Executive summary

In the last few years, the Energy from Waste (EfW) market has gained momentum and is demonstrating its importance in decarbonising the energy landscape. Waste management has always been a widespread challenge, due to the ongoing upsurge in global population and the conventional landfill as a waste treatment technique causing capacity and emissions issues. However, the waste sector is now under more scrutiny and pressure to improve its management procedures. Countries are publicly striving to meet air quality and climate change targets and the introduction of various waste taxes and import bans are on the rise. EfW developments are starting to be seen as a necessity for the current waste predicament now more than ever, with this insight report exploring the role of EfW plants in the future’s global energy mix.

The UK has shown signs of a promising market for EfWs with its recent flurry of activity. The Environmental Services Association calculated that should the UK meet its waste and recycling targets by 2035, 20 million tonnes of residual waste in England alone will be left untreated. With the UK still requiring a further 7.5 million tonnes of EfW capacity, the clear need for the market has helped portray the region as a favourable environment for development. Its economic standing and waste legislations has also helped attract developers to the scene.

Despite its positive outlook, an array of challenges are repeatedly faced throughout the development process that need to be addressed. The region’s political uncertainty in relation to the EU has also raised questions regarding potential changes to its existing waste management procedures and policies. This report offers a detailed analysis of the industry alongside ongoing projects within the UK, including the key political and financial incentives behind the market’s growth. The sector capacity is expected to double within the next decade and will favour innovative technologies such as combined heat and power gasification. As such, this report will dissect the range of supply chain and diversification opportunities generated by the increase in facility development.

These opportunities are not limited to the UK, with the report also delving into other global markets that are either anticipated to flourish in the near future due to promising waste strategies, or are already beginning to emerge with a rise in upcoming developments. Europe’s substantial portfolio of operational assets in its wealthier countries are anticipated to bring in more opportunities for development, with the industry anticipating a boom in activity in Eastern Europe in particular. Asia’s rapid industrialisation, urbanisation and population growth, alongside its recent stances against waste importation, has pushed the region towards the technology as a solution to its waste issues. The Middle East’s financial standing and readiness in tackling its waste scenario whilst also meeting its growing demand for clean energy has resulted in its own upsurge in EfW activity.

EfWs are becoming an accepted paradigm in closing the waste management loop. Traditional linear waste models are no longer an excusable option to dispose of waste and countries are now actively looking to implement a circular economy strategy. Advancements in efficient technologies are expected to drive down costs, making EfW facilities more affordable across the globe. With the global EfW market expected to be worth US$40bn by 2023, EfWs are evolving into its own dynamic energy sector. The market is expected to provide a plethora of supply chain activities to explore for those looking to enter or diversify into the market, which will be discussed in this insight report.