

Ask an Expert

AVP's head of business intelligence and partner, **Suejean Asato**, has been with the company for 27 years when the waste to energy market was in a nascent stage.

AVP (under its old brand name VZA) was the first to track waste to energy projects globally and offer the most accurate data on the global waste to energy plants.

Suejean was the one who started tracking the waste to energy market by speaking directly to plant suppliers around the world and analyzing trends per regions, in technology, fuels and market forces.



We asked Suejean to answer three most important questions for the market.

1. If you could name 3 biggest changes the waste to energy market has undergone for the past 10 years, what would they be?

We started tracking the European market since 2002 and worldwide since 2011. The biggest changes can be described as follows.

The first change is the majority of key plant suppliers have Asian owners.

With A-Tec's sudden bankruptcy in 2010, its subsidiary, the AE&E Group, which consisted of several consolidated waste-to-energy plant suppliers, was split and sold. AE&E Inova (former Von Roll) was acquired by Hitachi Zosen Corporation (Japan) and AE&E Lentjes (former Lurgi Lentjes) was sold to Doosan Group (Korea).

In 2014-2015 Standardkessel Baumgarte was sold to JFE Engineering (Japan), Fisia Babcock Environment went to Nippon Steel (Japan) and the waste-to-energy IP from Waterleau was acquired by China Tianying.

Major Acquisitions by Asian Companies in 2010 – 2015

2010	▪ AE&E Inova (ex Von Roll technologies) was acquired by Hitachi Zosen Corporation (Japan) becoming Hitachi Zosen Inova
2011	▪ AE&E Lentjes (ex Lurgi Lentjes) was sold to the Doosan Group (Korea) becoming Doosan Lentjes
2014	▪ Standardkessel Baumgarte was acquired by JFE Engineering (Japan) ▪ Fisia Babcock Environment was acquired by Nippon Steel Engineering (Japan), becoming Steinmüller Babcock Environment
2015	▪ The waste-to-energy IP from Waterleau (Belgium) was acquired by China Tianying (CTYI)

These acquisitions left the majority of waste-to-energy suppliers with Asian owners.

The second change took place in geographic markets.

Historically the most important markets in Europe were Germany and France. However, from 2008 the UK market started to develop with major PFI/PPP initiatives and by 2013 it became the largest and most dynamic market in Europe. Although UK remains a strong market, it is now slowing down.

Globally, the Chinese market is the largest with a market share over 5 times of Europe, which is the second largest market. There has been a pick-up in the Japanese market due to disaster waste from earthquakes as well as refurbishment of aging plants.

We have also seen movements in Southeast Asia and Oceania such as India, Thailand, Vietnam and a first plant in Australia.

The third change relates to technology: origin and types.

Non-European equipment suppliers are seen entering emerging countries where low cost is a deciding factor. For example, Chongqing Sanfeng, the licensee of the Martin license, is supplying the Martin SITY 2000 grate, manufactured in China, for the project in Ethiopia. Chinese manufacturers such as Everbright International and Jinjiang offer their technologies to the Indian market.

There also seems to be a move towards waste-to-fuel, which we are keeping an eye on.

2. Where do you see growth opportunities for the waste to energy market?

Southeast Asia, albeit slow, is accelerating: few projects were awarded in new markets such as India, Vietnam and Thailand and more projects are in the pipeline. The market saw developments in Indonesia but due to public protests, those projects are still not moving ahead.

Australia's first plant was awarded in 2018 and another one is in the pipeline. We believe this may lead to possibly more awards in Oceania.

After the first award in Qatar in 2006, the Middle East with new projects in UAE and Kuwait is moving ahead with possible expansion to Northern Africa.

3. Can the market survive without subsidies? Is there a country which regulation does not support the waste to the energy market but you still see projects?

Not evident. Even the merchant plants we see are backed by a special fund, subsidies, feed-in tariffs, development bank or organizations.

AVP has been tracking the European market since 2002 and the global market since 2011. The database covers European awards from 1995 and the rest of the world from 2008. The data is updated on an annual basis and regularly gets corrected and refined.

AVP's waste to energy market update for 2019 will come out in Spring 2020. If you are interested to get an update when it is out, please [sign up here](#)

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