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By Nigel Davis

LONDON (ICIS news)--Just how significantly will the petrochemicals world change over the next few years as great slugs of new production capacities are brought on stream?

As the centre of gravity of the business shifts towards the feedstock advantaged Middle East and the fast growing markets of Asia so does the industry's collective mindset. The upcoming capacity-driven downturn will be like no other: the feedstock additions are unprecedented. Most of the new production units will possess significant feedstock advantage.

Players in China and the wider Asia region will continue to be driven to cope with fast rising derivatives demand. Naphtha and LPG (liquefied petroleum gas)-based producers will come under particular pressure in an environment in which demand growth overall is expected to decline just as new product availability rises.

All of the new supply cannot be absorbed even under the most optimistic global growth scenarios. A new feedstocks study from International eChem takes a fresh look at the outlook for olefins and derivatives and also aromatics with the help of oil and refining analysts Wood Mackenzie.

One of the main conclusions from the work is that feedstock shortages are unlikely to continue. New ethane-based olefins supply coming on stream between 2008 and 2013 will reduce demand from naphtha and LPG based crackers. The new cost advantaged supply will always be competitive while the naphtha and LPG based players will be under pressure.

New refining capacities are also expected to shift the liquid feedstock supply picture. The consultants have built models around three global growth scenarios but the base case is for 3% GDP growth, a number which is close to the 1980-to-2000 average.

Different petrochemical products will grow at different multiples of GDP certainly but in the base case the new capacities are not absorbed until 2013/2014. Under the consultants' global downturn scenario, the new capacities for some producers are not absorbed until 2015 and production for others not until 2020.

The outlook, therefore, for many players is grim.

Producers based in Europe and North America are expected to lose export markets. Crackers in these regions will be forced to run at around 85% of capacity while producers

in the Middle East and in China run flat out. In the downturns of the 1980s and 1990s the majority of industry players were western and most had a similar mindset.

"This time round you have 60% of new capacity in the hands of people who want to run flat out," says International eChem chairman Paul Hodges. Petrochemical markets are going to become more complex, he suggests. And the business is likely to become increasingly regionally focused.

One of the most fascinating suggestions from the study is that the era of increasing petrochemical globalisation may well be dead. "It is misleading, and gives a false sense of comfort, to believe that individual regions will operate at similar rates in the next few years," Hodges suggests.

The Middle East and China, for instance, will account for 64% of the total increase in global ethylene capacity to 165m tonnes in the 2006-2013 period. "If these regions choose to maintain normal operating rates of 93%, then other producers will be forced to cut back," he says.

If demand growth slows markedly then producers will be under pressure to move from standalone to roll-through economics where one part of the business helps support another. Freight and logistics costs will become more important and act as a deterrent to inter-regional movements.

The advantage will lie with those regions that are either best balanced between supply and derivative consumption - the North America Free Trade Agreement (NAFTA) area, Europe and China - or have most feedstock advantage - the Middle East. Other regions will find it difficult to compete in export markets.

Amid such complexity integration and flexibility will provide the key to success alongside the ever-present drive to seek lower costs.

Companies will need to be in the right place at the right time.

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