

Bioenergy potential from urban waste and effluents in Brazil: a valuable source to replace the fossil fuel and improve environmental and healthy conditions

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Abstract

Over the past 5 years the biogas industry in Brazil is shifting from a low-technology to a high-tech sector. With this, many new projects to produce large amount of biogas to energy – especially in the agribusiness sector -, have been implemented. Brazil can produce 44.1 billion Nm³/year of biogas, which means a potential to generate 170,912 GWh of electricity per year or replace 40.8 billion liters of diesel. The highest potential is from the sugarcane sector, while sanitation represents only 0.05% of the total potential. However, poor waste management, especially in urban centers, causes a severe impact on human health and the environment. The COVID-19 pandemic highlighted the scenario of precarious sanitation in the country since many homes do not have access to basic hygiene, and lower-income neighborhoods have shown higher mortality rates. The major organic waste and effluents produced in the urban centers - food waste, sanitary sewage and pruning – are valuable tools to improve the environmental and healthy conditions of these areas. Recent programs are being implemented to stimulate biofuels (RenovaBio Program), to attract investments to the gas sector (New Market Gas), and to encourage the diversification and efficiency in the electrical sector (Reform of the Electricity Sector), and this is expected to impact on advances to a solid grown of biogas into the Brazilian energy matrix..

Biography:

Camila is a Brazilian specialist in biogas production, end-use and regulation. Over the past 12 years has worked on the development of semi-industrial biogas systems, especially for bioelectricity production, lab-scale methodologies for determining biogas and biomethane potential, and final energy uses of biogas. Camila was executive manager of the Brazilian Association of Biogas and Biomethane (ABiogás) for 4 years, where she assisted private companies and public institutions in the implementation and improvement of standards and public policies for the sector.

Publications:

1. Evaluation of antihistaminic activity of piper betel leaf in guinea pig.
2. Indian Women, Trauma and Hydroxyl Drugs Dependency: Connections and Disconnections in Heart Disease for Women
3. An Attempt to Eradicate Alcohol Dependency from Adult Men in Service Privately Managed Pharmaceutical in India.

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