

ecoprolog GmbH press release 15 December 2021

Boom year 2021 – the global WtE market has never been stronger

The number of new waste incineration plants and RDF power plants put into operation worldwide in 2021 is higher than ever before. Above all, this is the result of the capacity expansion in China. But also in Europe and other parts of the world, prospects in the thermal waste treatment market remain positive.

130 thermal treatment plants – that is waste incineration plants and RDF power plants – are commissioned in 2021 worldwide. These have a technical treatment capacity of about 41 million tpy of solid waste.

ecoprolog has been analyzing the market for thermal waste treatment since 2005 – such a substantial expansion has never before been registered.

As in the previous years, especially China is driving the global market. An estimated 32 million tpy of additional capacity approximately are built up in the country in 2021, that is 75 % of the worldwide expansion. Nevertheless, the Chinese market is still only of limited interest to the European thermal waste treatment industry, given the fact the Chinese market, in many segments, is a very closed market, even more so than was the case a few years ago.

In Europe, 10 plants with a capacity of about 3 million tpy will probably be put into initial operation in 2021. This is also one of the highest numbers of the past ten years. Of this capacity expansion, about 1.3 million tpy can be attributed to the United Kingdom; the biggest individual plant went operational in Istanbul. In total, an estimated 2.580 thermal treatment plants with a combined capacity of 456 million tpy will be operational worldwide at the end of 2021. Of these, Europe accounts for approximately 530 plants with a combined capacity of 107 million tpy.

Prospects in the global market for thermal waste treatment remain positive, even though individual national markets, in part, develop very differently.

In China, the super year of 2021 will probably incorporate a record-breaking year for a long time. According to the Chinese five-year plan, about 100 million tpy of additional capacity are supposed to be built up between 2021 and 2025. Thus, a relevant part of this capacity has already been installed, although a part of the 2021 expansion, mathematically, still has to be attributed to the previous five-year plan. However, decreasing expansion rates have to be expected in the future, given that material recycling of waste is also becoming more and more important in China. Nevertheless, regarding capacity expansion, China will dominate the global market in the years to come.

In other rather young markets, such as India, Indonesia or Brazil, a growing number of waste incineration plants can also be observed. Even if many projects in these countries fail due to a lack of expertise or finances, the number of realized projects still increases.

Only North America furthermore, in the broadest sense, cannot be considered as a market for thermal waste treatment. Over the past few years, the number of plants has decreased, new construction projects virtually do not take place. It is true that, under the Biden-Administration, fighting the climate crisis has again become part of the political agenda also in the USA, and of

course, restricting landfill would make a significant contribution in this context; in addition to that, even an unprecedented infrastructure programme has been launched following the COVID-19 pandemic. However, the market for thermal waste treatment, up to this date, could not benefit from this development. This is also due to the fact that a price increase for waste disposal by charging landfilling is still off-limits in most American states.

ecoprolog expects the annual capacity expansion until 2025 to drop to about 21 million tpy in the first instance. But this decrease presumably is solely attributable to China, while in almost all other countries, a stable or growing market for thermal waste treatment can be observed.

In Europe, prospects in the market for thermal waste treatment also remain generally positive. Still, here the booming market of the previous years – the United Kingdom – will likewise be saturated in the medium term. But at the same time, new markets open up. Especially in Eastern and Southern Europe, an expansion of thermal waste treatment is inevitable if the EU directive of landfilling a maximum of 10 % of all municipal wastes by 2035 is to be reached. Market risks exist mainly due to the vagueness of political guidelines. Up to now, it is completely open how the EU recycling targets are to be reached with regard to municipal waste – and if they can be reached at all. While on the one side, new thermal waste treatment capacities are urgently needed due to political goals, investments into thermal waste treatment plants, on the other side, are at the same time fiercely fought on a political level. As a consequence of the EU Taxonomy Regulation, for instance, thermal waste treatment projects not only risk being excluded from EU subsidies, but also have to cope with severely hampered access to the overall financial market. Yet, in countries such as Germany or the United Kingdom, the past has shown that thermal waste treatment plants – in the case of a disposal shortage serious enough – are eventually constructed all the same in the EU. This is why, also in the years to come, ecoprolog expects an average capacity expansion of about 3 million tpy in Europe. This includes the Russian market as well, which in the next few years, due to an exceptional boom, will even present the second-strongest expansion after the British market.

In just a few European countries, such as Denmark or the Netherlands, a tendency towards the reduction of thermal waste treatment capacities is to be expected, or reduction of capacities has already been planned. In these countries, nowadays, mixed wastes practically are not landfilled anymore, which is why gains in recycling are only possible at the expense of thermal waste treatment. In addition to that, these countries, for historical reasons, exhibit substantial overcapacities in the thermal waste treatment market which in the past few years had mainly been exploited with British wastes. This phase ends with the commissioning of further plants in the United Kingdom. Finally, thermal waste treatment has to face increasingly higher levies. These result from, for instance, a tax on combustion (Sweden), an import tax (Netherlands) or carbon dioxide taxation (Denmark, Netherlands), the latter also impending in Germany, the largest European market for thermal waste treatment. This is the only market where, against the backdrop of a high inventory, several new projects and expansion projects are being planned and realized again.

In general, climate change and carbon dioxide are topics which, in the years to come, will also radically change the market for thermal waste treatment, at least in Europe. While putting a burden on thermal waste treatment as such, this situation at the same time creates opportunities for many

companies, for instance with regard to (Bioenergy) Carbon Capture and Storage or due to increasing privatization of the operator market.

ecoprolog's market study „Waste to Energy“ is updated annually. In the field of thermal waste recovery, it is the most extensive market survey and data collection worldwide. The current 14th edition 2021/2022 is available at: www.ecoprolog.com

As a respected industry expert, ecoprolog accompanies clients from Germany and abroad in dealing with implementation-oriented management issues with political, technical or economic backgrounds in the environmental and energy technology industries. We work in the fields of strategy consulting, market and competition analyses as well as multi-client studies.