

The Big Smog

Edited by Anna Cummins
anna.cummins@timeout.com.hk

Freight-ening
A ship near Kwai Tsing
Container Terminals



THE
BURNING
ISSUE

Bridging the (dirty) gap

Hong Kong is the first city in Asia to force ships, by law, to use less polluting fuel while at berth. Anna Cummins explores if the new legislation goes far enough, and why it's taken a decade to happen. Additional reporting by Rhoda Kwan

Shipping is essential to the world we've created. There are boatloads of incredible stats on the topic – 90 percent of the world's trade is carried by sea, meaning nine in every 10 items we buy are buoyed to us on OGVs (ocean going vessels). But on open waters cargo ships use highly polluting 'bunker fuel'. This dark, viscous fuel is comprised of around three percent sulphur (compared to ultra-low sulphur diesel which is under 0.005 percent). Consequently, one large container ship at sea emits the same amount of sulphur oxide as 50 million diesel-burning cars annually, as well as plenty of particulate matter and nitrous oxides. Unsurprisingly, given that Hong Kong is the fourth busiest container port in the world (handling over 22 million units of cargo each year), ships have become a major cause of air pollution in Hong Kong.

But there's only one port in the whole of Asia that has legislated to reduce the carcinogenic emissions produced by ships at berth, and that's our very own fragrant

“The government and tycoons are too closely related... that's one reason why we're in such a bad situation

harbour. On July 1 it became law for all large ships to use a more expensive but less polluting fuel at berth ('parked') in Hong Kong waters. This alternative fuel can only be a maximum of 0.5 percent

sulphur and any ship owner caught using the heavy sulphur fuel at berth now risks a jail term and a \$200,000 fine. This will reduce the respirable suspended particulates from OGVs by more than 60 percent, and will have a measurable impact on the health of people living near the port in Kwai Chung district.

It's been a long time coming, however. Hong Kong may be the first city in Asia to legislate on the issue, but many other ports in the US and Europe already have ECA (Emission Control Areas) that require ships to switch to fuel that is 0.1 percent sulphur or less when in port or nearby waters. The Hong Kong government has been generally supportive, yet far from speedy, in pushing through these new laws. In fact, the impetus actually came voluntarily from the industry itself. 17 of the world's major shipping lines signed the Fair Winds Charter, which came into effect in 2011, agreeing to use cleaner fuel when at port.

“We're surrounded by Chinese waters, so it's difficult to come up with a solution that doesn't involve legislation from China,” points out Arthur Bowring, managing director of the Hong Kong Shipowners Association, which represents the industry. “We've been working closely with groups like Civic Exchange and Clean Air Network for a long time, but it was hard to get the third side of the triangle – the HK government – involved. So we said we'd do it on a voluntary basis at first [in 2011]. Yes, it's strange for the industry to do that but, in this case, we decided it was time to do something. The government was apparently concerned that the port would become uncompetitive compared to surrounding ports like Shenzhen, and a lot of departments required a lot of work, but we're extremely pleased this has finally come into force. It's levelled the playing field [between shipping companies who had signed the 2011 Fair Winds Charter and those who hadn't]. We've already seen massive reductions in sulphur emissions in the area around the port. As someone who used to run in Hong

Kong and had to give it up for health reasons, I can say it's an issue that affects all of us.”

“We welcome the new regulations,” says Silvia Ding, managing director of Maersk Line in South China, one of the signatories to the Fair Winds Charter, which has been using 0.1 percent sulphur fuel voluntarily since 2011.

Christine Loh has been under secretary for the environment in Hong Kong for the last three years, and was a member of LegCo before that. She also founded the Society for the Protection of the Harbour, as well as Civic Exchange, a prominent city think tank. “The government committed to legislation in January 2013 [in its policy address] and then it took a while to formally consult the industry, draft the legislation and get it passed,” she explains of the time frame, pointing out that an emissions inventory had to be compiled before action was taken.

“Hong Kong is the first jurisdiction outside North America and the EU to mandate fuel switching at berth, so things have happened rather quickly if we look at the overall context,” adds Loh. “It is extremely difficult to get any piece of legislation drafted, scrutinised and passed by LegCo in less than three years!”

“It could have happened years ago!” exclaims James Middleton, chairman of local NGO Clear the Air. “Ships form over 50 percent of HK's emissions – the sulphur dioxides, nitrogen dioxides and the particulate matters. They are the ones that kill you, the suspended particulates that hang in the air. Your nose hairs can't stop them and people around Kwai Chung are breathing that in every day. [The new law] is a step in the right direction of course, but they could have talked to all the fuel companies a decade ago. The government and tycoons are too closely related... That's one reason why we're in such a bad situation. All the ships commuting from Europe to Shanghai and vice versa, all these ships are going through our waters and why are we making them switch to 0.5 percent [sulphur fuel], not 0.1 percent? They already have it in their tanks ready for when they enter US waters!”

We put this to Bowring. “We couldn't [legislate] 0.1 percent sulphur fuel here immediately because you can't find it in most Asian ports. Yet,” he tells us, “the big global trading ships that also go to the US and Europe will have 0.1 percent sulphur fuel on board and so they may well use that in Hong Kong and not bother carrying three different grades of fuel. But it's their decision. We have told the government that we support a move towards 0.1 percent or less when the fuel becomes more available. They have decided on 0.5 percent because of competition.” Ding confirms that Maersk are already using 0.1 percent fuel in Hong Kong. Simon Ng is chief research officer at think tank Civic Exchange and has been closely involved in the research forming the basis of the new law.



All at sea
Sulphur emissions have decreased since July 1; (above) 90 percent of the world's trade is transported on OGVs



CALVIN SUI

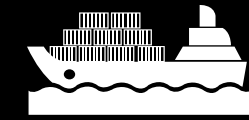
“Everyone is very excited to talk about the new regulations,” he reveals. “10 years ago the government wasn't doing anything on ship emissions. Even the public wouldn't have known what bunker fuel was. We didn't know how to plan, or whether to assume the port would continue to be a big part of HK's economy. Our prelim research showed that Europe and the US were targeting the shipping industry and that's when we started wondering why we weren't doing anything about it here. Ship emissions impact the air quality a lot.”

The government has launched a financial incentive scheme to help shipping companies recover the cost of buying the cleaner fuel, so the fee shouldn't be passed on to the consumer, for now. But there are naturally concerns over how our port, which was once the busiest in the world, can stay competitive in the booming Pearl River Delta region. “Hong Kong is working with Shenzhen and Guangzhou so we don't have to deal with the competitiveness,” says Ng. “So far it's very positive, Shenzhen is willing to subsidise the shipping trade, to clean up. Things are moving a lot quicker now.” Better late than never.

Find out more about the new shipping regulation at epd.gov.hk

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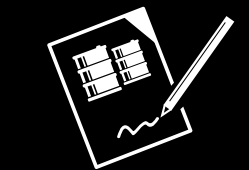
Something in the air?



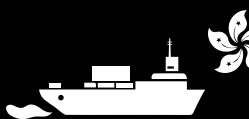
90%
of the world's trade is transported by the global shipping industry



7 million
The number of premature deaths linked to air pollution annually around the world



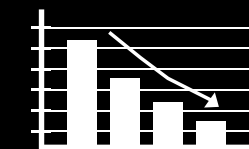
17
major freight lines signed the Fair Winds Charter to commit to switching to cleaner fuel while berthing in Hong Kong in 2011



375,000
sea-going vessels and river-trade vessels arrive in Hong Kong each year



13%
This many ships in HK have voluntarily been using low sulphur fuel since the charter was introduced



12%
The switch to low sulphur fuel at berth should cut the city's annual sulphur emissions by this much, and reduce particulates by six percent