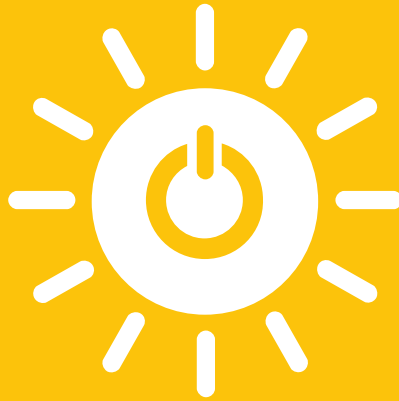




SUSTAINABILITY REPORT

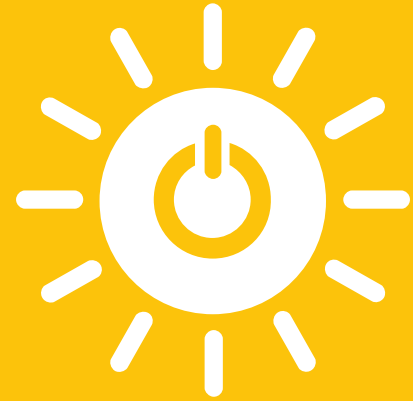
7 AFFORDABLE AND CLEAN ENERGY



“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



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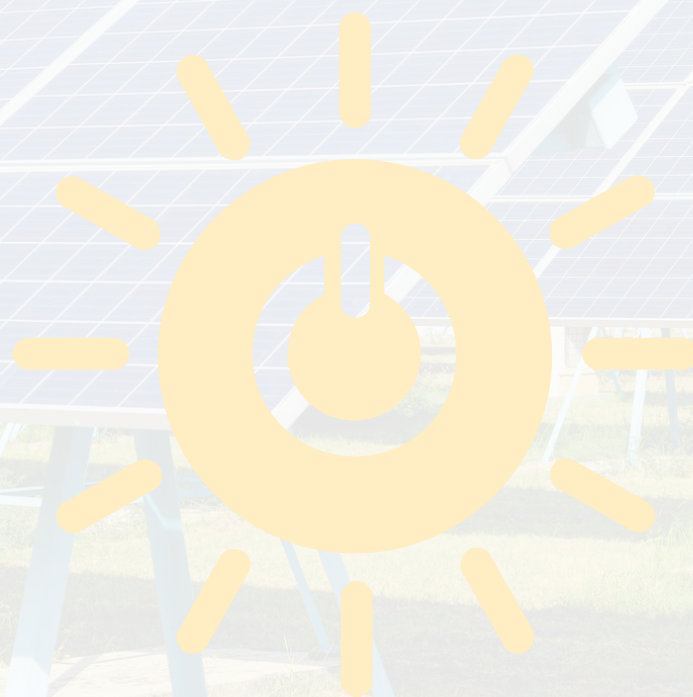
2.17

Citation Impact

RESEARCH IN NUMBERS (2016-2023)

908

publication



7 AFFORDABLE AND CLEAN ENERGY




1 Sign of Progress of Renewable Energy

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.

Renewable energy in Universitas Sebelas Maret is generated through **Solar Panels** located in six faculties and five institutions and **Biodiesel** located in five faculties. Renewable energy sources were used as lighting and various activities that require energy.



2.802,44 GJ
total energy produced



2 Fuel-Efficient and Environmentally Friendly Vehicle

The **Bengawan Team** achieved outstanding results in two different categories in **Kontes Mobil Hemat Energi (KMHE) 2023** held by Ministry of Education, Culture, Research and Technology at the Jakarta International E-Prix Circuit (JIEC) Ancol, from 28 October to 3 November 2023.

As a result, the team successfully winning **1st place** in the Urban Category for Internal Combustion Engine Diesel Class with Nirakara car and **2nd place** in the Prototype Category for Internal Combustion Engine Gasoline Class with Wirasena car.

Nirakara
766.92 km/L

Wirasena
222.21 km/L



7 AFFORDABLE AND CLEAN ENERGY




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



3 Creating High-Efficient Building with the Right Upgrades

Energy efficiency is the use of less energy to perform the same task or produce the same result. Universitas Sebelas Maret is undertaking important initiatives to reduce energy consumption and support environmental sustainability as part of its long-term commitment. This is done through replacing existing building technology with **more energy efficient technology**, thereby allowing for more efficient **reductions in energy expenditure**. Implementing green building is one effort to increase energy efficiency in buildings.

Several elements have been implemented at Universitas Sebelas Maret, such as **natural ventilation** and **lighting**, use of **energy-saving systems**, **building management systems**, and analysis of environmentally friendly building components based on **Ecotec software**.

