Indian Biogas Association

Fertilizing Energy

COVERAGE REPORT FOR THE MONTH OF AUGUST 2024

FIFTH ARCHER

BUILDING BRAND STORIES

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THE ECONOMIC TIMES

Trucks running on kitchen oil: Is India's ambitious biodiesel plan yielding results?

The government's plan to mix used cooking oil with diesel to create a **biofuel** that reduces emission is promising. But three years after the first supply of this **biodiesel** hit the market, experts say there is a need for increased coordination from the government, industry, and the civil society to make it a success.

India's used cooking oil (UCO)-based biodiesel sector remains in its initial stages, say industry experts, necessitating significant efforts at multiple levels to ensure **UCO** is collected in adequate quantities for diesel **blending**. They point out that similar policies in the EU, the US and China show the UCO-based biodiesel sector has significant growth potential.

"While the UCO-based biodiesel may not yet be as cost-competitive as diesel, its lower carbon intensity and environmental benefits make it a promising alternative," says Gaurav Kedia, Chairman, Indian Biogas Association (IBA). "Only with continued government support and infrastructure development can UCO-based biodiesel become a significant and cost-effective part of India's renewable energy strategy."

To make the country a net zero emitter by 2070, the Modi government has rolled out policies that encourage development and the use of cleaner energy sources. Using biofuels is a part of the plan. The government has started blending **ethanol** with petrol to create a less polluting fuel and also to reduce petroleum imports. The government has set a target of blending 20% ethanol with petrol by the 2025-2026 supply year (ESY). In June 2022, the government reached the 10% blending target five months ahead of schedule. In June 2024, the country achieved a 15.9% blending rate.

Deciphering Sustainability: Biogas Offers Holistic Solution to Global Biodegradable Waste Challenge

By Abhijeet Mukherjee, Director, Indian Biogas Association - August 31, 2024

In an era where environmental sustainability is paramount, the management of biodegradable waste presents a critical challenge. The conventional approach of landfilling not only contributes to greenhouse gas emissions but also fails to harness the potential energy contained within organic waste. It is estimated that, globally, 30-70 million tonnes of methane is emitted from landfills each year. In India, the waste sector accounts for about 20% of methane emissions. However, amidst this challenge lies a promising solution – biogas production. Biogas, a renewable energy source produced through the anaerobic digestion of organic matter, not only addresses waste management concerns but also offers a sustainable energy alternative.

The exponential growth in population and urbanization has led to a surge in biodegradable waste generation worldwide. Global municipal solid waste generation is expected to reach 3.4 billion tonnes by 2050, with a significant portion being organic in nature. Improper disposal of biodegradable waste not only leads to environmental pollution but also poses health risks and exacerbates climate change through methane emissions from landfills.

Biogas production presents a holistic solution to the challenges posed by biodegradable waste in the following ways:

Environmental Benefits

Biogas production significantly contributes to environmental sustainability by addressing key challenges of organic waste management. By capturing methane emissions from organic waste through anaerobic digestion, biogas production effectively reduces greenhouse gas emissions, thereby mitigating climate change. This process prevents the release of methane, a potent greenhouse gas, into the atmosphere and utilizes it as a valuable energy source. Additionally, digestate, a by-product of biogas production, as a nutrient-rich fertilizer promotes soil health and reduces the need for synthetic fertilizers, further enhancing environmental sustainability and fostering a circular economy approach.

ET INSIGHTS

Biomass: Nature's solar battery!

Auto & Transportation / By Gaurav Kedia / August 8, 2024

Representational Image

Biomass is nothing but a nature's battery, a remarkable way the sun's energy is captured and stored in organic materials. This energy storage mechanism is not dissimilar to how batteries in electric vehicles (EVs) store electrical energy, ready to be used when needed

Biomass is any organic material derived from plants and animals. Through photosynthesis, plants convert sunlight into chemical energy, storing it e.g., in the form of carbohydrates. This stored energy can later be released through various processes such as combustion, fermentation, or digestion to produce heat, electricity, or biofuels.

The global biomass energy potential is substantial. According to the International Energy Agency (IEA), bioenergy accounts for roughly one-tenth of world total primary energy supply today. The potential for biomass energy production is even higher, with estimates suggesting that sustainable biomass could provide between 50 and 150 EJ per year by 2050, representing a significant share of the global energy mix. IEA further emphasises that nearly two-thirds of biofuel demand growth will occur in emerging economies, primarily India, Brazil, and Indonesia.

While biomass stores solar energy chemically, electric vehicle (EV) batteries store electrical energy. It is interesting to look how both of them serve as energy storage solutions but operate through different mechanisms and have distinct applications.