



## Recycling in China rife with challenges

**Steve Toloken**

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Too much of China's electronics recycling is done in ways that aren't good for the people doing it or for the environment. Groups like the Basel Action Network and Greenpeace have documented how recycling plants will burn plastic openly to get at more valuable materials, or how farmers will run primitive backyard recycling operations to melt circuit boards, all to bring in extra money.

But my recent visit to a Guangzhou factory offers an interesting glimpse into what could be an environmentally sustainable approach.

There, a 1-year-old joint venture between U.S. electronics waste recycler MBA Polymers Inc. and steel recycler Guangzhou Iron & Steel Enterprises is using the latest technology to mine a stream of ground-up plastic and materials from things like computers and kitchen appliances and extract valuable ABS, high-impact polystyrene and polypropylene.

Contrast that with local recycling operations. According to wire reports, government officials in Guangdong province, where Guangzhou is, started an investigation Jan. 24 into whether plastic recycling factories are releasing chemicals into rivers, or forcing their US\$100-a-month employees to breathe hazardous fumes.

The US\$12 million MBA-GISE plant is the first commercial venture for Richmond, Calif.-based MBA, with funding by private investors like GE Plastics and electronics contract manufacturer Flextronics International Ltd., along with the U.S. government, to develop its technology and provide seed capital.

The technology is not a panacea for environmental problems caused by Chinese recycling, particularly if, as BAN and Greenpeace report, some Chinese farmers feel they have no other way to make ends meet. On the other hand, China's government is talking as though it wants more sustainable development.

That makes MBA's presence there interesting. During a recent tour of the plant, managers told me they are happy with how things have fared so far, but say they are still fine-tuning.

There are challenges in relying on someone else's trash as your raw material. MBA-GISE, for example, has a radiation detector to screen incoming loads, although it has yet to find any contamination. There are also more subtle challenges. The plant can wind up with waste plastic from consumer products made five or 10 years ago that may contain additives that since have been declared environmental contaminants, such as brominated flame retardants.

Ultimately, the operation wants to sell its material to users like Flextronics or GE Plastics. "The economics are improving," said Darren Arola, MBA global director of product development and sales. But, "they are not where we want them to be," he added.

MBA relies heavily on government-mandated collection programs for electronic waste, and the Guangzhou plant was built partly with Japan's extensive e-waste recycling systems in mind. Its second plant is going up in Europe, where there also is a legislative push.

Given that China is considering similar legislation, it seems likely there is going to be more use for MBA's approach, rather than less.

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