



RENEWABLE ENERGY AND WASTE MANAGEMENT INNOVATION FOR FUTURE YIELD (RENEWIFY)



|Bioenergy & Biomass Conversion | | Green Hydrogen | Waste-to-Energy | | e-Mobility | Net-Zero Technologies |

ABOUT Renewify

Renewify is a multidisciplinary research group advancing renewable and sustainable energy technologies. Our mission is to tackle global energy and environmental challenges through innovations in bioenergy, green hydrogen, waste-to-energy systems, and electric mobility. Aligned with Malaysia's National Energy Transition Roadmap and global decarbonization goals, we collaborate across academia and industry to deliver impactful, scalable solutions for a sustainable future.

OBJECTIVE

- Advance Clean Energy Technologies
- · Promote Waste-to-
- **Energy Systems** Enable e-Mobility
- Integration
- Enhance Modellings & System Optimization
- Support Decarbonization & Net-Zero Goals

EXPERTISE

Renewify is the expert in the renewable energy conversion for sustainability that encompass:

- · Advanced biomass
- thermochemical conversion Green hydrogen production
- · Waste-to-energy systems and
- biofuel generation
- Electric mobility systems and inhouse dynamometer design
- · AI-enhanced energy system modeling and simulation
- Lifecycle analysis and sustainability impact evaluation

RESEARCH CONTRIBUTIONS & IMPACT



COLLABORATION:





Tech and Dongguan Tailing EV Co

NATIONAL INITIATIVES Air-cooled dynamometer electric two-wheelers

PRODUCT INNOVATION & COMMERCIALIZATION

- Quran Combustion System
- Biomass Pellet System Prototypes
- Dynamometer System for EV Testing
- Slaughter Restraining Machine for Cattle (SRMC)

FUTURE RESEARCH DIRECTION

Renewify is advancing integrated hybrid microgrids and scaling acoustic hydrogen production for industrial use. The team promotes circular hydrogen using biomass strengthens global collaboration through ERASMUS+ and MoUs with partners in Turkiye, China, and Malaysia, focusing on solar and hydrogen systems.





Product Commercialization - Quran Combustion System (Mesin Pelupusan Quran)



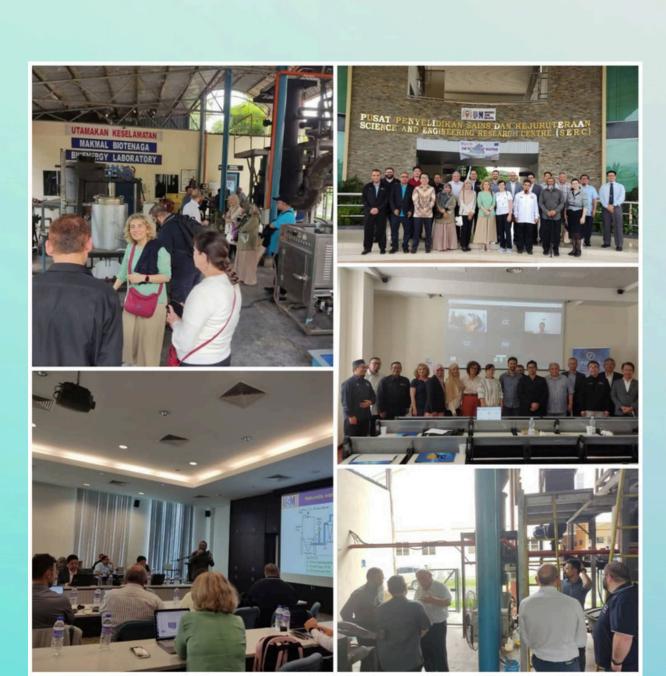
Product Commercialization - Slaughter Restraining Machine for Cattle (SRMC)



Research Project Collaboration with Industry (Kawan Engineering Sdn Bhd) on 200Kg/hr Biomass Power Plant & Flameless Combustion



RUTrans Grant Project on Treatment of POME via ERS and Thermal Analysis of POME pellets via Carbonization & Gasification Processes -Collaboration with School of Industrial Technology and School of Social Science, USM



International Grant Project (ERASMUS) on Enhancement of Renewable & Sustainable Energy Module in Teaching & Research -Collaboration with Univ. of eCampus Telematica Italy, Northumbria Univ. UK, Cukurova Univ. Turkiye, Chiang Mai & Naresuan Univ. Thailand, Beijing Technology Univ & Lanzhou Univ. China and UPM Malaysia.