

ABSTRACT

Processing waste into energy is one of the solutions used to solve the problem of waste in the world. However, in practice, processing waste into energy in Indonesia encounters many obstacles, ranging from technological options, financing and funding of the project, up to the financial feasibility aspect of the project. This research was conducted to try to answer what technology options are suitable for use in Indonesia, what kind of financing and funding schemes are available for the project, and how the financial feasibility of a waste-to-energy project after the above support is included. This research will combine quantitative and qualitative methods to gain a comprehensive understanding of the issues raised. Finding of this research shows that the technology options those are most likely to be applied in Indonesia are Moving Grate Incinerator (MGI) technology with electricity as the main output and Mechanical Biological Treatment (MBT) with refuse derived fuel as the main output. Financing sources with low cost of financing those are most likely to be applied are Green Sukuk, Viability Gap Funding, Green Climate Fund, Indonesia Environmental Fund, Sustainable Development Goal (SDG) Indonesia One, and Private Financing. Sources of funding are most likely to be applied are sales of waste to energy products, tipping fees, and subsidies from central governments in the form of the allocation of Non-physical Special Allocation Funds. Financial feasibility analysis shows that both MGI and MBT technology has a positive financial feasibility after the inclusion of elements of available financing and funding sources.

Keywords: Waste-to-Energy, Financing Scheme, Funding Scheme, MGI, MBT, Financial Feasibility

ABSTRAK

Pengolahan sampah menjadi energi merupakan salah satu solusi yang digunakan untuk mengatasi permasalahan sampah di dunia. Namun dalam praktiknya, pengolahan sampah menjadi energi di Indonesia menemui banyak kendala, mulai dari opsi teknologi, pembiayaan dan pendanaan proyek, hingga aspek kelayakan finansial proyek. Penelitian ini dilakukan untuk mencoba menjawab opsi teknologi apa yang cocok digunakan di Indonesia, skema pembiayaan dan pendanaan seperti apa yang tersedia untuk proyek tersebut, dan bagaimana kelayakan finansial proyek sampah menjadi energi setelah dukungan di atas disertakan. Penelitian ini akan menggabungkan metode kuantitatif dan kualitatif untuk mendapatkan pemahaman yang komprehensif tentang masalah yang diangkat. Hasil penelitian menunjukkan bahwa pilihan teknologi yang paling mungkin diterapkan di Indonesia adalah teknologi Moving Grate Incinerator (MGI) dengan output utama listrik dan Mechanical Biological Treatment (MBT) dengan output utama bahan bakar jampukan padat. Sumber pembiayaan dengan biaya rendah pembiayaan yang paling mungkin diterapkan adalah Green Sukuk, Viability Gap Funding, Green Climate Fund, Indonesia Environmental Fund, Sustainable Development Goal (SDG) Indonesia One, dan Private Financing. Sumber pendanaan yang paling mungkin diterapkan adalah penjualan produk sampah menjadi energi, tipping fee, dan subsidi dari pemerintah pusat dalam bentuk alokasi Dana Alokasi Khusus Non fisik. Analisis kelayakan finansial menunjukkan bahwa baik teknologi MGI maupun MBT memiliki kelayakan finansial yang positif setelah dimasukkannya unsur-unsur pembiayaan dan sumber pendanaan yang tersedia.

Keywords: Waste-to-Energy, Financing Scheme, Funding Scheme, MGI, MBT, Financial Feasibility