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Financial sustainability of biogas technology: Barriers, opportunities, and solutions

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ABSTRACT

Biogas technology, which converts biological waste into energy, is considered as an excellent tool to improve the lives, livelihoods, health, and ecosystem. The demand and prospect of biogas technology as a renewable energy source in terms of market value have not been adequately addressed, although it offers a large revenue opportunity that supports the socioeconomic development in rural areas. For more sustainable development of this technology, policy-makers should reform the existing institutional framework by reorganizing subsidies, motivating and attracting investors with flexible financial conditions, liberalizing the management of gas grids, and involving farmers in local projects. Therefore, it is a great challenge to find a proper mode of marketing policy, business models, and multi-profit options and a sustainable financing mechanism. This paper covers the state-of-the-art enlargements and future consequences of the hastily emerging biogas market, starting with a universal viewpoint and going through special market characteristics of Europe, USA, Africa, and Asia Pacific.

KEYWORDS

Biogas market barriers and solutions; biogas market opportunities; biogas technology; economic viability