technology alternatives, implementation, performance evaluation, lifecycle assessment, eco-design, economic mechanisms, environmental labeling, and policy tools to promote resource efficiency. These courses also highlight the roles of relevant sectors in promoting clean technology and outline strategies, policies, and energy management plans at both domestic and international levels.

Moreover, graduate students specializing in Clean Technology and Energy Management are given the opportunity to participate in field studies at IRPC Clean Power Co., Ltd., and IRPC Public Company Limited, focusing on energy, co-generation power plants, and solar floating projects

