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Globalisation on Waste-to-Energy market continues

The growth on the thermal waste recovery market in Asia has spread to more and more countries for some years now. Nevertheless, China remains in the lead when it comes to the number of projects. In the past months, projects were also planned or even commissioned in South America, Africa and Australia. The European market has shown some signs of an increasingly dynamic development as well.

In 2017, more than 80 new waste incineration plants with a capacity of about 25 million annual tons went online. About 90% of these capacities were constructed in Asia, where China remains the strongest market.

This resulted in almost 2,440 operational incineration plants worldwide in late 2017. They reached an annual treatment capacity of over 360 million tons. Most of these facilities are equipped with grate firing technology; only about 15% of the plants worldwide use fluidised bed combustion. The use of alternative technologies such as MSW gasification or pyrolysis continues to be of marginal importance (with a share of about 5%).

This dynamic growth will keep up in the years to come. Until 2027, about 70 new plants with an average thermal treatment capacity of about 20 million annual tons will be realised every year.

Asia will continue to dominate the WtE market in the future. In China, we expect many additional plants to be constructed, especially in the next years and until the goals of the current 13th Five-Year Plan have been reached. Initially, this was planned until 2020. However, we expect a delay, as the goals of the previous 12th Five-Year Plan were also realised almost 2 years late. After that, the growth in China will slow down. On average, this results in waste incineration capacities of almost 12 million annual tons to be constructed each year. Additionally, by 2027, approximately 1.5 million annual tons of waste incineration capacities will be constructed in India.

Apart from a continuously growing Asian market, new waste incineration markets in South America, Africa and the Australia and Pacific region show indications for a market upturn.

The South American waste market was stimulated by large-scale projects in Mexico and Brazil. As in Asia, this region has numerous metropolitan regions where waste amounts are increasing and space for landfilling is running out.

In Africa, a first waste incineration plant was commissioned in Addis Ababa, Ethiopia. If operated successfully, this project could unfold a signal effect for neighbouring African agglomerations.

In the Australia and Pacific region, the Chinese import ban for 24 selected waste streams, introduced in early 2018, has increased the number of waste incineration projects. The ban stimulated plans for new waste incineration capacities in Australia especially. In 2017, about 1.3 million tons of municipal and industrial waste was exported to China that is no longer allowed since early 2018.

In Europe, EU waste legislation continues to be the most important market factor for the construction of waste incineration plants. The adoption of the Circular Economy Package in May

2018 was a new milestone in this respect. As the continuation of the Waste Framework Directive, the law envisages, amongst other targets, a maximum landfilling share of 10% of the overall MSW amounts until 2035.

Another market factor is the ageing plant asset, causing a need for modernisation measures in traditional markets such as Germany and Denmark. On average, this will result in about 3 million annual tons of capacities to be newly constructed and replaced in Europe.

The North American market, by contrast, remains sluggish. Low energy prices have been putting a lot of pressure on thermal waste recovery for years. Furthermore, the current government cannot be expected to enforce stimuli for landfilling restrictions. The plant asset has been shrinking for many years and this trend will continue.

The competition also reflects the globalisation on the waste incineration market. Most projects in cost-sensitive markets like India, Thailand and Malaysia are realised by Chinese technology providers. Chongqing Sanfeng Covanta, Chinese licensee of Martin, was assigned for the project in Brazil and the commissioned plant in Ethiopia.

As matters stand, Chinese general contractor Power China has not managed to enter the European market. Its subsidiary Shanghai Electric Power handed in the most competitive offer for the expansion of the Warsaw WtE plant in Poland, however, the awarding was annulled as the company is lacking experience in the WtE sector.

ecoprog's "Waste to Energy" market study is the world's most extensive analysis and data collection on thermal waste recovery. We update this report annually and the 11th edition for the years 2018/2019 is now available at: www.ecoprog.com

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