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ASX: IGE

“Yang Laji”: Positive Impact of China’s Ban on “Foreign Garbage”

The directors of Integrated Green Energy Solutions Ltd (“IGES” or “the Company”) are pleased to provide the following update regarding China’s ban on the importation of waste plastics and the opportunities this affords IGES.

Key Factors

- China waste ban increases supply of waste plastic in the jurisdictions in which the company intends to operate.
- Margins are expected to increase by up to \$100 per tonne of plastic feedstock processed, with an annualised forecast EBITDA increase of between \$2.3 million and \$3.3 million. IGES expects this to now become a revenue stream.
- The IGES solution is being welcomed by regulatory authorities as part of the solution to this problem, with the Company being granted a license for a 100 tonne per day facility in Amsterdam.

China’s Decision to Ban “Foreign Garbage”

In 2017 the Chinese government notified the World Trade Organisation (“WTO”) it intended to ban the import of “all scrap plastics and unsorted paper” by the end of the 2017 calendar year as part of a broad clean-up effort and a campaign against “yang laji,” or “foreign garbage.”

On 1 January 2018, China enforced this policy. This latest move has hit Europe’s recycling industry very hard – 87 per cent of its plastic waste ends up in China (The Irish Times, 15 August 2017).

“There may be alternative markets but they’re not ready today,” said Emmanuel Katrakis, the secretary general of the European Recycling Industries’ Confederation in Brussels.

Financial Impact on IGES: Overview

This series of world events has given IGES access to a stream of plastics to fuel its global network of waste plastics to fuel plants planned across the globe. Of particular note is the IGES plant under construction in Amsterdam with a significant cost being morphed into a previously unaccounted for revenue stream.

With these drastically changed conditions IGES has taken the opportunity to revisit and renegotiate its plastics supply chain at its Amsterdam facility. IGES is in the process of executing plastic feedstock contracts for the supply of waste plastic to the Amsterdam site that will price points change from a cost of \$50 per tonne to a long term sustainable income stream. This income stream will likely be in range of between \$20-\$50 per tonne, with a 200 tonne per day facility processing up to 66,000 tonnes per annum.



Officials in Britain, Europe and the West are scrambling to cope with growing piles of plastics like this one in China. Beijing banned the import of many recyclables on 1 January 2018. Credit: Fred Dufour/ Agence France-Presse — Getty Images

“Yang Laji” Explained

China’s ban covers imports of 24 kinds of solid waste, including unsorted paper and the low-grade polyethylene terephthalate used in plastic bottles and it also sets new limits on the levels of impurities in other recyclables.

China had been processing at least half of the world’s exports of waste paper, metals and used plastic — 7.3 million tons in 2016, according to recent industry data. Last July, China notified the World Trade Organization that it intended to ban some imports of trash, saying the action was needed to protect the environment and improve public health.

“Large amounts of dirty wastes or even hazardous wastes are mixed in the solid waste that can be used as raw materials,” Beijing wrote to the WTO “This polluted China’s environment seriously.” (The Straits Times, 12 January 2018)

“Yang Laji” Impact on Europe

The sudden move has left Western countries scrambling to deal with a build-up of plastic and paper garbage while looking for new markets for the waste. The answer, to date, in Britain at least, is nothing. At least one waste disposal site in London is already seeing a build-up of plastic recyclables and has had to pay to have some of it removed (The New York Times, 11 January 2018).

In Britain, Britain’s prime minister, Theresa May, pledged to eliminate avoidable wastes within 25 years. In a prepared speech, she urged supermarkets to introduce plastic-free aisles where all the food is loose.

The European Union, for its part, plans to propose a tax on plastic bags and packaging, citing the China ban and the health of the oceans among other reasons.

Those measures might help ease the situation someday, but for now Britain, Europe and the West in general is faced with growing piles of recyclables and no place to put them. “There may be alternative markets but they’re not ready today,” said Emmanuel Katrakis, the secretary general of the European Recycling Industries’ Confederation in Brussels.

Ever since China announced last year that it no longer wanted to be the “world’s garbage dump,” recycling about half of the globe’s plastics and paper products, Western nations have been puzzling over what to do when the ban went into effect, which it did on 1 January 2018.



A recycling centre near Ascot, England. Credit Steve Parsons/Press Association, via Associated Press

Every year, Britain sends China enough recyclables to fill up 10,000 Olympic-size swimming pools, according to Greenpeace U.K. The United States exports more than 13.2 million tons of scrap paper and 1.42 million tons of scrap plastics annually to China, the Institute of Scrap Recycling Industries has reported. That is the sixth-largest American export to China.

Similar backups have been reported in Canada, Ireland, Germany and several other European nations, while tons of rubbish is piling up in port cities like Hong Kong. (The Straits Times, 12 January 2018)



A mountain of garbage and plastic bags at a dump in Nairobi, Kenya. Credit Ben Curtis/Associated Press

Plastics: Global recognition

Pollution from plastics has captured global attention in recent years. A new David Attenborough series on the BBC, "Blue Planet II," has shown plastic bags and bottles clogging oceans and killing fish, turtles and other marine wildlife, prompting governments to put in place more stringent rules.

IGES Amsterdam

Partners:

Bin 2 Barrel Amsterdam B.V. is in the final stages of contract negotiations with several feedstock partners. These contracts are designed to provide the first 100 tonnes per day feedstock requirements to support the Amsterdam plant start up and then will increase to a maximum of 400 tonnes per day based on additional permit approvals.

Revenue Impact:

The contracts will provide a positive gate fee ranging from \$20-\$50 per tonne of plastics delivered. Previously IGES has based its financial modelling on a cost impost of purchasing plastics of up to \$50 per tonne.

Mr Paul Harkema, the Director of IGES' subsidiary Bin 2 Barrel Amsterdam B.V. stated "The revenue received from the gate fees is due to the oversupply of plastics in the market as a result of the China ban on plastics as well as a combination of high incineration and landfill pricing to dispose of contaminated and unrecyclable waste plastics. This provides IGES with a good opportunity to secure favourable supply contracts for waste plastics that would otherwise go to expensive incineration or landfill".

EBITDA Impact:

The financial performance of an IGES plant has been stated at producing an EBITDA of 30 cents per litre (refer announcement dated 30 January 2018) on a plant producing 70 million litres per annum (refer announcement dated 30 November 2017). This financial performance is based on a cost impost to purchase plastics of \$50 per tonne.

With the current negotiations underway that are underpinned by China's "yang laji" policy this will transition the cost of \$50 per tonne into a revenue stream of between \$20-\$50 per tonne of plastics processed. This will conservatively add an EBITDA contribution of between:

- \$660,000 (at \$20 per tonne) and up to
- \$1,650,000 (at \$50 per tonne)

on the 100 TPD facility being constructed in Amsterdam.

This revenue contribution from feedstock will increase linearly as the processing capacity at Amsterdam is increased to 200TPD and ultimately to 400TPD.

About IGES

IGES is a company focussed on converting waste plastic that is destined for landfill or discarded into the environment into valuable road ready fuels using its patented waste plastic to fuels process. The company believes that doing this will inevitably reduce the amount of plastic entering the environment and help to create circular economies in this jurisdictions in which it operates serving to provide a cleaner planet for the next generation.

FOR FURTHER INFORMATION CONTACT:

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