

BatStateU upscales biodiesel technology to support University's low-carbon pledge

Batangas State University (BatStateU) is upscaling its biodiesel technology to support its commitment to carbon neutrality. The university has developed a transesterification biodiesel reactor that uses waste cooking oil (WCO) as feedstock. The reactor was developed in 2020 and has been shown to be economically feasible and to produce lower emissions than conventional petroleum fuel.

In a recent emission test, the reactor was found to reduce emissions of nitrogen oxides (NOx). All the properties except for FAME content of the pure biodiesel produced conformed with the Philippine National Standards (PNS) for Coco Methyl Ester for pure biodiesel. All properties of blended biodiesel conformed with PNS. The result also shows that a very small amount of Carbon monoxide was produced and can be an effective additive to commercially available diesel fuels.



BatStateU is now upscaling the reactor to produce enough biodiesel to meet the community's needs, as well as to sell to other businesses and organizations in the community. The university is also working to develop a training program to teach other communities how to build and operate their own biodiesel reactors.

The upscaling of the biodiesel technology is part of BatStateU's efforts to achieve the United Nations Sustainable Development Goals (SDGs). The SDGs are a set of 17 goals that were adopted by all United Nations Member States in 2015. The goals aim to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity.

BatStateU's biodiesel technology is a valuable tool in the fight against climate change. By reducing emissions, the technology can help to improve air quality and protect human health. The technology can also help to reduce the university's reliance on fossil fuels, which are a major source of greenhouse gas emissions.

The upscaling of the biodiesel technology is a significant step forward in BatStateU's efforts to achieve its carbon neutrality goals. The technology is also a valuable example of how universities can play a leading role in the fight against climate change.