

MAY 2019

GREEN

Newsletter

A staggering 30,000 tonnes – that’s the amount of waste Malaysians produce on average daily. This figure was disclosed at the National Waste Management Conference 2018 in July. Worse, only 5% of the total waste is recycled.

That means 10.4 mil tonnes of waste makes its way to landfills across the country a year. Selangor alone contributes 7,000 tonnes daily to these saturated disposal areas, which are quickly piling up as sources of land and air pollution.

Enter the proposal for a Waste-To-Energy (WTE) treatment system by Worldwide Holdings Berhad, a subsidiary of the Selangor government. For this RM500 mil project, Worldwide Holdings is partnering with Western Power Clean Energy Sdn Bhd, a subsidiary of China Western Power Industrial Co.

A joint development agreement was signed on Dec 10 for a WTE facility to be built adjacent to the Jeram sanitary landfill in Kapar, Selangor.

Operational by 2022

“The Waste-To-Energy concept is a waste management technology that is able to convert solid waste into energy in the form of electrical power,” explained Worldwide Group CEO Datin Paduka Norazlina Zakaria. There are two phases to the project, with an estimated total cost of RM1bil. The first phase with Western Power Clean Energy is expected to be operational by 2022.

“The first phase will have waste capacity of per day, which will produce between 20MW to 25MW of green energy, enough to power 25,000 households within the vicinity of the plant,” she said. According to Worldwide Holdings COO (environment) Zamri Abdul Rahman, the amount of waste in Selangor increases at a higher yearly rate of 4-5% compared to a 2.5% national increase. He pegs this on urbanisation and population hikes.

Malaysian project to produce green energy from waste will power 25,000 homes

Environment, Living, TSOL –Environment- Star2.com
By Yvonne Nathan

“About 20ha of land is used up as landfill in a year,” he said, adding that Worldwide Holdings embarked on plans for the development to save land consumption in Selangor.

Feasibility studies comparing landfills and WTE were done, with results showing that WTEs have a longer lifespan than landfills. “95% of WTE in the world uses the type of technology we are planning to use, which complies with EU standards of regulation,” he said.

Worldwide Holdings has yet to decide if it will continue with the second phase, set to be completed by 2024, with Western Power Clean Energy.

How it works

Four major components form the WTE’s functions. It works as an indoor storage facility for solid waste, enclosed incinerator, steam-powered energy generator and a gas filtration system. Dealing specifically with municipal solid waste or domestic rubbish, the waste will be deposited in a lined bunker. As domestic waste is high in moisture content, it will be stored from three to seven days and rotated repeatedly to ensure it is evenly scattered, as microorganisms facilitate the fermentation of organic waste so it can be burned easily.

Follow NRS :



LinkedIn



YouTube

Ashes to ashes

"Two types of ashes form during the burning process. The first is bottom ash, which is non-toxic ash usually created by wood and such materials. The harmless bottom ash will be sent to the landfill. Some countries use bottom ash for road construction or making low quality bricks, a possibility we will look into.

"The harder part to treat is fly ash. It contains hazardous materials and particles such as sulphur dioxide and nitrogen oxide. We'll use activated carbon and slake lime to neutralise these acidic components," said Zamri.

The process involves a scrubbing system and burning at the highest temperature, so that all toxins and pollutants are destroyed. "Like other parts of the world, we will neutralise the fly ash, then encapsulate it in cement and carry out leaching tests before it is deposited in the landfill," he said.

Perhaps the most important step is how gas from the combustion unit is treated.

"There is the matter of the toxic fumes dioxin and furan, normally associated with the burning of plastic. These will be taken care of using an activated carbon injection system into the gas before it enters a bag filter, which captures the dioxin, furan and mercury," he said. Zamri said Worldwide Holdings will secure skills-based training through their partnership with Western Power Clean Energy. Essentially the transfer of technology and knowledge will provide Worldwide Holdings with the tools to carry out their duties consistently.

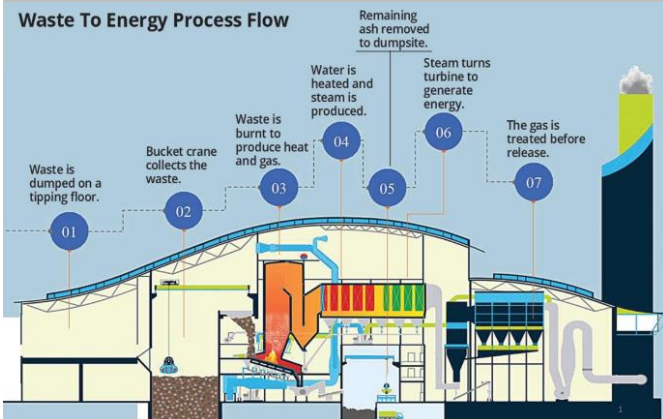
Worldwide Holdings has assured the state government and Department of Environment (DoE) that it will have an online display for the public to monitor emission levels in real-time and ensure that the operator meets the standards set.

The big picture

The WTE project is part of a broader and more complete approach, namely Worldwide Holdings' Integrated Solid Waste Management Centre in Jeram. The centre is touted as a multifaceted approach that includes everything from an anaerobic digester to a research and development centre.

Consistent with the holistic plan, Zamri said waste separation has a key function as the WTE plant works in tandem with the centre. Non-combustible material such as metal and concrete recovered from the incinerator will be sent to the centre's material recovery facility for construction and demolition waste, while organic waste from restaurants and hotels will be directed to the centre's composting plant.

Despite technological advancement, Zamri said that old-fashioned recycling and waste separation is still a necessary practice, with the public playing a vital role.



What are the benefits of money plant?

It energizes the home by filtering air and increasing oxygen inflow. Feng Shui experts recommend keeping one plant near each computer, television, or WiFi router. Placing a money plant in front of a sharp corner or angle reduces anxiety and stress. It also helps avoid arguments and sleep disorders.

Money Plant is the most commonly found plant in India, more so in our country since we believe that having money plant helps us bring money!

So although you all have been growing the money plant in your garden for a while now, did you know about these fascinating facts and tips about this plant?

The easiest way to grow a money plant is to cut off an existing stalk and plant it in a new pot!

- In its initial days, the plant requires an adequate amount of water. So ensure that the plant is watered sufficiently. But take care to see that it is not soaked in water!
- The money plant is one of the few plants that can grow in water or in pots. There is a shortcoming in this, though – It becomes hard for the plant to sustain if you change it from water to soil or vice versa once it is fully grown. So decide on its place in the early stages. The ones grown in water have softer leaves than the plants grown in the soil.
- Money plants have high survival rate and longevity when compared to other house plants. Although they possess the properties of cleansing and eliminate the toxic chemicals when planted indoors, they can behave like weeds too!
- The sap of money plant is poisonous if consumed
- Money plants can be put in the aquariums as well. Their roots would branch out till the bottom, and it would partly float giving a gorgeous look to the aquarium as well as act as a purifier. They also provide the essential nutrients for the fish
- They do not need direct or heavy sunlight. Instead, keep them near the windows or in places where there is indirect sunlight.





5 Diabetes Diet Myths

by WebMD.com

Have you heard that eating too much sugar causes diabetes? Or maybe someone told you that you have to give up all your favorite foods when you're on a diabetes diet? Well, those things aren't true. In fact, there are plenty of myths about dieting and food. Use this guide to separate fact from fiction.

1. Eating Too Much Sugar Causes Diabetes.

MYTH. The truth is that diabetes begins when something disrupts your body's ability to turn the food you eat into energy.

2. There Are Too Many Rules in a Diabetes Diet.

MYTH. If you have diabetes, you need to plan your meals, but the general idea is simple. You'll want to keep your blood sugar levels as close to normal as possible. Choose foods that work along with your activities and any medications you take.

Will you need to make adjustments to what you eat? Probably. But your new way of eating may not require as many changes as you think.

3. Carbohydrates Are Bad for Diabetes.

MYTH. Carbs are the foundation of a healthy diet whether you have diabetes or not.

They do affect your blood sugar levels which is why you'll need to keep up with how many you eat each day. Some carbs have vitamins, minerals, and fiber. So choose those ones, such as whole grains, fruits, and vegetables. Starchy, sugary carbs are not a great choice because they have less to offer. They're more like a flash in the pan than fuel your body can rely on.

4. Protein Is Better Than Carbohydrates for Diabetes.

MYTH. Because carbs affect blood sugar levels so quickly, you may be tempted to eat less of them and substitute more protein. But take care to choose your protein carefully. If it comes with too much saturated fat, that's risky for your heart's health. Keep an eye on your portion size too. Talk to your dietitian or doctor about how much protein is right for you.

5. You Can Adjust Your Diabetes Drugs to 'Cover' Whatever You Eat.

MYTH. If you use insulin for your diabetes, you may learn how to adjust the amount and type you take to match the amount of food you eat. But this doesn't mean you can eat as much as you want and then just use additional drugs to stabilize your blood sugar level.

If you use other types of diabetes drugs, don't try to adjust your dose to match varying levels of carbohydrates in your meals unless your doctor tells you to. Most diabetes medications work best when you take them as directed. When in doubt, ask your doctor or pharmacist.

