

Why converting municipal trash into energy isn't a complete waste of time

Although many would argue otherwise, the inevitable concept of centralized power plants is slowly dissipating. We're moving into an era where consumers of energy are also becoming producers of it, where communities and businesses are generating their own power. But, even though conversations around decentralized energy systems are happening more often, the Waste to Energy conversation is still on the sideline and hasn't become a familiar topic to many.

Producing energy from waste is a one of the best ways to reduce the amount of waste on landfill sites. Electricity produced from waste is environmentally friendly; it does not harm or damage the environment. When generating energy from waste, green house gasses and pollution are significantly reduced compared to when energy is generated from coal.

So, what are some of the benefits of turning waste into energy?

1. Reduction of waste going to landfills

Most of South Africa's waste is still going to dump sites and is not being recycled or converted into energy; this means that the country is losing many acres of land to these increasing landfills. Generating energy from waste means that the waste that would have otherwise gone to landfills is diverted to Energy from Waste facilities for conversion, therefore, saving land and reducing landfills.

2. Carbon emissions and greenhouse gasses are reduced

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Methane that is produced from decomposing waste is a toxic greenhouse gas. The production of energy from waste contributes significantly towards reducing carbon emissions and meeting renewable energy targets. They have good sustainability and greenhouse gas saving characteristics, as they make further use of materials that have already been discarded. Waste seen as source for energy saves the limited fossil fuel resources for the production of sustainable energy

3. Local production and use of energy

Having local/community Waste to Energy facilities minimizes the air pollution of travelling to regional landfills that are located far from the communities that are using them. Because much of the waste is generated locally, there is no need to produce and generate energy far out. Electricity for the community can be generated within the community.

4. Stabilizes power supply and energy prices

Using Municipal waste to produce electricity can stabilize the price of electricity as well as its availability. Because humans are continuously generating tons waste daily, shortages will be far and wide. These waste to energy facilities can operate around-the-clock daily to provide a sufficient amount of electricity that will meet the needs of a community.

South Africa is currently producing approximately 108 million tons of waste per year, 90 percent of which is going to the country's depleting landfill space. It is time to change the energy landscape of South African communities, but how do we achieve this?

The heart of virtually every Waste to Energy plant is a steam turbine generating electrical power out of the heat from the combustion of waste. An efficient and reliable steam turbine is the key to harnessing energy from waste and provides many benefits. With available technology, like the Siemens steam turbines we can start producing and delivering to our communities, energy that is clean and affordable in the most efficient way.

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