



شرکت ملی صنایع پتروشیمی
مدیریت برنامه ریزی و توسعه

اهم اخبار جهان پتروشیمی

شماره ۴۴۶

جهان

۱. **توازن در بازار جهانی پلی اتیلن** ✓
بر اساس اظهارات مدیرعامل شرکت شورون فیلیس ، میزان عرضه و تقاضا در بازار جهانی پلی اتیلن ها طی چهار تا پنج سال آینده متوازن خواهد شد و رشد جهانی تقاضای پلی اتیلن در این زمان حدود ۱/۵ برابر رشد GDP جهان پیش بینی می شود.
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✓ بهره وری در عملیات تولید و انعطاف پذیری در انتخاب انواع خوراک نفت خام
✓ انعطاف پذیری در برابر تغییرات رخ داده در بازارهای مصرف (سوخت ها- مواد شیمیایی)
✓ کاهش هزینه های نگهداری، حمل و نقل ، سرویسهای جانبی و محصولات تولیدی

آمریکای شمالی

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بر اساس اعلان انجمن شیمی آمریکا (ACC) ، ناحیه آپالچین توانایی تبدیل شدن به دومین هاب صنایع پتروشیمی پس از منطقه خلیج آمریکا را در این کشور دارا می باشد.
مهمترین مزایای این ناحیه به شرح زیر می باشد:
✓ مجاورت با بزرگترین تولید کنندگان خوراک و مواد اولیه (از منابع شیل گاز)
✓ نزدیکی به کارخانجات ، صنایع تبدیلی و پایین دست محصولات شیمیایی
۵. **مروری بر تولید اتیلن - پلی اتیلن در آمریکا** ✓
توسعه صنایع اتیلن - پلی اتیلن در آمریکا بر اساس دو موج اول و دوم آن برنامه ریزی شده است هر چند که برخی تغییرات در موج دوم توسعه این صنایع دیده می شود که می تواند موجب لغو احداث برخی واحدهای کراکر اتیلن آمریکا شود.

✓ سناریوهای پیش روی صنعت پلی اتیلن آمریکا طی سالهای ۲۰۲۰-۲۰۱۷..... ۱۰

با نگاهی به شرایط فعلی صنعت پلی اتیلن آمریکا می توان پیش بینی کرد حاشیه سود این صنایع تا سال ۲۰۲۰ از وضعیت بسیار خوب به خوب تغییر می یابد. مهمترین دلیل این اتفاق متعادل شدن رشد اقتصادی چین (مهمترین بازار صادراتی تولید کنندگان آمریکایی) می باشد.

براساس پیش بینی ها تا سال ۲۰۲۰، کاهش ۴ میلیون تنی واردات LLDPE را در بازار چین شاهد خواهیم بود، در سایر نواحی جهان نیز بازار مصرف انواع پلی اتیلن ها روند کاهشی خواهند داشت.

✓ مشارکت ساییک و اکسون موبیل در یک مجتمع پتروشیمیایی..... ۱۴

شرکتهای اکسون موبیل آمریکا و ساییک سعودی توافق نامه ای را برای انجام مطالعات فنی- اقتصادی، FEED و احداث یک مجتمع پتروشیمیایی در خلیج آمریکا به امضاء رسانده اند.

◀ خاورمیانه

✓ توسعه صنایع ویژه پلیمری عربستان سعودی توسط شرکت داو کمیکال..... ۱۴

شرکت آمریکایی داو کمیکال در صدد احداث یک واحد تولید محصولات ویژه پلیمری و یک واحد سیلیکون در عربستان سعودی است. محصولات پلیمری ویژه در صنایع پوشش دهی لوله ها و تصفیه آب به مصرف می رسند. محصولات سیلیکون نیز در صنایع نفت و گاز، خورشیدی، داروسازی، خودروسازی و ساختمان کارآیی دارند.

✓ توسعه واحد LAB عربستان سعودی..... ۱۵

شرکت پتروشیمی فارابی سعودی در صدد توسعه ظرفیت تولید LAB و نرمال پارافین خود در شهر صنعتی ینبوع می باشد. خط تولید جدید این شرکت سالانه ۶۰۰ هزار تن LAB و نرمال پارافین را با نرخ بهره برداری ۷۰-۶۰ درصد تولید می نماید.

◀ آسیا

✓ رشد دو برابری سود دهی صنایع پایین دستی پتروناس مالزی..... ۱۵

سوددهی صنایع پایین دستی شرکت پتروناس مالزی در سه ماهه نخست ۲۰۱۷ در مقایسه با مدت مشابه سال قبل دو برابر شده و به ۵۹۵ میلیون دلار رسیده است. در این مدت دو میلیون تن انواع محصولات پتروشیمیایی توسط این شرکت به فروش رسیده است.

تهیه و ترجمه: احمد کشوری

Global PE market to be balanced over next 4-5 years – CP Chem

05 June 2017 18:59

Interview article by **Joseph Chang**

COLORADO SPRINGS, Colorado (ICIS)--The global supply/demand balance for polyethylene (PE) is likely to stay relatively balanced through the next four to five years, Chevron Phillips Chemical president Peter Cella said on Monday.

“If you go out four to five years, with expected demand growth and new supply, we would expect to see market conditions roughly where we are now – and that’s a good place to be with the market comfortably supplied,” said Cella on the sidelines of the American Chemistry Council (ACC) Annual Meeting.

He expects global PE demand to grow at 1.5 times GDP growth.

In a scenario of stronger global economic growth and certain PE plants starting up a few months behind schedule, the market could stay strong or balanced throughout the period, he noted.

However, if demand is not as strong and all the planned new capacity in the US starts up on time, conditions could be challenging, but “not last long”, he added.

“The same fears [of overcapacity] existed during the Middle East capacity wave – that Saudi Arabia and Iran would create a strong surplus. But it didn’t work out that way as demand grew and capacities did not come on as strongly,” said Cella.

Chevron Phillips Chemical is on track to start up its two new PE units in Old Ocean, Texas by the summer, while the 1.5m tonne/year ethane cracker in Cedar Bayou, Texas will start up by the end of the year, he said.

The PE units include a 500,000 tonne/year bimodal high density PE (HDPE) plant and a 500,000 tonne/year metallocene linear low density PE (LLDPE) plant.

While most of the PE capacity from the new units will be for US customers, a substantial portion would also be exported, with Asia and Europe being primary destinations, Cella noted.

Chevron Phillips’ PE exports from the new units would be close to the range of overall US PE exports today at about 20-25%. The company currently exports less than that amount, he added.

The company will sell the rest of the ethylene production from the new cracker on the merchant market, where it is already a major player.

“We’re net long ethylene, and it’s our business model to be net long. We like the flexibility of being involved in the merchant market with the advantages of having a diverse portfolio of demand for ethylene, as well as being more plugged into the space,” said Cella.

Integration creates operational efficiencies

4/19/2017

By Adrienne Blume, Executive Editor

NEW DELHI, INDIA—During Day 2 of IRPC 2017, Ashish Logani, Principal Process Engineer at Fluor, shared insights on how to overcome the challenges associated with integrating petrochemicals production and refining operations.

Drivers and challenges for refinery/petrochemical integration. Conventional operating modes of standalone refineries are not generating enough margins, Mr. Logani said. "Standalone refinery complexes do not stand in this world now. People are finding ways to integrate and make a coordinated, better [processing] complex."

Refinery/petrochemical integration is characterized by a number of drivers and challenges. For refining, these include:

- Processing heavier and sulfur-rich crudes
- Increasingly stringent environmental regulations
- Enhanced product specifications for sulfur, aromatics, cetane and RVP
- Evolving regional supply and demand dynamics for diesel versus gasoline
- High price of energy and utilities
- Shortage of hydrogen
- Limited monetization of C₂, C₃ and C₄
- Low refining margins.

For petrochemical producers, drivers and challenges include:

- Olefinic feedstock availability and price volatility
- Better margins
- High-value downstream integration opportunities
- Regional supply and demand dynamics for ethylene and propylene
- High prices for energy and utilities
- Competitive pressure of globalization
- Limited monetization of streams such as pyrolysis gasoline, hydrogen, and C₄=.

Benefits of integration. Many benefits exist for refinery/petrochemicals integration. Higher returns on existing and new assets can be secured through reductions in CAPEX, the establishment of a high-value product chain (i.e., depressed products from one chain can become

valuable feedstock for another) and additional opportunities for diversification in premium chemicals.

Operational efficiencies and flexibility can be achieved through optimized crude baskets, increased flexibility in gasoline blending and aromatics management, better management of FCC propylene and hydrogen, and increased flexibility to respond to market changes for fuels and chemicals.

Single-site benefits include reduced storage needs, the possibility of hot feeding, reduced transportation costs and lower utilities redundancy. Improved utilization of infrastructure, synergies in support functions, optimized resource allocation and scale of economies are additional benefits.

"Increased flexibility to respond to seasonal changes in the fuels market is possible when you have an integrated complex," Mr. Logani said. "Integration will always give you mutual benefits here."

Case study 1: Refinery/petrochemical synergies. The Principal Engineer then discussed two refinery/petrochemical integration case studies performed by Fluor.

In the first, a feasibility study was performed for the integration of a 1,000-Mtpy, standalone petrochemical complex based on imported naphtha, with a mega-refinery in Southeast Asia. Fluor examined dedicated versus integrated utilities and offsites systems. Selection drivers included lifecycle cost and maintainability.

"A very important benefit [of the integration] was a reduction in hydrogen generation unit capacity by 25%," Mr. Logani explained. "The reason? A lot of hydrogen from the petrochemical plant was going back to the refinery."

Major savings areas in utilities and offsites included a 50% reduction in imported naphtha, a near-100% reduction in imported LPG inventory, and shared storage with the refinery for H₂, C₃= and C₄.

Also, the complex was able to switch to river water from sea water for its raw water and cooling water needs. "The river water was cheaper to process than the seawater, making it a major area where we could save some money," Mr. Logani said.

Case study 2: Gas processing feeding to petrochemical. The second case study involved a linear programming modeling exercise to demonstrate varying levels of integration for a 12-Bcmy gas processing plant and a petrochemicals plant. The impacts of integration on operating cost, and simple payback by monetizing different intermediate streams, were studied.

In closing, Mr. Logani noted that, based on the second case study, monetizing stranded streams can boost operating margins by 45%–70%. Although the net effects after investment cost changes are much lower, simple payback can still be improved by 10%–25%.

A full study would need to be performed to consider additional investment cost changes, Mr. Logani noted

New report shows potential for major Appalachian petchem industry

5/24/2017

WASHINGTON — An economic report released by the American Chemistry Council (ACC) shows that the Appalachian region could become a second center of US petrochemical and plastic resin manufacturing, similar to the Gulf Coast. ACC President and CEO Cal Dooley presented the findings at a Capitol Hill press event with lawmakers including Senator Shelley Moore Capito (R-W.Va.), Senator Joe Manchin (D-W.Va.) and Rep. David McKinley (R-W.Va.)

"The Appalachian region has distinct benefits that could make it a major petrochemical and plastic resin-producing zone," Dooley said. "Proximity to a world-class supply of raw materials from the Marcellus/Utica and Rogersville shale formations and to the manufacturing markets of the Midwest and East Coast has already led several companies to announce investment projects, and there is potential for a great deal more."

ACC's report presents a hypothetical scenario that includes the development of a storage hub for natural gas liquids (NGLs) and chemicals (e.g., ethylene, propylene), 500-mi pipeline distribution network and associated petrochemical, plastics and potentially other energy infrastructure and manufacturing in a quad-state area consisting of West Virginia, Pennsylvania, Ohio and Kentucky. It uses the IMPLAN model to estimate direct, indirect and payroll-induced job impacts, as well as tax revenue impacts.

By 2025, the quad-state region could see 100,000 permanent new jobs, including 25,700 new chemical and plastic products manufacturing jobs, 43,000 jobs in supplier industries and 32,000 "payroll-induced" jobs in communities where workers spend their wages, according the report. The new investment could also lead to \$2.9 B in new federal, state and local tax revenue annually.

"The right policies are critical to realizing this opportunity," Dooley said. "The Appalachian Ethane Storage Hub Study Act of 2017 (S. 1075) is an important step forward. It will help inform efforts to maximize America's domestic energy and manufacturing potential." The bipartisan bill is sponsored by Senator Capito and co-sponsored by Senators Manchin and Portman.

"Uncertainty around financing is a key barrier to the development of energy infrastructure in the Appalachian region," Dooley continued. "Policymakers can help by affirming that NGL storage and distribution projects are eligible for existing private-public financing programs. As Congress and the Administration consider infrastructure modernization legislation, the Appalachian Hub should be a priority. And a timely and efficient regulatory permitting process is essential."

ACC's analysis projects a \$32.4-B investment in petrochemicals and derivatives and a \$3.4-B investment in plastic products, put toward the construction of five ethane crackers and two propane dehydrogenation (PDH) facilities. Three of the crackers would produce polyethylene and two would supply downstream petrochemical derivatives. Each PDH facility would contain a polypropylene resin plant. These capital investments are underway and will likely continue through the mid-2020s.

In the United States, chemical companies use ethane and propane, NGLs derived from shale gas, as key feedstocks. Plentiful and affordable supplies of natural gas and NGLs are enabling companies from around the world to build new US facilities or expand production capacity. Since 2010, 301 projects cumulatively valued at \$181 B have been announced, with nearly half completed or under construction.

IMPLAN is an input-output methodology—an economic model that quantifies interdependencies among industries or economic sectors. It is used by government agencies including the Army Corp of Engineers, US Department of Defense, US Environmental Protection Agency and over 20 others, and by over 250 colleges and universities, local governments, non-profits, consulting companies and other private sector companies.

US ethylene/PE boom massive and historic

30 May 2017 12:00

By **Lane Kelley**

HOUSTON (ICIS)--The big picture of the ethylene and polyethylene (PE) boom in the US and North America so far has been about waves, first and second waves, with so many new plants in the first one and so many in the second.

The numbers may change, maybe some of the plants in the second wave will not be built, but what it all means is more ethylene crackers and PE plants and a few other derivative units because of the advent of cheap shale gas that gives the US a global feedstock advantage.

But the bigger picture here is about this boom's place in history.

Kevin Swift, chief economist at the American Chemistry Council, says the US ethylene and PE boom is the biggest development in the petrochemical world since DuPont invented nylon in the late 1930s.

PE, polystyrene, styrofoam, polypropylene, polyvinylchloride – those and other resins spawned an entire industry that grew out of DuPont chemist Wallace Carothers' work with a superpolymer that became known as nylon 6,6.

The US petrochemical industry's first boom took off in the quarter-century following World War II, and PE became the engine behind that growth.

Why? Because PE is the basic material of the middle-class, from the stretch film on food, to all those flimsy grocery bags, to gas tanks in cars, bottles for motor oil and drinking water, picnic plates and utensils and a myriad of other products.

Now that PE engine is proliferating. Most of the new plants under construction are what a Sasol executive last year called “cracker-plus” projects, and the “plus” usually includes a PE plant.

But one of the odd facts about this cracker-plus boom is that the US already has too many PE plants, at least for the domestic market.

American PE producers already make more than they can sell here, so they discount the resin and move it offshore, with PE exports accounting for roughly 20% of sales in any given month.

With 48 PE plants currently operating in the US, that means 10 of them are for export-only, and that’s not counting four more (ExxonMobil, Dow, CP Chem and INEOS/Sasol) that will most likely be running by this time next year.

PE exports accounted for 23% of sales in 2016, according to industry data. LyondellBasell CEO Bob Patel expects the PE export share to rise to [30%](#) or higher in the near future because of the new plants.

BILLIONS AND BILLIONS OF POUNDS

The most popular criticisms so far have been that there are too many US PE plants, and that the US cracker-plus boom is a huge gamble where the odds are great that something will go wrong.

Peter Huntsman called it a bubble bound to burst at a [Texas](#) conference earlier this year. “To put billions and billions of pounds into the market and not see a disruption is unrealistic,” Huntsman said.

But what market are those billions and billions of pounds going into?

The US, to start with, but the conventional wisdom among buyers is that most of the new American PE capacity will be exported.

That idea is hardly a widespread assumption among producers, though, who have been all over the board on how much they plan to export. Some say they will devote all of their new plant capacity to exports, and some say very little.

ExxonMobil’s two new 650,000 tonne/year PE units will be 100% dedicated to exports because there is no railcar access to the plants, according to a conference presentation.

An executive at Sasol late last year also suggested a high percentage, providing proof that there are at least two producers who plan to export at least half or all of the new resin made at their plants.

Two other producers have said they will export less.

An executive at [CP Chem](#) recently said that the plan is to initially export about 30-50% of the two new 500,000 tonne/year PE units at Old Ocean, Texas, with the export percentage eventually shrinking to 20%.

And then there is Dow chairman Andrew Liveris, who has said that Dow initially expected that it would have to export a portion of its new capacity but now such a prospect seems unlikely because of good economic demand drivers.

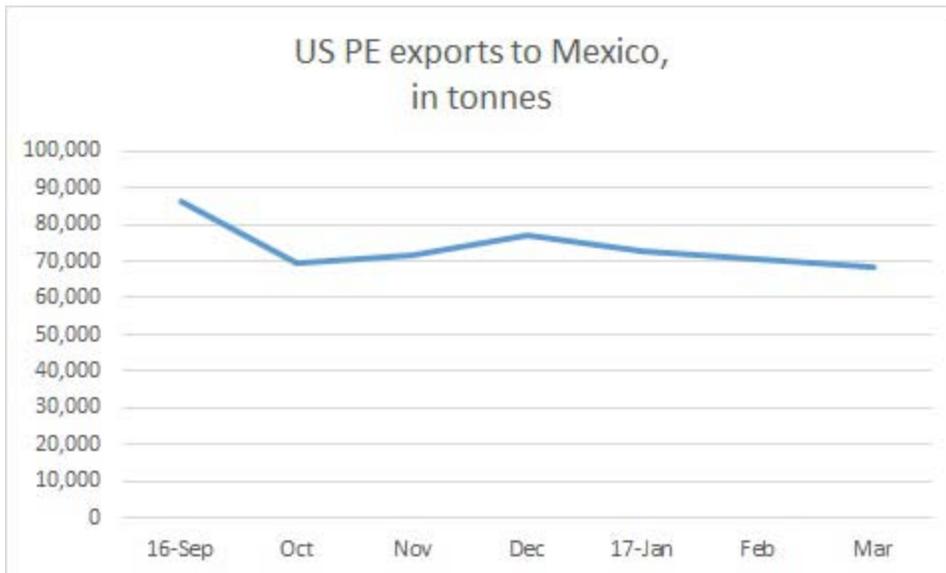
Industry wisdom at this point holds that PE producers will have to export at least 40-50% of their new resin.

A US distributor says some producers talk about taking an additional 10-15% in US market share with their new plants, but the distributor chuckled at the thought, considering that the producers are exporting so much now because they could not sell the material domestically.

Which leads to the question of where producers will sell so much of this new PE outside of the US.

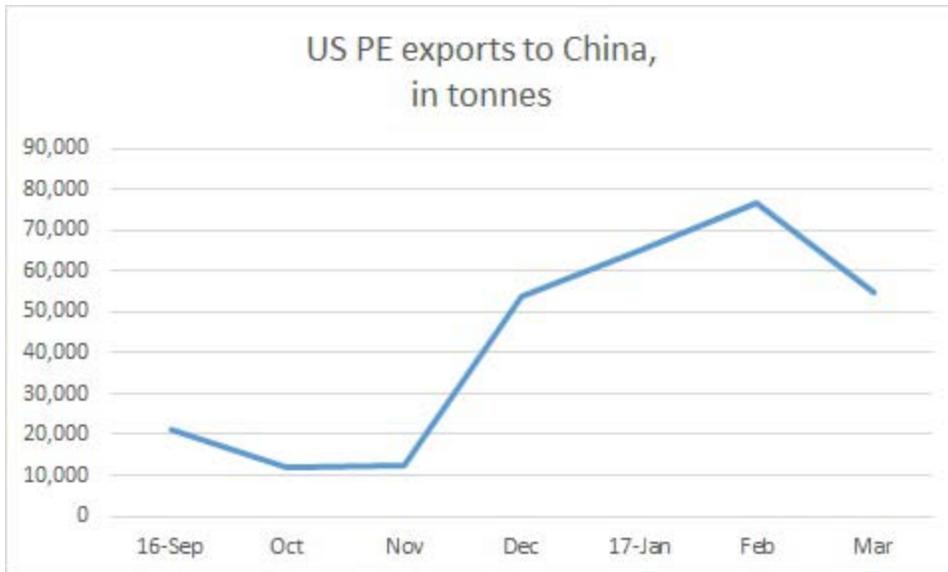
THE BRASKEM EFFECT AND THE CUSTOMER IN SHANGHAI

Mexico and China are the top US PE export destinations now, but Mexico's buying has tailed off in the past year because of the Braskem effect. The startup of the new Braskem Idesa plant in Veracruz last year put a damper on US PE exports to Mexico.



Source: American Fuel and Petrochemical Manufacturers (AFPM)

Meanwhile, PE exports to China have more than doubled in the same period, and shipments to China could surpass those to Mexico this year if the buying keeps up .



Source: AFPM

Patel at LyondellBasell recently said that a PE customer in Shanghai is as important as one in Chicago.

But what if the customer in Shanghai quits buying?

Moody's Investor's Service recently cut China's credit rating for the first time in nearly three decades, citing expectations that the country's financial strength will deteriorate in coming years as debt keeps rising and the economy keeps slowing.

If the slowdown in China continues then it might affect the buying patterns of Patel's customer in Shanghai, though that seems a longshot at this point.

China produces roughly two-thirds of the PE it needs right now, and that will not change anytime soon, says ICIS consultant John Richardson. "No matter how you spin this story it looks like China will have a substantial [PE] deficit for many years to come, based on current assumptions," Richardson said at a recent conference.

He warned, however, that visibility on Chinese petrochemicals projects was a constant challenge, and that there was a risk that PE self-sufficiency could be much higher than people expect.

China had previously surprised everyone by the speed and scale of their capacity expansions in other chemicals and polymers, he added.

THE 4% SOLUTION

PE producers say they have heard such criticism before.

A [Dow](#) executive speaking at a conference in Bangkok late last year waved off the criticism about the big gamble and where the new resin would be exported.

The executive, Mark Saurin, said the current US boom is not that different from the wave of new polymer plants that were built in the Middle East and Asia during 2009-2013.

Saurin said four million tonnes of new PE capacity was added each year during that period. The additional capacity – about 20m tonnes, or roughly the size of US PE capacity now – was swallowed up by growing demand in those regions, especially in Asia.

Saurin said PE demand in Asia grew from 7m tonnes/year in 1990 to 42m tonnes at the end of 2015.

Meanwhile, the producers have plenty of data to show that the world wants more plastic.

Saurin cited data showing global GDP growth has averaged 2.9% annually over the past 25 years, while global PE demand has averaged 1.5 times GDP – 4.3% - during that same period.

During the last quarter century, PE global demand has more than tripled, from 30m tonnes to 92m tonnes now and there are research studies predicting 100m tonnes by the end of 2018. The Dow executive predicted that the global PE market will grow 4% annually through 2020.

LyondellBasell's Patel used a similar percentage in an interview earlier this year, saying global PE demand has grown consistently by 4-5% globally and he expects that trend to continue.

The current cracker/PE boom shows a truly American habit at work, says Paul Bjacek, a principal director at Accenture who leads the firm's chemicals and natural resources strategic research.

Bjacek said the US has always excelled in scale production. "The US manufacturers know how to make things big, especially the integrated oil companies," Bjacek said.

Bjacek added that one of the crucial statistics for the current boom is producers' belief in 3-4% annual world growth for PE, which by Bjacek's estimate requires 4-6 new worldscale complexes each year, according to statistical models.

PE growth could be less, but Bjacek said he doubts there is much chance of a global downturn.

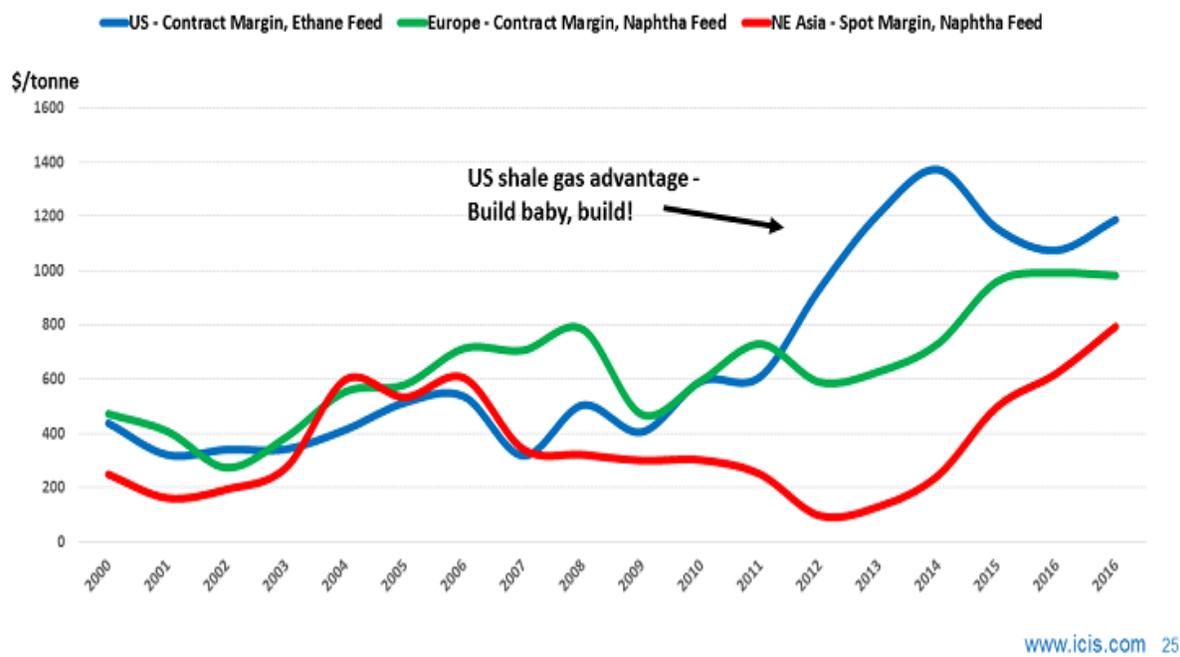
He said the world economy has never gone negative during a recession for a full year looking back as far as 1980, except during the great recession of 2009, when it declined by 1.6% but jumped up by 3.9% the year following.

"It's all based on world economic growth at the end of the day," Bjacek said. "Ethylene market performance depends on the global, not the regional supply/demand situation."

US Polyethylene Industry: Scenarios For 2017-2020

By [John](#) on 31 May, 2017 in [Business](#), [China](#), [Company Strategy](#), [Economics](#), [Europe](#), [India](#), [Indonesia](#), [Malaysia](#), [Middle East](#), [Oil & Gas](#), [Olefins](#), [Philippines](#), [Polyolefins](#), [Singapore](#), [South Korea](#), [Thailand](#), [US](#)

Global integrated variable cost PE margins 2000-2017



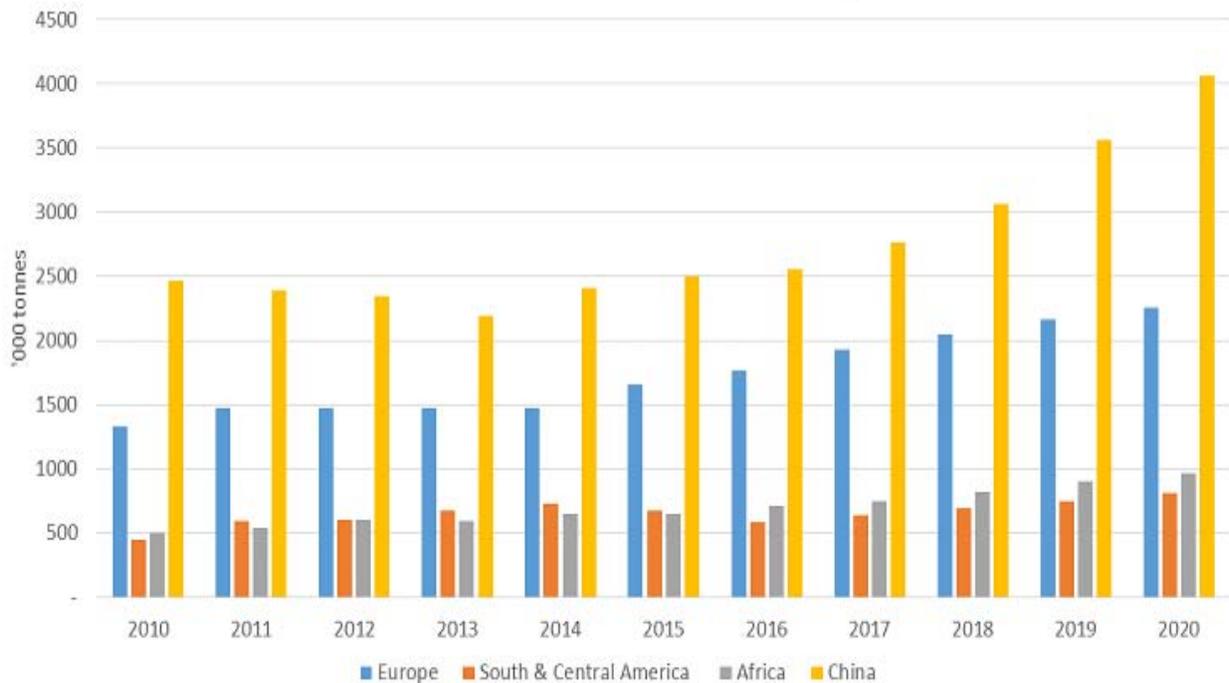
By John Richardson

IT has been a remarkably strong few years for the US polyethylene (PE) business. The shale gas revolution has sent ethane costs plummeting, resulting in the kind of margins that you can see in the above chart. Lower oil prices have made naphtha cracking a lot more competitive of late, but the chart illustrates how US ethane-based PE producers still have a significant edge.

And most of the consensus-view forecasts for the next three years are that US margins will only fall from very, very good to good/average, despite the big build-up in new US capacity from now until 2020.

This view largely depends on a [healthy Chinese economy](#) because the US exposure to China. The chart below, from our Supply & Demand database, is a reminder of the extent of this exposure.

LLDPE: Deficit countries and regions



ICIS Supply & Demand Database

By 2020, if nothing goes much wrong with economic growth, we expect China to have a deficit of just over 4m tonnes in linear-low density PE (LLDPE).

The implications of a slowing China

In second place will be Europe at 2.3m tonnes, followed by the developing world ex-China that will have much-smaller deficits. Despite all the talk of the “rising middle classes” in the emerging world in general triggering lots more PE consumption, the numbers tell a different story:

- Africa will need to import slightly less than a 1m tonnes of LLDPE by 2020 and South and Central America around 800,000 tonnes.
- The Asia & Pacific region, which includes Southeast Asia and the Indian subcontinent, doesn't even feature on this chart because we expect it to be in net surplus by 2020.

It is the same pattern in the other two major grades of PE – high-density PE and low-density PE: The US is hugely exposed to events in China.

A severe economic slowdown in China might result in LLDPE demand growth falling below our base-case expectations. This could translate into import demand in 2020 at less than 4m tonnes. The knock-on impact on the [rest of the world of a slower China](#) would also be significant, meaning the potential for lower import requirements in Europe and Africa etc.

Our base case for China's LLDPE demand is that it will rise from around 10.3m tonnes in 2017 to approximately 12.5m tonnes in 2020. This is built on our assumption that GDP will grow by an average of 6.1% per year during this period, with LLDPE consumption growth at an average of 7% per annum. This means we expect LLDPE will grow at a multiple of around 1.16m times GDP.

But during a confidential internal company presentation in Shanghai last week, a leading economic research body gave a very different view of China. Their base case was for an economic hard landing in 2018 as a result of China's debt problems. They defined this hard landing as 2018 GDP growth at just 4.5%.

In my view, this feels a little too pessimistic. But it is by [no means guaranteed that China will escape](#) a financial crisis, and so a hard landing, as its level of indebtedness is higher than in Japan ahead of its 1990s financial crisis – and in the US just before the sub-prime collapse.

So let's assume, for argument's sake, that China's GDP growth does fall to 4.5% next year. Let's next assume that it bounces back to 5.9% in 2019 and 5.8% in 2020 – our base case assumptions. This would leave average GDP growth in 2017-2020 at just 5.7%.

This would leave LLDPE demand at around 12.4m tonnes in 2020 – some 100,000 tonnes less than in our base case, using the same multiples over GDP. Not a big difference. But what about the knock-on effect on other regions? And is it reasonable to expect GDP to bounce back so quickly in 2019 and 2020?

There is another aspect to this story and this is of course local supply. In times of economic weakness, Western companies tend to cut back on production as their profitability declines.

Not in China, though. History tells us that central and local government officials often insist that petrochemicals and other plants run harder during times of economic weakness. The reason is to generate more tax revenues, and to guarantee employment downstream through greater volumes of local PE resin. Our base case assumes an average local LLDPE operating rate of 94% in 2017-2020. But what if this were to rise to say 97%? This would further lower the deficit, or import requirement, in 2020.

There is another variable to the 2017-2020 local production story, and that is the speed with which new projects are implemented. Some [10 naphtha cracker projects have been announced](#) in China over the last few months, mainly for start-up from 2019 onwards. But what if some of these projects were accelerated for the sake of the “economic multiplier” benefit that the extra construction activity would deliver to a slowing overall economy? This would exert further reduce LLDPE and other PE imports.

The US-China trading relationship

Right now, the US seems to need China on its side, perhaps because of China's ability to [exert geopolitical pressure](#) on North Korea. And/or maybe there has been a shift in [the White House's attitude towards](#) its trading relationship with China, and towards free trade in general.

Whatever the reason, it feels as if the threat of a [US-China trade war](#) has receded for the time being, which could bode well for the US's ability to export PE to China up until 2020.

But this will of course make no difference to the challenge of distance. Competitors in the Middle East India, Southeast Asia and South Korea etc. are much better geographically positioned to deliver to China in shorter timeframes.

Unless, that is, US companies opt for the “logistics hub” approach – building PE warehouses in say Singapore to serve China, or in China itself. Resin would be delivered to these warehouses first, and then orders would be taken from end-users. This would make delivery times comparable with competitors in SEA and South Korea.

Building these hubs would, however, require extra capital costs – and would run the risk of inventory revaluations. Sudden falls in pricing could leave producers with losses on stocks held in these logistics hubs.

Back in the US, port congestion is a big concern as several new US PE plant come on-stream in a short space of time. PwC warns that the US chemicals industry in general could [see \\$29bn extra in operating costs](#) over the next 10 years because of logistic inefficiencies.

There is also the question of how delays might hit sales volumes. How will US producers that don't opt for the logistics hub approach get their PE to the China market quick enough to win market share from their overseas competitiveness?

And please make a note of this: The US is starting from a weaker position than a decade ago, as in 2016 its total PE exports to China were 460,000 tonnes compared with a million tonnes in 2006.

Perhaps margins will only fall from very, very good to good/average by 2020, at least on a variable cost basis. But will this be enough to pay all the money back spent on new projects? And will the returns be good enough to satisfy the expectations of shareholders?

As always, I could be wrong. And I again hope this will turn out to be way-too pessimistic. But you do need multiple scenarios in today's very uncertain environment – much more so than before [the end of the Economic Supercycle](#). So I hope that this helps you start the process of building these scenarios.

ExxonMobil, SABIC to conduct study, plan FEED for US petchem project

22 May 2017 00:11

HOUSTON (ICIS)--US-based ExxonMobil and Saudi Arabia-based SABIC have agreed to conduct a detailed study and plan for the front-end engineering and design (FEED) work on a proposed petrochemical project in the US Gulf Coast, ExxonMobil announced on Saturday.

[Announced in July](#), the Gulf Coast Growth Ventures project would include a 1.8m tonne/year ethane cracker, a monoethylene glycol (MEG) plant and two polyethylene (PE) units.

[In April](#), the companies selected San Patricio county, Texas, as the site for proposed project.

“This agreement represents an important step in the progression of the Gulf Coast Growth Ventures project,” Philippe Ducom, president, chairman and chief executive officer of ExxonMobil Saudi Arabia.

Dow to develop Saudi Arabia specialty polymers facility, moots silicones investment

23 May 2017 17:30

LONDON (ICIS)--Dow Chemical is to construct a specialty polymers facility in Saudi Arabia and is exploring the development of a new silicones complex in the country, according to the US-headquartered producer.

The company has signed an agreement with the Kingdom to build a facility producing polymers for coatings and water treatment applications, developing the foothold in the region established by its Dubai coatings facility.

Dow has also signed a memorandum of understanding to carry out a study on the feasibility of developing a siloxanes and high-performance silicones facility in the country, targeting the oil and gas, solar, medical devices, automotive and construction sectors, the company added in a statement released over the weekend.

Dow has numerous joint ventures in the country, including the world-scale Sadara complex being developed with state oil player Saudi Aramco, but these facilities are being developed under the Dow Chemical banner.

Foreign businesses usually need to form joint ventures with local partners to operate in Saudi Arabia. Last year, Dow became the first company to receive a licence from the Saudi Arabian

government allowing 100% ownership in the country's trading sector.

“Dow has been a long-term strategic partner in Saudi Arabia for nearly four decades and is the largest foreign investor in the country,” said Dow CEO Andrew Liveris.

Saudi's Farabi plans LAB expansion with new plant in Yanbu

23 May 2017 09:21

SINGAPORE (ICIS)--Saudi Arabia's Farabi Petrochemical is planning to expand its production of linear alkylbenzene (LAB) and feedstock normal paraffin with the development of a new complex in the Yanbu industrial city, company sources said on Tuesday.

Farabi's new petrochemical complex is set to produce over 600,000 tonnes/year of petrochemical products with LAB and n-paraffin production expected to account for 60-70% of that capacity.

Farabi signed a contract with developers on Monday and construction is expected to start soon while commercial operations are due in Q1 of 2020.

Output from the new facility is aimed at supplying Farabi's existing export markets as well as domestic demand.

Farabi currently operates a LAB plant at an existing facility in Jubail, which has a nameplate capacity of 140,000 tonnes/year.

Malaysia's PETRONAS Q1 downstream profit more than doubles

02 June 2017 13:43

SINGAPORE (ICIS)--PETRONAS' downstream profit after tax more than doubled to Malaysian ringgit (M\$) 2.86bn (\$595m) in the first quarter of this year from M\$1.28bn in the same period of 2016 amid higher product prices, the Malaysian state-owned oil and gas major said on Friday.

Revenue rose to M\$27bn in the first quarter ending 31 March from M\$20.5bn in the same period of 2016, the company said in a statement.

Petrochemical sales volumes rose to 2m tonnes in the first quarter of this year versus 1.7m tonnes in the same period of 2016, in line with higher production, it said.

On a group basis, the company's first-quarter profit more than doubled to M\$10.3bn from M\$4.6bn in the corresponding quarter of last year.

Revenue for the quarter ending in March rose to M\$61.7bn from M\$49.1bn in the same period of 2016.

(\$1 = M\$4.81)