

STARTUPS IN BIOFUELS



INTRODUCTION:

- Start-ups in biofuels are emerging players in renewable energy.
- They develop sustainable processes to produce alternative fuels from organic materials, aiming to replace fossil fuels and reduce emissions.
- These start-ups face challenges but play a vital role in promoting renewable energy and reducing the carbon footprint of transportation.



BIOFUELS APPLICATIONS:

- Transportation: Used as fuels for vehicles.
- Power Generation: Generate heat and electricity.
- Heating and Cooking: Provide heat and fuel for cooking.
- Aviation: Used as an alternative to jet fuel.
- Industrial Processes: Used as solvents or raw materials.



COOKING OIL RECYCLING PLAN TO HELP ENVIRONMENT IN NORTHWEST TÜRKIYE

Yalova Municipality in Turkey has launched a campaign to collect used cooking oil, aiming to prevent its disposal in sinks. As part of the campaign, citizens can exchange 5 liters of used oil for 1 liter of new sunflower oil. The initiative aims to promote environmental protection and recycling. Various designated delivery points have been established for participation to protect the environment and the economy. citizens to bring their discarded oil.

The municipality emphasizes that 1 liter of waste oil can pollute 1 million liters of water. The campaign has received support from local officials and encourages public participation to protect the environment and the economy.



FROM THE FRYER TO THE FUEL TANK, WHEN USED RESTAURANT OIL BECOMES FUEL

The recycling of used cooking oils lowers fossil fuel usage in transportation and minimizes greenhouse gas emissions. Converting one liter of oil into biofuel results in a 92% reduction of CO2 emissions compared to diesel fuel.

This practice aligns with the European Commission's goal of achieving 10% renewable energy consumption in the transport sector by 2020.

THIS STRONGER PAPER BAG CAN BE REUSED REPEATEDLY, THEN RECYCLED FOR BIOFUEL

Researchers at Penn State University have developed a process to make paper bags stronger, especially when wet. By torrefying the cellulose in the paper, its wet-tensile strength increased significantly.

The study suggests that these durable paper bags could be used multiple times and then chemically broken down for biofuel production. While further development is needed, this innovation could reduce waste and offer a more sustainable alternative to single-use plastic bags.



NREL LAUNCHES SYNTHETIC BIOLOGY PROJECT TO ADVANCE BIOFUEL DISCOVERY TECHNOLOGIES WITH LANZATECH, NORTHWESTERN, AND YALE

NREL, LanzaTech, Northwestern University, and Yale University are partnering for a project on carbon-negative biofuel and biochemical production. By harnessing microorganisms that consume carbon oxides, they aim to create fuels and chemicals. Scaling production is a challenge, but with abundant carbon resources, the economic impact could be significant. The collaboration seeks to transform the industry and reduce emissions.



HOW THIS STARTUP IS TURNING DISCARDED PLASTICS INTO BIOFUEL FOR INDUSTRIES

Pyrolysis converts plastic into biofuel by breaking down plastic molecules without oxygen.

The process involves high temperature burning of plastic mixed with chemicals.

Emissions are condensed into liquid biofuel, while methane gas is utilized in the burning process.

Biofuel from pyrolysis can replace kerosene and diesel and has industrial and vehicle applications.

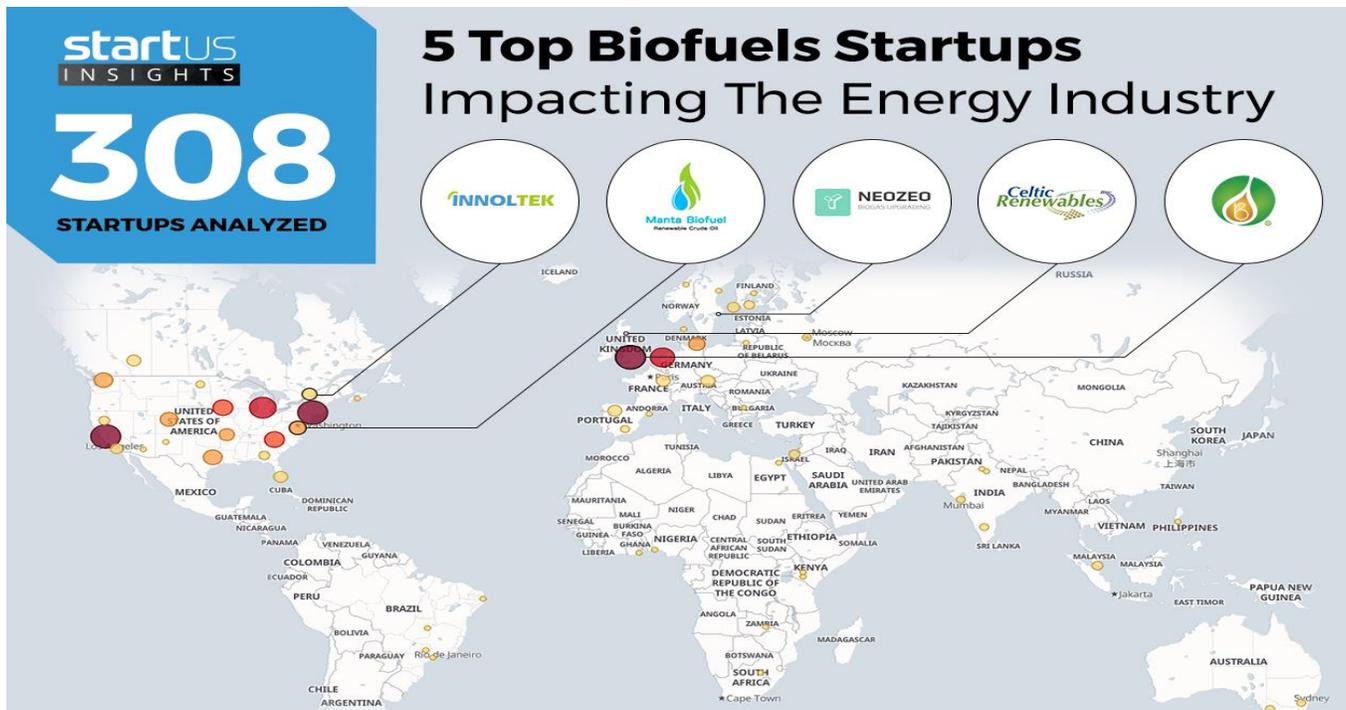


NEW FOOD RECYCLING TECHNIQUES COULD LEAD TO 'ZERO WASTE'



Food waste, including used frying oil and coffee grounds, is being recycled for renewable energy. Gecco recycling company converts used cooking oil into biofuel, while Les Alchimistes collects food waste from restaurants and creates compost for farmers. These initiatives contribute to a circular economy and the goal of achieving zero waste.





- **5 Biofuels startups impacting the Energy Industry:**
 - **Innoltek** - Biodiesel
 - **Manta Biofuel** - Algae Biofuel
 - **NeoZeo** - Biogas To Biomethane
 - **Celtic Renewables** - Biobutanol
 - **Biofuel Evolution** - Bioethanol

More NEWS

- [Sea6 Energy: An ocean farming startup that wants to replace fossil fuel with biofuels](#)
- [Buyofuel raises 11.5 crore in Pre-Series A round led by Inflection Point Ventures](#)
- [THIS COIMBATORE-BASED BIOFUEL STARTUP WANTS TO BUILD A ONE-STOP PLATFORM FOR A FRAGMENTED SPACE](#)
- [Renewable biofuel startup company produces renewable diesel, jet fuel with UW-Oshkosh](#)
- [Repos Energy raises fund from Ratan Tata, to bring biofuels on its network](#)
- [THIS WOMAN ENTREPRENEUR'S STARTUP COLLECTS USED COOKING OIL TO CONVERT INTO BIODIESEL](#)
- [BiofuelCircle wins NTPC startup challenge for Biomass Digital Marketplace](#)
- [Is Carbon Capture The New Biofuels?](#)
- [Biofuel Marketplace Buyofuel Raises Over Rs 1.6 Cr In Seed Round](#)