



MEDIA RELEASE

Landfill Gas: A Source of Renewable Energy

Immediate Release

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Landfill gas can be converted to useful energy, such as electricity, and is a renewable resource. Several regional Landfill Interest Groups (LIG)'s that fall under the auspices of the Institute of Waste Management of Southern Africa (IWMSA), enthusiastically support, educate, and encourage progress in the field of landfill management and extraction methodologies.

Methane is a colourless, odourless and non-toxic gas, but is flammable and explosive under certain conditions and is also a harmful greenhouse gas. It is generated under anaerobic (in the absence of oxygen) conditions, primarily within landfills and herds of grazing animals, such as cattle, sheep and pigs. Ultimately, we have to take responsibility for finding effective ways to manage and destroy the large volumes of methane being continuously emitted to the atmosphere, and what better way to do this than to convert it into clean energy, such as electricity.

As waste in landfills decomposes, different gases are continuously produced in varying proportions. Landfill gas comprises approximately 50% methane, 40% carbon dioxide, small quantities of oxygen and nitrogen, and over 100 other trace gases, including carbon monoxide and hydrogen sulphide. Whilst carbon dioxide is found in much greater quantities in the atmosphere, methane is a potent greenhouse gas that is a key contributor to global climate change (over 21 times more potent than carbon dioxide). In addition, typical landfill gas, if permitted to accumulate in low lying or enclosed or confined spaces (such as buildings and houses next to a landfill), may produce an atmosphere that is both explosive and hazardous to life.

Stan Jewaskiewitz, president of the IWMSA says, "Landfill gas can be readily extracted from a landfill, provided that proper engineering of the extraction and management system is carried out, and the landfill is under control and well managed. The extraction of landfill gas can take place once landfill cells reach capacity, at which point the landfill is covered, extraction equipment and collection pipe networks set in place, and the process of extracting the landfill gas can begin. In addition, the

installation of landfill gas extraction systems can be incorporated in the landfilling process, enabling the extraction of landfill gas much earlier, prior to the completion of individual landfill cells. The extracted landfill gas can be used to fuel gas engines or turbines for the generation of electricity”.

The use of methane gas from landfill to fuel electricity generation systems offers one solution to the much needed quest for the diversification of energy resources in Southern Africa, particularly renewable energy resources. Such a solution can also provide potential employment opportunities along with the undisputed benefits of a cleaner environment.

Under the guidance of the Clean Development Mechanism (CDM) which was facilitated by the Kyoto Protocol, it is also possible, as a developing country, for South Africa to gain economically from the sale of emission reductions or “carbon credits”.

The IWMSA provides education and training for its members, as well as facilitating interest groups. You can network and exchange information with like-minded individuals, and even have your voice heard in the formulation of legislation.

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The IWMSA is a professional, multi-disciplinary organisation with voluntary membership established to promote the science and practice of waste management and is a non-profit organisation. For more information, contact the IWMSA visit: www.iwmsa.co.za

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