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By **John Richardson**

LONDON (ICIS news)--The future could be bleak for anyone who does not have a secure supply of naphtha.

“China could have a deficit of more than 35m tonnes by 2015," warns Sat Roopra, head of downstream oil, Asia Pacific, at oil and gas consultancy Wood Mackenzie.Will refiners - motivated primarily by serving the fuels markets – be willing and/or able to meet the huge deficit being forecast by Wood Mackenzie? "Perhaps not, even at any price, because the main job of the refiners is to fulfil demand for gasoline, diesel and other transportation fuels," says Paul Hodges, chairman of UK consultancy International eChem*.

"The first task for a non-integrated cracker or reformer operator will be to find a refiner with the potential to produce more naphtha. "The second job will be to persuade him to do so, given that naphtha production accounts for only 5% of total refinery output." More than 700 refinery projects have been announced globally, of which many are in the Middle East and Asia. This includes a large number of grassroots refining projects. But Wood Mackenzie believes that a significant number will either be delayed or cancelled because of the rise in construction costs and the tight contractor market.

China is building14 new refineries, many integrated with new crackers, as part of the 2006-2010 Five Year Plan. At the same time older, less efficient refineries are being closed down. This huge construction wave means that China has on paper achieved a delicate balance between naphtha supply and demand. Although the start-up of integrated refineries and crackers might be delayed because of the worldwide shortage of equipment, it seems likely that the projects will eventually happen because of the country's abundant supplies of capital and labour.

But the rapid increase in demand for motor vehicles has the potential to disrupt the fine balance between supply and demand for petrochemical feedstock. Transportation fuel prices are heavily subsidised in order to stimulate economic growth. The surge in car ownership in - some 14,000 vehicles are joining the roads every day, with the number of cars set to rise to 90 per thousand of the population in 2020 from 19 in 2006 - is a major factor behind soaraway GDP growth.

If it's a choice, therefore, between letting service stations run short of gasoline and petrochemical plants run dry of naphtha, the petrochemical producers are going to lose out. "The public are hardly going to riot if they run out of plastic bags, but might if they can't get their hands on enough fuel to run all their gleaming new cars," adds Hodges. Social stability is a major priority of the Communist Party. Delivering continued strong growth is a proven method of keeping most of the people in the wealthy coastal and southern provinces happy most of the time.

There is nothing new in the Wood Mackenzie warning: several other consultancies have been predicting a China naphtha deficit for some time. What's new is the scale of the shortfall and as a result the potential impact on global and regional cracker economics. The Japanese and the South Koreans, for example, have built petrochemical industries based on imported crude and naphtha. Both countries have big naphtha deficits and could find themselves competing in tight feedstock markets, where the Chinese will have the biggest demand and consequently the greatest financial muscle.

But, of course, naphtha is not the only liquid feed and alternatives include gas oil and liquefied petroleum gas (LPG). The rapid rise in diesel demand has pretty much shut down the gas oil option in China. LPG looks more promising on the supply side with the consultants predicting long global markets beyond 2010. Several Asian crackers operators have recently upped their LPG consumption in response to favourable economics.

But Hodges warns that many operators lack the commercial flexibility and the logistics facilities to take maximum advantage of LPG. "LPG prices started to fall in the second quarter of this year, but it took most producers three-four months to realise this and adjust their systems. By the time they had done so, the opportunity had disappeared because naphtha prices had fallen. "You need to have the commercial skills to respond quickly to changes in LPG markets, a sales team able to shift the different product mix that results from cracking more LPG, and storage tanks."

Today, though, the Asian ethylene industry is geared to run mainly on naphtha with these alternative feeds only providing a small percentage of the total feedstock requirement. And so the time could well be right to start giving some of your long lost friends in the refinery industry a call.

* Wood Mackenzie and International eChem have produced a new study into these issues - Feedstocks for Profit. Contact Paul Hodges for further details at phodges@internationalechem.com, Tel +44 20 7700 6100