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**7 AFFORDABLE AND
CLEAN ENERGY**

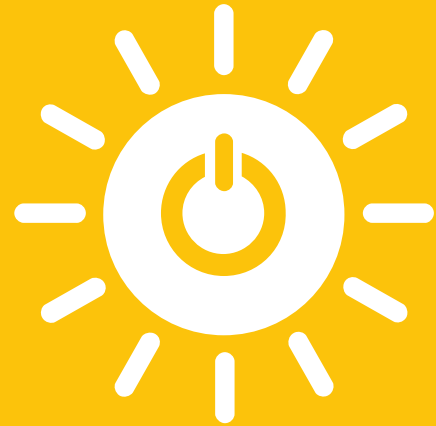


**R
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“After water and food, energy is one of the key enablers of human life. Energy is central to nearly every major challenge and opportunity the world faces today and access to energy for all is essential. But energy needs to be available and affordable to all to allow future development, and it needs to be clean in order to ensure that the development can be sustainable.”

-THE Impact Rankings

7 AFFORDABLE AND CLEAN ENERGY

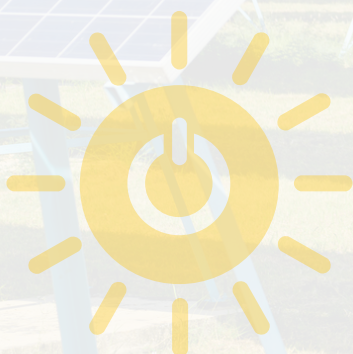


Number of	
Total energy used (GJ)	20,148
University floor space (m ²)	505,885

“
14.1
 Impact Factor

RESEARCH IN NUMBERS (2024)

97
 publications



Universitas Sebelas Maret (UNS) is committed to disseminating and implementing the values of SDGs 1-17 through a wide range of education, research, and community engagement programs. One example of this commitment is the dissemination of this research on

SDG 7

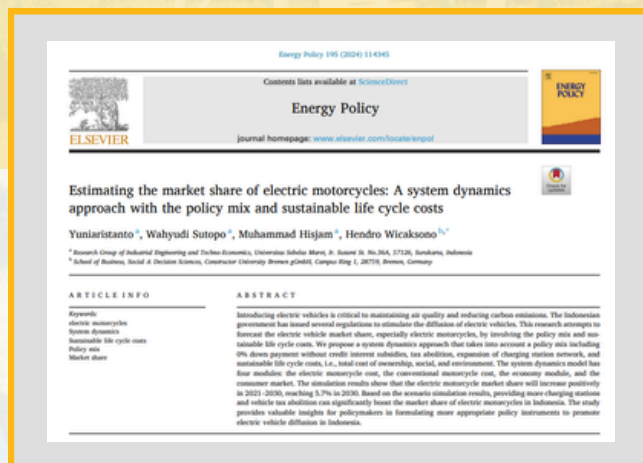


ESTIMATING THE MARKET SHARE OF ELECTRIC MOTORCYCLES: A SYSTEM DYNAMICS APPROACH WITH THE POLICY MIX AND SUSTAINABLE LIFE CYCLE COSTS



RESEARCH ARTICLE

The study applies a **system-dynamics model** to forecast **electric motorcycle adoption** in Indonesia by 2030, integrating policy measures with sustainable life-cycle costs. The simulation projects an **electric motorcycle market share of about 5.7% by 2030**, if supported by policies like tax abolition and expanded charging infrastructure.



7 AFFORDABLE AND CLEAN ENERGY



ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

1 Renewable Energy Usage in Universitas Sebelas Maret

Educational institutions are instrumental in accelerating the transition to renewable energy that prioritizes the **health of the planet** and ensures a more **resilient energy system** for generations to come. In acknowledgment of that, Universitas Sebelas Maret is committed to showcasing the future of renewable energy usage.

UNS's commitment to sustainable energy extends to **renewable power generation**. Solar panels installed throughout the campus and UNS Hospital converts sunlight into electricity for street lighting, parks, and backup reserves, **reducing dependence on fossil fuels and providing a cleaner, more affordable energy supply**. Alongside solar energy, UNS produces and utilizes biodiesel as a renewable fuel source for generators and other energy needs.



9.308 GJ
Total energy used from low-carbon sources (GJ)

2 Empowering Rural Communities Through Sustainable Energy Education and Participation



Students from Universitas Sebelas Maret introduced sustainable energy concepts to elementary students and residents of Kepyar, Wonogiri, through **interactive sessions on renewable energy sources and simple energy-saving technologies**. The program aimed to **build environmental awareness and encourage the adoption of clean energy practices at the community level**.

They also conducted participatory workshops to explore practical solutions such as solar panels, biogas systems, and energy-efficient tools. By **involving local residents in planning and discussion, the initiative sought to empower the community to develop feasible, sustainable energy strategies for long-term environmental and economic benefits**.