

Innovative Waste Technologies & Solutions

The Company

IUT Global Pte Ltd is a Singapore-based niche environmental waste management company providing a comprehensive and scalable suite of waste treatment technologies & management solutions for the Asia-Pacific region.

Founded by a management team with comprehensive experience in the environmental industry and extensive regional public & private sector networks to assure successful project implementation and operational support.

Technology Capabilities



Landfill Remediation

The “SMELL WELL System” is the global leading technology that is able to stabilise and reduce odorous gases and methane emissions from landfills. This unique patented system guarantees safe, unimpeded work on the landfill.

Air is sucked in through a biofilter and forced into the landfill, while the gas present in the landfill is extracted and purified by other biofilters.



Once stabilised, IUT's suite of sorting equipment & capabilities enable the landfill to be mined, its contents treated, separated and sorted by type including recyclables, waste derived fuel and earth materials. Once remediated, the landfill area can then be redeveloped for other purposes.



Landfill Gas to Energy

Through a piping system and gas blowers, landfill gas is extracted and fed into gas engines for power generation.

Landfill gas management is key for prevention of fires, odour management and reduction of green house gases.



Composting

The natural decomposition process of organic matter is harnessed to treat domestic, commercial, industrial and agricultural organic waste. Being a biological process, the technology can assist to accelerate the process and improve the quality of the end product, that is, compost. Technology includes windrows on ventilated floors, composting in boxes, Rotte-Filter process and dynamic systems.



Bio-Methanisation

The natural decomposition of organic matter is controlled in an anaerobic digester at thermophilic temperatures to produce quality compost. The technology has the advantages of shorter decomposition time, smaller plant footprint, elimination of odours and production of bio-gas for the generation of electricity and heat.



IUT Global Pte Ltd

800 Tons per Day Bio-Methanisation Plant in Singapore



In view of land scarcity and environmental preservation the Singapore Green Plan 2012 targets initiatives to:

- 1) delay the need for new incineration plants from one every 5-7 years to one every 10-15 years
- 2) extend the life span of Semakau Landfill to 50 years and ultimately strive for "zero landfill" needs.

These initiatives include raising the overall waste recycling rate to 60% by the year 2012 from the current 48%.

Whilst the recycling rate of most waste types has steadily improved, a major laggard has been food waste. Singaporeans generate over 530 thousand tons of food waste a year, or 1,450 tons a day. Of this, only 6% is recycled.

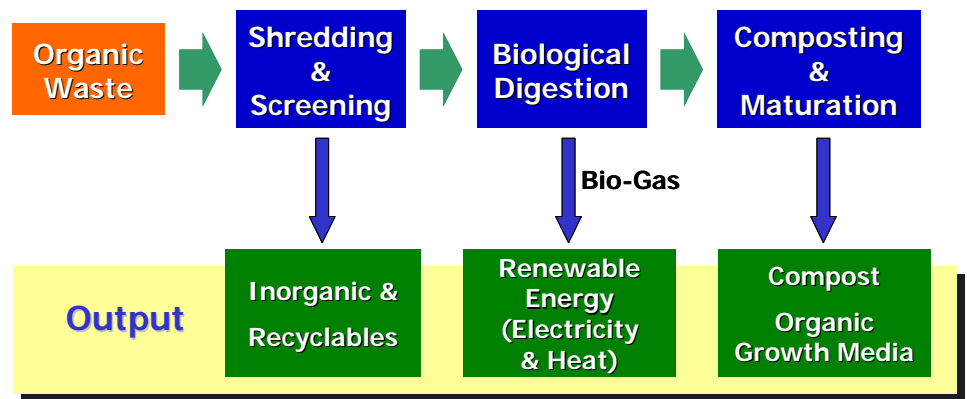
SGP2012 targets to raise the recycling rate of food waste to 30% by year 2012.

With the implementation of IUT Global's 800 Tons-per-day Bio-Methanisation Plant, the target 30% food waste recycling rate will be surpassed. The plant will begin accepting food waste by end 2006.



IUT Global Pte Ltd
 491B River Valley Road
 #08-01 Valley Point
 Singapore 248373
 Tel: (65) 6235 2012
 www.iutglobal.com
 Email: info@iutglobal.com
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IUT Global has commenced construction of Asia's First Major Organic Waste Bio-Methanisation and Renewable Energy Plant at Tuas, Singapore. Marking a significant milestone in Singapore's environmental waste management industry, the Tuas facility, with the capacity of processing up to 800 tons of organic waste per day, is the first bio-methanisation and renewable energy plant in Singapore and the largest of its kind in Asia.



At full capacity, the plant will reduce by more than half the amount of food waste currently delivered to local incineration plants for disposal. The recycling rate of food waste in Singapore will thus be significantly increased and more effectively recycled back into the environment in the form of sanitized, nutrient-rich compost used as a soil media for organic farming and the landscaping industry. In the process, high-quality bio-gas is harnessed for the production of renewable electrical energy, or green power.

At full capacity, it is estimated that more than 6 MW of electrical energy per hour is generated, providing enough power for over 10,000 households or equivalent industrial facilities. Further, the generation of green or renewable power not only provides a cleaner energy alternative, but also contributes to long-term reduction of Green House Gas emissions and Global Warming.

