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## Technical and Economic Analysis of Municipal Solid Waste Potential for Waste to Energy Plant (Case Study: Jatibarang Landfill Semarang, Central Java, Indonesia) (Conference Paper) [\(Open Access\)](#)

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### Abstract

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Municipal solid waste (MSW) is still a serious problem in Indonesia. As well as following up on the Indonesian Government's commitment to reduce carbon emissions, a Presidential decree Perpres Number 18 of 2016 concerning the Acceleration of the Development of Waste-Based Power Plants was made. It is expected that the construction of Waste-Based Power Plants from landfills can reduce the budget deficit in handling municipal waste while maintaining environmental preservation. This research calculates the potential of landfill gas that can be produced from the landfill waste dumps of Jatibarang, as well as the capacity of electrical energy that can be produced. Furthermore, with several types of plant scenarios used, it can be seen the economic feasibility of the construction of a Waste Based Power Plant in Jatibarang landfill. The landfill gas potential and economic feasibility for this study are calculated using the Intergovernmental Panel on Climate Change (IPCC) Inventory Software and LFG-CostWeb from LandGEM. The results showed that only from the electricity sale Standard Reciprocating Engine-Generator Set project may generate a break even in the 6 yr after the operation begins and value of the net present value is USD 755 664 for 15 yr project lifetime. © The Authors, published by EDP Sciences, 2020.

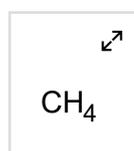
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