



Academic

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“TEN YEARS WORKING TOGETHER FOR A SUSTAINABLE FUTURE”

The perspectives of biomethane to contribute to increase the NG supply

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Abstract

The Bioenergy Research Group of the Institute of Energy and Environment at the University of São Paulo (GBIO / IEE / USP) is developing the "Project 27 - The biomethane contribution prospects to increase the supply of natural gas in São Paulo" - within the Research Center for Innovation in Natural Gas (RCGI). This is a center of advanced studies on sustainable use of gas, created at USP with funding from FAPESP / Shell / BG. This Project 27 will map the production of biogas and biomethane from vinasse, animal residues (livestock waste and residues from slaughterhouses) and urban residues (solid wastes and liquid effluents). It is important to mention that, besides the use of biogas for energy production, there is another option. After the upgrading process of biogas (CO₂ and impurities removal), biomethane can be used as a primary source of energy to be fed into NG pipelines and be distributed to different consumers, as well as in the form of CNG when necessary. Also, in the case of biomethane from vinasse, it can be used to fuel the sugar mills' diesel fleet (trucks and agricultural equipment). During the development of Project 27, financial, technical, environmental and social aspects of production and use of biomethane will be analyzed. These aspects will be addressed as important points to encourage the biomethane market in São Paulo, such as the need to consider the fundamental synergy between biogas for energy generation and basic sanitation. In view of the above, this article aims to present Project 27, as well as the preliminary results obtained so far.

Keywords: *biogas, biomethane, urban waste, agro-industrial waste, energy potential.*