Noxious haze has again wafted into a prevalent topic of conversation in China, with the worst air pollution in months choking much of the country’s north including Beijing, Tianjin and Hebei earlier this year.

Over February 20-26, more than one million sq km of China’s northern and central territory, or nearly 15% of the total, was blanketed by heavy smog. Beijing announced its first ever ‘orange’ smog alert – just two weeks ahead of two of the most important political gatherings of the year.

As a result, the country’s steel industry, which was already high on the list of China’s most polluting industries, is expected to remain a focus of Beijing’s anti-smog plans and this could impact production.

Xu Lejiang, chairman of the China Iron & Steel Association (CISA), recently predicted China’s steel output rate of growth would slow in 2014 to 4% from 7.5% last year, meaning 810 million mt of crude steel made in China this year.

On March 6 at the National People’s Congress, Chinese premier Li Keqiang said the government will “declare war” on pollution and pledged to fight it with the same determination as the country has battled poverty. Smog is affecting ever-wider parts of China and environmental pollution is “nature’s red-light warning against the model of inefficient and blind development,” Li said.

Pollution has been a key political issue in China since January 2013, when the worst smog in China’s history covered one quarter of the country and affected some 600 million people.

China began publishing PM2.5 readings, a measure of small particulate matter in the atmosphere, across the country from January 1 last year. China’s meteorological authorities introduced a three-tier warning system the same month.

Some northern cities, including Beijing, saw PM 2.5 readings bust the usual 0-500 micrograms per cubic meter scale last year, topping 900 mg/cm on some
The World Health Organization recommends 25 mg/cm as an acceptable level.

China's iron and steel industry, the second biggest consumer of coal after power generation, is perennially identified as a chief culprit for air pollution, especially in northern Hebei province, which hosts one third of the country's steel capacity and produced 188.5 million mt of crude steel last year.

China's steel industry began to see air pollution impact production more directly during major smog last December and in February. Several municipal authorities in Hebei and in the eastern provinces of Jiangsu and Shandong have included the steel industry in contingency plans for smog alerts.

The municipal plans were formulated after China's cabinet, the State Council, released an “Action Plan for Air Pollution Prevention and Control” on September 12, 2013, which suggested roughly a 20% cut in energy consumption per unit of industrial value added by 2017, compared to 2012, and focused on three key regions – the Beijing-Tianjin-Hebei area in the north, the Yangtze River Delta in the east and the southern Pearl River Delta.

In the event of a yellow smog alert, Hebei's Tangshan municipality, which alone has annual steelmaking capacity of more than 100 million mt, will order all steelmakers to suspend at least 30% of production, and re-rollers to cease output between 8:00 am and 8:00 pm, equivalent to an output cut of 50%.

The main impact so far has been on iron ore sintering, and Tangshan Iron and Steel, the largest steelmaker in Tangshan, reported halting operations at two sintering plants following a yellow alert in late February.

One Shanghai-based steel analyst noted that 90 sinter plants in Hebei province's Tangshan city were flagged for closure this year, while many more required upgrades. Not only could this impact iron and steel production, but the reduction in sinter output could increase ironmaking costs at small private furnaces without their own sintering facilities, he noted.
In early December last year, a total of 104 cities in 20 provinces saw their Air Quality Index soar over 300, forcing shutdowns at several mills in Jiangsu province. Nanjing Iron & Steel in Jiangsu’s capital city was forced to stop a sinter plant on December 3, impacting blast furnace output. The sinter plant restarted six days later – without revealing the extent of the output loss.

Meishan Iron & Steel, a Baosteel subsidiary in Nanjing, was also forced to shut down a sinter plant, blast furnace and converter over the same period, reducing steel output by about 25%, it said. This may have resulted in about 30,000 mt of lost steel output, Platts calculates.

Zenith Iron & Steel in nearby Changzhou city was also affected, ceasing output from a sinter plant, two blast furnaces and one bar mill on December 3. The shutdown was planned for one week, and the company took the opportunity to bring forward maintenance on a rebar mill. The stoppage was extended for a full month, meaning just over 130,000 mt of lost iron output.

Similar emergency measures are now expected to be taken each time a municipality issues a smog alert. “It’s likely we’ll see those state-owned or bigger steelmakers take action under the emergency measures ... as these bigger mills are strictly monitored by local environmental protection departments,” said a Shanghai-based analyst.

Market observers, however, are doubtful whether these measures will be thoroughly enforced. Smaller producers in Hebei’s Tangshan city will be a key test of this. Many small steelmakers deactivate their environmental protection equipment when not being monitored to reduce costs by over Yuan 100/mt (about $16), market sources and industry analysts have said. “It will take time for the government to prove it is serious about these measures,” the analyst added.

On February 18, China’s Ministry of Industry and Information Technology (MIIT) pledged a ban on new projects in the steel, cement, electrolytic aluminum, flat glass and shipbuilding industries before 2017, while gradually eliminating existing projects that were found to be below standard.

Although Chinese Premier Li Keqiang announced on March 5 an ambitious decommissioning target of 27 million mt/year each of iron and steelmaking capacity this year, the domestic steel market response was muted, as the reduction could still be outpaced by new capacity to be brought on-stream.

China closed 122 million mt/year of outdated ironmaking and nearly 70 million mt/year of steelmaking capacity during 2005-2010, but this was far outpaced by new capacity brought on-stream.

Last year, China added 25 million mt/year of new ironmaking capacity and 40 million mt/year of steelmaking capacity, according to MIIT. Meanwhile, its obsolete capacity decommissioning target for 2013 was just 2.63 million mt/year of ironmaking and 7.81 million mt/year of steelmaking.

Also last year, China’s crude steel capacity surged past the 1 billion mt/year mark, according to some estimates. The nation’s crude steel output reached 779.04
million mt in 2013, up 7.5% from 2012’s 724.69 million mt, according to the National Bureau of Statistics (NBS).

Hebei, a major industrial region surrounding Beijing which contains more than half of the 10 most-polluted cities in China, has been the focus of China’s anti-pollution drive.

On February 23, during the last major smog, the province scrapped 16 blast furnaces and three converters at 15 steelworks. The campaign eliminated 6.71 million mt/y of pig iron capacity and 1.49 million mt/year of crude steel capacity across Tangshan, Handan, Qianghungdao, Xingtai and Zhangjiakou cities. This was the first capacity eliminated in 2014 in Hebei.

Hebei has promised to remove 15 million mt/year of crude steel capacity in 2014 and has promised Beijing it will eliminate 66.72 million mt/year of ironmaking and 67.26 million mt/year of crude steel capacity by the end of 2017.

Tangshan city, Hebei’s largest steelmaking base, is drafting a plan to shutter 28 million mt/year of ironmaking capacity and 40 million mt/year of crude steel capacity by 2017.

The closures carried out so far, however, have been criticized for being box-ticking activities that have had little effect on actual overcapacity. Industry sources pointed out that the campaign in February once again targeted fairly small facilities and some of the plants demolished had actually not been in operation for some time because of the weak market. A Tangshan trader heard that one of the converters demolished had already been idle for about a year.

The largest concentration of facilities demolished about 3.3 million mt/year of pig iron capacity in Handan’s Wù’ān city. But a source at an affected mill told Platts that the BF eyed for closure at his mill had actually been shut down last year and a new, larger BF had already been commissioned to replace it.

Last November, a similar initiative dismantled ten blast furnaces and 16 converters and was also widely condemned as superficial. The facilities shut were from eight steel companies in Tangshan, Handan and Chengde cities, with a combined 4.56 million mt/year of pig iron capacity and 6.8 million mt/year of steel capacity – most of which had long before ceased production.

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