

SDG REPORT

Rajamangala University of Technology
Phra Nakhon 2023



AFFORDABLE AND
CLEAN ENERGY

- RMUTP Wins Asia Energy-Saving Innovation Award
- RMUTP and 5 Partners Develop Battery Management System for Electric Tricycles



AFFORDABLE AND CLEAN ENERGY

7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



RMUTP Wins Energy-Saving Innovation Award at the Asian Level

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Rajamangala University of Technology Phra Nakhon (RMUTP) students participated in the “Asian Energy-Saving Innovation” competition at the Shell Eco Marathon 2023.

10 REDUCED INEQUALITIES



11 SUSTAINABLE CONSUMPTION AND PRODUCTION



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION

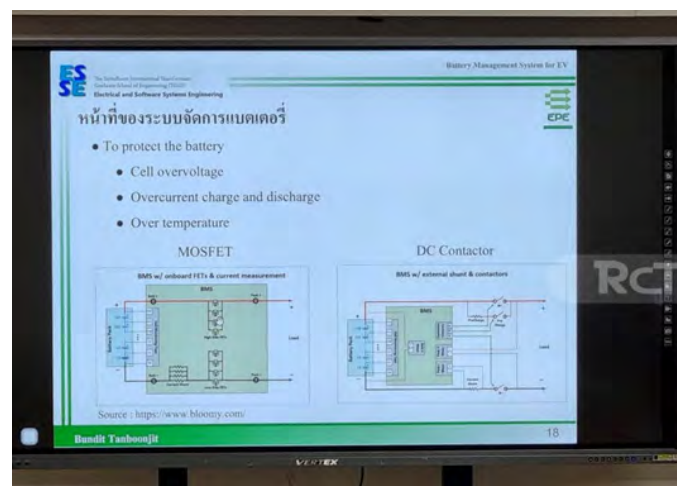


The RMUTP Racing team, comprised of students from RMUTP, secured 4th place in the “Prototype Internal Combustion Engine (ICE) using ethanol fuel” category at the Shell Eco Marathon 2023. They achieved a fuel efficiency record of 877 km/l at the Pertamina Mandariga International Street Circuit in Indonesia. This event was organized by Shell Company.

The RMUTP Racing team consists of third-year mechanical engineering students from Faculty of Industrial Education, including Ms.Piyachat Phongphaew, Mr. Saharat Nuchthim, Mr.Pornpipat Srithaweekart, and Mr.Chokthawee Suwanprom. The team was supervised by Asst. Prof. Dr.Rungarun Pornjareun, Dean of Faculty of Industrial Education, with Acting Sub-Lieutenant Nattakit Ritthong, a lecturer in the Department of Mechanical Engineering, Faculty of Industrial Education, served as the team leader, while Police Captain Wutthichai Moachai, an Aeronautical Engineer (Level 1) from the Police Aviation Division, acted as the team advisor.

Asst. Prof. Dr.Rungarun Pornjareun, Dean of Faculty of Industrial Education, said that this year’s Shell Eco Marathon 2023 saw more than 80 teams from 13 Asian countries. RMUTP Racing is the former champion of 2019. All of the students showed great dedication and spirit. We all learned a lot from this competition, and we believe that these experiences can be applied to benefit themselves and others. The team has set its sights on future competitions, aiming to further develop and compete again in 2024.

RMUTP Collaborates with 5 Organizations to Develop a Prototype Battery Management System for Electric Tricycles, Hoping to Serve as a Future Model for Electric Vehicle Battery Management Systems



CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY



Amid the challenges of pollution and air quality problems caused by PM 2.5, Thailand has established a roadmap to reduce greenhouse gas emissions as part of the United Nations Framework Convention on Climate Change (UNFCCC). The goal is to achieve net-zero emissions by 2065. To support this, the government has outlined a strategy to increase electric vehicle (EV) production to 30% of total car production by 2030. However, the push for electric vehicles in Thailand has faced slow adoption due to high prices and concerns over maintenance, especially regarding batteries, which are the core component of EVs.

In response to these issues, five organizations have come together to research and develop a prototype Battery Management System (BMS) for lithium-ion batteries to promote an environmentally friendly industry. The five organizations include:

- Lecturer Ms.Kamonmit Phusorn, a faculty member in the Department of Electrical Engineering, Dean of Faculty of Industrial Education, RMUTP,
- Mr.Bundit Tanboonjit, a researcher at Sirindhorn International Thai-German Graduate School of Engineering (TGGS),
- Asst. Prof. Narong Narong Thammaphuti, a faculty member of the Department of Electrical Engineering Technology, College of Industrial Technology, King Mongkut's University of Technology North Bangkok,
- Asst. Prof. Dr.Sumet Lippirojanpong, a faculty member of the Department of Electrical Technology, Faculty of Science and Technology, Muban Chombueng Rajabhat University, and PTS Combination Co., Ltd. (a joint venture).

The research is supported by the National Research Council of Thailand (NRCT) under a project aimed at enhancing the country's competitiveness through the development of future transportation systems and robotics and automation industries.



6 CLEAN WATER AND SANITATION

NEXT WORK AND ECONOMIC GROWTH

EFFECTIVE INNOVATION AND RESEARCH

ENHANCED QUALITIES

SUSTAINABLE CITY COMMUNITIES

RESILIENT INFRASTRUCTURE

CIRCULAR ECONOMY

CLIMATE ACTION

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