



7 AFFORDABLE AND CLEAN ENERGY

333.905 kwh

Total renewable energy made

55,163 GJ

Total energy used

373,577

University Floor Space

Stewardship

MASTER PLAN

KEY PLAN



ITS Builds REIDI Project, the Largest Living Laboratory in Indonesia

By initiating the Renewable Energy Integration Demonstrator of Indonesia (REIDI), ITS is actively advancing SDG 7, which promotes access to affordable, reliable, sustainable, and modern energy. ITS provides the land and leads the development of this 1.5-hectare living lab, integrating solar panels, agrovoltatics, biomass, hydrogen fuel cells, and smart grid systems. This initiative not only powers campus operations with renewable sources but also serves as a training and research hub for industry and academia. Through REIDI, ITS demonstrates environmental stewardship by fostering innovation, education, and infrastructure that support Indonesia's transition to clean energy.

Teaching



Advancing Marine Energy Guidelines

ITS demonstrates its academic stewardship by hosting an external Focus Group Discussion (FGD) in collaboration with PT PLN (Persero), aimed at shaping national guidelines for marine energy development. This initiative targets the academic community and energy stakeholders, fostering interdisciplinary dialogue and policy alignment. By involving experts from universities, government agencies, and industry, ITS positions itself as a catalyst for sustainable energy innovation and knowledge integration. The FGD supports ITS' commitment to environmental responsibility and capacity-building, ensuring that academic insights contribute meaningfully to Indonesia's renewable energy roadmap.

Outreach



Empowering Fishermen with Renewables

To enhance community welfare, ITS initiated an outreach program for coastal fishing communities in Pangkah Wetan Village, Gresik, deploying solar-powered ice flake machines for post-harvest fish preservation and economic resilience. This effort, part of ITS' commitment to sustainable development, involves collaboration with the Gresik government and Kemendikbudristek. The partnership transfers technological innovation and fosters inclusive development by directly engaging and benefiting local fishermen.

ITS KKN Abmas 2024: FT-EIC Brings Agricultural Tech to Villages

ITS KKN Abmas agricultural technology initiative emphasized active community engagement and education to ensure long-term impact. In both Jambuwer and Ngronggot villages, the student team conducted socialization sessions to introduce the solar-powered coffee bean sorter and automatic pest repellent devices, explaining their functions and benefits in accessible terms. These sessions also promoted awareness of renewable energy, particularly solar power, as a viable solution for rural farming challenges. The team collaborated closely with residents throughout the process—from site surveys to installation—fostering trust and ownership. This hands-on approach empowered farmers to adopt and maintain the technologies independently, reinforcing the program's commitment to sustainable development through inclusive outreach.

Research



ITS students developed eco-friendly biobriquettes from cow dung to support clean energy and waste reduction

The core innovation of the ITS KKN Abmas initiative lies in its development of biobriquettes made from cow dung and biogas residue, offering a sustainable energy alternative for local industries. By integrating waste from tempe chip production and cattle farming, the team engineered a low-cost, high-efficiency fuel source that emits minimal smoke and delivers prolonged heat output. The process involves drying, carbonizing, and grinding cow dung into fine powder, then binding it with tapioca flour and water to form compact briquettes. This inventive approach not only addresses waste management challenges but also supports Indonesia's clean energy goals by empowering communities with practical, eco-friendly technology.

ITS Officially Launches EVITS, a High-Quality Flagship Electric Motorcycle

ITS has officially launched EVITS, a high-quality electric motorcycle developed to meet national standards. This innovative vehicle features a lithium battery, smart dashboard, and regenerative braking system, showcasing ITS' engineering excellence. By promoting electric mobility, ITS contributes to reducing carbon emissions and advancing sustainable transportation. Through EVITS, ITS reinforces its commitment to SDG 7 by supporting clean energy solutions in the automotive sector.