

REACTION

Chemical Magazine / Seventh Edition

The miracle of shale and the future of US chemicals



cutting through complexity



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minerals:**

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suspensions
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Introduction

Welcome to the latest edition of Reaction Magazine. The overall feeling continues to be one of uncertainty and mixed signals. Growth in China is slowing, the US economy is growing strongly but remains susceptible to outside shocks, as evidenced by the recent volatility on stock prices, while Europe continues to grapple with the trade-off between economics and political reality. In the chemical industry, the most recent worrying data is CEFICs downgrade of European chemical industry growth for 2012 to zero percent.

With so much change affecting the industry, we focus this issue on the future of the US chemical industry and particularly the impact of shale gas which has reinvigorated the country's commodity chemical sector. We also take a look at an opportunity for chemical producers to reduce their tax burden by taking advantage of EU tariff suspensions and duties; as well as seeing how the Dodd-Frank Act is creating a regulatory reporting burden for chemical companies with precious metals in their production processes or supply chains.

As ever, we continue to be active in the industry. KPMG in Australia was a gold sponsor of the Plastics and Chemicals Industry Association's National Conference held in Sydney this month. We are looking forward to our annual chemical industry event this September in Shanghai – we hope to see many of you there.

We will be back with our annual industry survey in September – given all of the change above, the results should be interesting. If there are any topics you would like us to cover in future editions of Reaction, please do not hesitate to contact us.



Mike Shannon
Global Chair
Chemicals and Performance
Technologies

A full-page background image showing a worker in a dark industrial setting, wearing protective gloves and a mask, pouring a bright, glowing stream of molten metal from a large ladle into a mold. The scene is dimly lit, with the primary light source being the intense orange and yellow glow of the molten metal.

TRACING CONFLICT MINERALS:

The implications of the **Dodd-Frank Act** for the chemical industry

By Sara Ellison

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In July 2010, US President Barak Obama signed the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2012 into law. While the law, commonly referred to as the Dodd-Frank Act, is best known for bringing significant changes to financial service firms in the US, the Act also contains a provision that may seriously affect many chemical companies around the world and may add new complexities and costs to the chemical business environment at least in the foreseeable future.

Put simply, the Dodd-Frank Act contains a section titled “Miscellaneous Provisions” which requires SEC-registered companies to trace and report the source of certain minerals, known as conflict minerals that may be used in their manufacturing process (which currently includes contract to manufacture, production process and packaging). The provision aims to reduce the global sale of specific metals sourced from mines in the Democratic Republic of Congo (DRC) or certain neighboring countries in Central Africa where the proceeds of mining activity have been used to finance armed militias. The list of minerals includes tin, tungsten, tantalum and gold (often referred to as 3TG).

Initially, the SEC, who has been directed by the Act to publish rules for compliance by June 2012, estimated that the law would impact about half of the SEC’s registrants, roughly 6,000 companies in all. But it has been widely noted that this number only includes companies that would be required to make conflict mineral disclosures within their annual reports (by way of 10-K, 20-F and 40-F submissions). The SEC’s estimation does not take into account the wide range of companies operating within the supply chain who would be indirectly affected by the Act.

Essentially, the law requires any SEC registrants to conduct due diligence

of its supply chain (which will include private companies) to determine the sourcing of these minerals. If they determine the minerals are sourced from the DRC or surrounding countries they must include in a conflict minerals report furnished as an exhibit to the public filings subject to independent audit. Affected companies must report on how they determined the source of their metals and – if the origin is determined to be either the DRC, surrounding countries or of unknown origin – they must also trace their supply chain to identify the source of the materials. Ultimately, the companies involved would include a conflict minerals report subject to item, a new disclosure in their 10-K or 20-F reporting and include on their corporate websites.

It is worth noting that the Dodd-Frank Act does not actually prohibit companies from sourcing conflict minerals, nor does it currently include an enforcement mechanism. Rather, the intent is to rely on public pressure. Companies that do not comply with this provision risk facing negative public opinion and significant backlash from NGOs, and – as a result – may lose their customer base.

So while the Act is directly aimed at manufacturers and retailers, much of the burden will likely fall on downstream suppliers who will need to ensure they have properly sourced and documented minerals within their own supply and manufacturing processes.

The imperative for chemical companies

Chemical companies – both those registered with the SEC and their suppliers – may well be affected by the new law. The reality is that 3TG minerals are used in a number of chemical processes: gold is widely used in chemical compounds used to make certain semiconductors; tantalum is used in catalyst baths to support the manufacturing process for items such as aircraft engines; tungsten is frequently used as a catalyst for speeding up chemical reactions. This would be considered their production process as described in the proposed rule.

As a result, those chemical companies that are SEC registrants will experience a direct impact as they strive to comply with the law's disclosure requirements. But suppliers to SEC registered companies may also feel an increased compliance burden, albeit indirectly, as their customers start to demand detailed and audited records of the source of their materials.

In a set of rules proposed in December 2010, the SEC attempted to clarify that the law did not specifically apply to tools used in the assembly or manufacturing processes, but rather minerals or metals

that are incorporated directly into the final product. However, there is – as yet – no guidance on the applicability of the Act on intermediate chemical processes using chemicals that may contain conflict minerals. Neither the Act itself, nor the proposed regulation provide for a 'de minimis' quantity that would form a materiality threshold under which companies may preclude the audit and reporting requirements.

It is also worth noting that the concept of responsibility within the Act is also rather broad and companies would be deemed responsible for the contracting of an item for manufacturing if:

- the company exerts any influence over the manufacturing process;
- the minerals used in the production process are necessary to the item's functionality (whether or not they are included in the end product); or
- the company offers a generic product either under its own brand name or a separate brand name (regardless of the level of influence the company has over the process itself) where the company contracted to have the product manufactured for its own use.

Those chemical companies that are SEC registrants will experience a direct impact as they strive to comply with the law's disclosure requirements.

Working towards compliance

It is critical, therefore, that chemical companies take immediate action to investigate, track and document the source of their materials. While this compliance burden may be conducted by in-house professionals such as internal audit, supply chain and procurement professionals, compliance officer, general counsel, and/or sustainability manager, the complexity

of establishing a clear audit trail to the mine or smelter, is requiring many companies to obtain external forensic auditing support.

KPMG in the US will be hosting a webcast on the final rules for conflict minerals once they are released by the SEC. Chemical executives interested in joining should e-mail: us-conflictmin@kpmg.com to register.



The future of the



chemical



industry

By Mike Shannon, Paul Harnick and Tom Meike

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The past two years have seen a dramatic change in the outlook for US chemical companies. In 2010, the industry seemed well rationalized, but with few opportunities for significant revenue growth and – outside of R&D – precious little expansionary investment.

With the commercialization of shale gas in the US, the industry has seen a remarkable turn of fortune. Today, the outlook for many US chemical companies feels overwhelmingly upbeat. With a new and abundant source of low-cost feedstock, the US market has transformed to become one of the most advantageous markets for chemical production in the world.

The changing dynamics have spurred a wave of new investments (according to the ACC, almost US\$25 billion has been earmarked by US chemical companies for the construction or expansion of new facilities¹) that have signaled a renaissance for commodity chemical production. The availability of low cost energy and feedstock in the

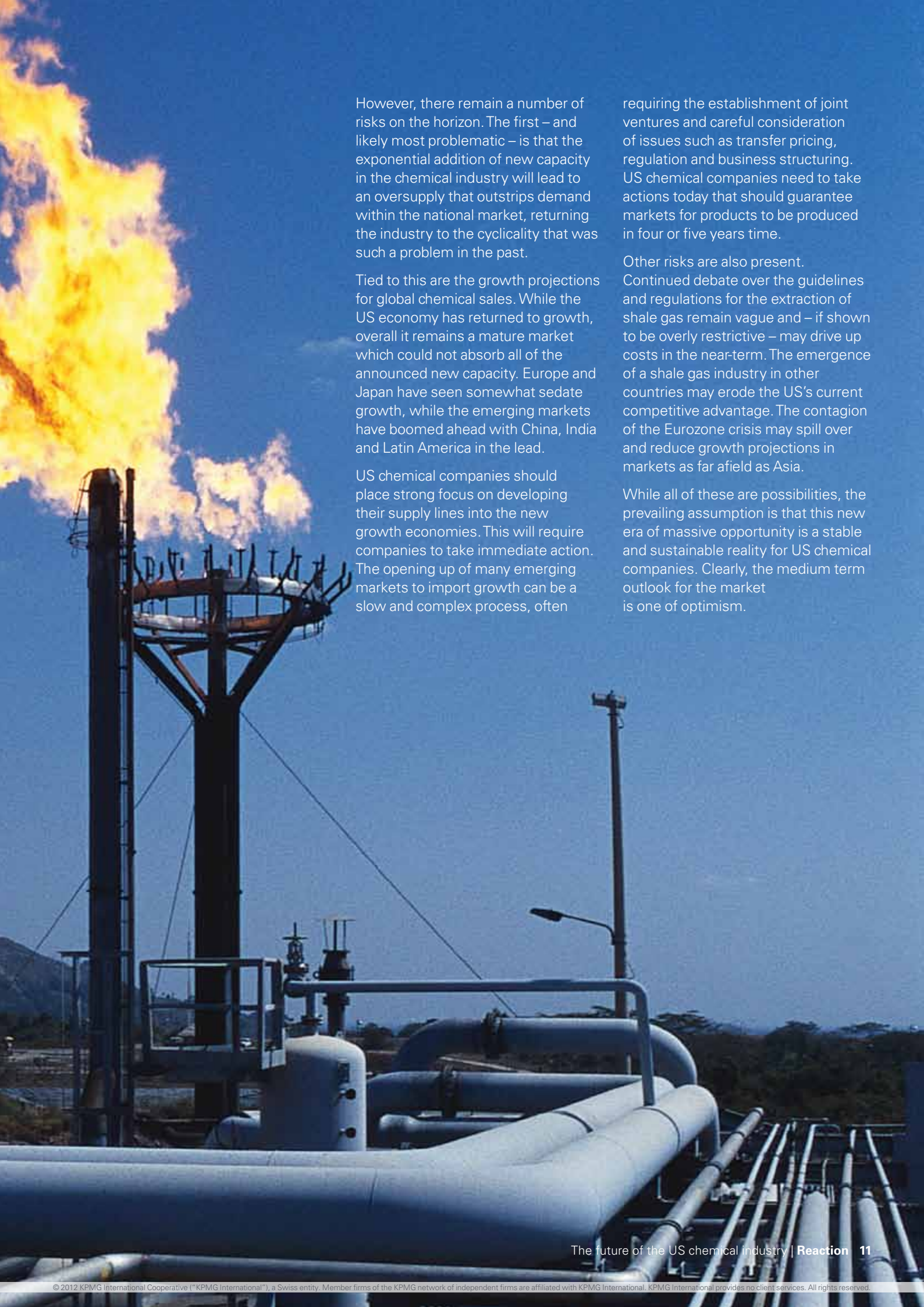
form of shale gas has already provided a boon to the economy and, notwithstanding another economic shock, should help consumers and manufacturers drive the economy into an era of steady growth.

Much can also be said for the industry's recent actions aimed at reducing the cost base. Indeed, out of the turmoil of the 2008 global financial crisis, many US chemical companies have made significant progress in reducing their operating costs, rationalizing operations and increasing margins. Significant consolidation has been occurring, even while companies take advantage of new opportunities in outsourcing, tax efficient supply chain management and cost rationalization.

The tenacity of the US economy has also played a part in returning optimism to the US chemical industry. True, the long-awaited recovery has been slow to take hold, but the outlook for the US economy, particularly when juxtaposed against the woes of the Eurozone, seems positive and steady. As a result, many US chemical companies are anticipating a period of economic expansion – auto sales are growing strongly and growth will inevitably return to the construction sector as well.

United States **chemical companies** should place **strong focus** on developing their **supply lines** into the **new growth economies**.

¹ <http://www.smartbrief.com/redirect.action?link=http%3A%2F%2Fplattsenergyweektv.com%2Fnews%2Farticle%2F203900%2F293%2F042912-US-Petrochemicals-Surge-on-Bullish-Gas-Outlook&encoded=dDeUCcbpoQCdeJgcCidmghCicNrjQY>



However, there remain a number of risks on the horizon. The first – and likely most problematic – is that the exponential addition of new capacity in the chemical industry will lead to an oversupply that outstrips demand within the national market, returning the industry to the cyclicity that was such a problem in the past.

Tied to this are the growth projections for global chemical sales. While the US economy has returned to growth, overall it remains a mature market which could not absorb all of the announced new capacity. Europe and Japan have seen somewhat sedate growth, while the emerging markets have boomed ahead with China, India and Latin America in the lead.

US chemical companies should place strong focus on developing their supply lines into the new growth economies. This will require companies to take immediate action. The opening up of many emerging markets to import growth can be a slow and complex process, often

requiring the establishment of joint ventures and careful consideration of issues such as transfer pricing, regulation and business structuring. US chemical companies need to take actions today that should guarantee markets for products to be produced in four or five years time.

Other risks are also present. Continued debate over the guidelines and regulations for the extraction of shale gas remain vague and – if shown to be overly restrictive – may drive up costs in the near-term. The emergence of a shale gas industry in other countries may erode the US's current competitive advantage. The contagion of the Eurozone crisis may spill over and reduce growth projections in markets as far afield as Asia.

While all of these are possibilities, the prevailing assumption is that this new era of massive opportunity is a stable and sustainable reality for US chemical companies. Clearly, the medium term outlook for the market is one of optimism.

The miracle of shale gas

One would be hard pressed to overestimate the impact of the commercialization of shale gas on the US chemical industry. As Dow Chemical CEO Andrew Liveris put it, "And then along came shale gas – this gift, this miracle."

At its root, the discovery of abundant reserves of shale gas in the US has driven down the natural gas price and created a massive competitive advantage for US companies.

Between 2007 and 2009, proven shale gas reserves in the US jumped from 23.3 trillion cubic feet to 60.6 trillion cubic feet². The US Energy Administration expects reserves to

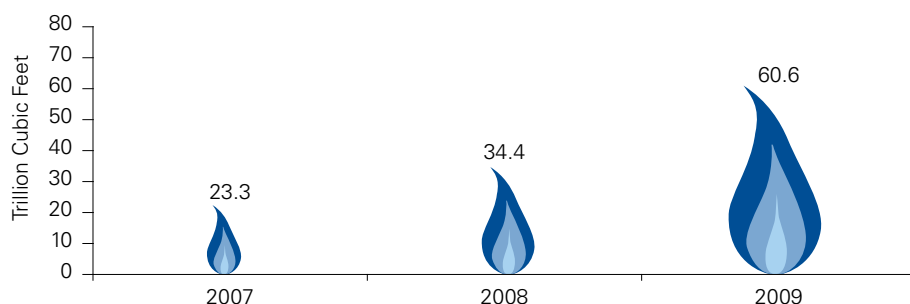
continue expanding, driving production from just 2.91 trillion cubic feet in 2009 to 8.09 trillion cubic feet in 2015 and then steadily climb to 13.56 trillion cubic feet by 2035³.

The resulting price impact on the gas market has been significant. The discovery of ample and low-cost shale gas has helped the US Henry Hub Gas Price decouple from the price of US crude oil, thereby enabling the US market to enjoy historically low gas prices. In March, 2012, the US gas price fell to just US\$2 per million BTU, its lowest point this century⁴. Over the same period, the price of US crude has rocketed up almost 360 percent to

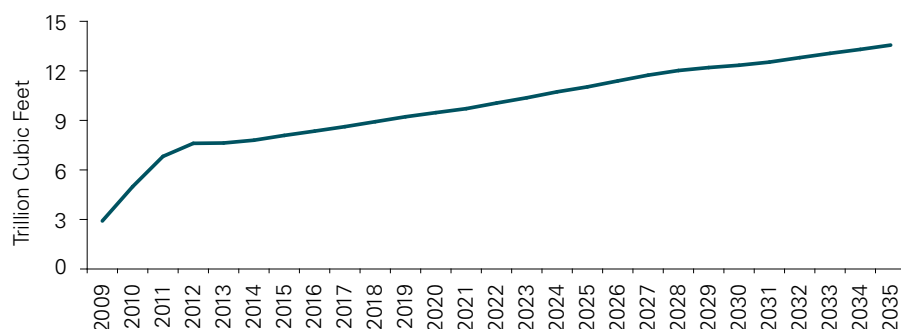
reach a four year high in March 2012 of US\$18.3 per million BTU⁵.

The cost implications for the US chemical industry have been equally impressive. Generally, a ratio of 6-1 between crude oil and gas prices is enough to make the US chemical environment 'favorable'. At today's prices, the disparity is more like 9-1, creating lasting advantages for US producers. "When you have that disparity, you have an advantage for natural gas-based feedstocks compared to crude oil-based feedstocks that will persist," said Carlo Barrasa, IHS Chemical's Director of NGLs and cracker economics⁶.

Proved shale gas reserve (as of 31 December)



Estimated production of shale gas



Source: US Energy Information Administration, accessed on 30 April 2012; AEO2012 Early Release Overview, EIA, 23 January 2012

² Source: US Energy Information Administration, accessed on 30 April 2012; AEO2012 Early Release Overview, EIA, 23 January 2012

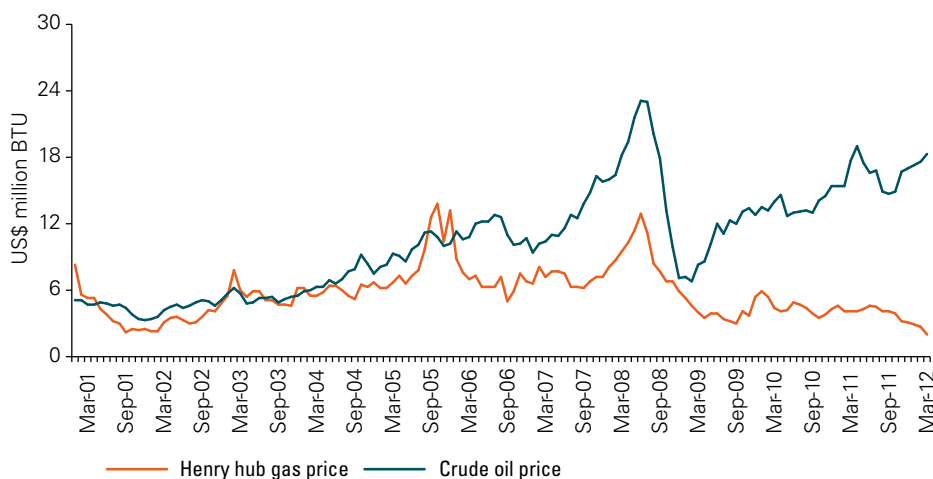
³ Source: US Energy Information Administration, accessed on 30 April 2012; AEO2012 Early Release Overview, EIA, 23 January 2012

⁴ Source: IMF, Primary Commodity Prices

⁵ Source: IMF, Primary Commodity Prices

⁶ http://www.chemweek.com/sections/cover_story/42235.html

US crude oil and Henry hub gas price, January 2001–March 2012 (US\$ million BTU)



Source: IMF, Primary Commodity Prices

According to **ACC President** and CEO Cal Dooley, the **chemical industry** is currently considering about **30 new or expanded United States facilities**, with investments of up to **US\$25 billion in capital**.

Investment and employment

With their sights set on a long-term and highly advantageous competitive position, US chemical companies have embarked on a massive investment program. In the last year alone (April 2011 to April 2012), the market has been awash with announcements of new crackers in the US. Chevron Phillips Chemicals will build an ethylene cracker in Texas that will provide 1.5 million metric tons per year⁷, while Dow Chemicals has announced a world-scale steam cracker (also in Texas) that will provide similar capacity⁸.

Interestingly, many foreign chemical companies are also eager to take advantage of the competitive advantage provided by US shale gas. Sasol, a South African based company, will build a cracker in Louisiana with a capacity

of 1-1.4 million metric tons per year⁹; Thailand based polyester and fibers major Indorama Ventures (IVL) has plans to build out 1.3 million metric tons per year of capacity in the US by 2018¹⁰.

According to ACC President and CEO Cal Dooley, the chemical industry is currently considering about 30 new or expanded US facilities, with investments of up to US\$25 billion in capital. "The benefits consumers could see from the shale gas boom are tremendous," he notes, because natural gas is "a fundamental building block of almost every manufacturing item a consumer touches every day"¹¹.

For the regions in which this investment is planned, the capacity expansion represents significant

economic potential. The Chevron Phillips cracker in Old Ocean, Texas, is anticipated to create more than 10,000 engineering and construction jobs and some 400 long-term direct jobs¹². "The associated downstream polyethylene facilities would be the first ethylene derivative units to be constructed in Old Ocean and as such they offer an exciting opportunity to our employees, the surrounding Brazoria County community, and those businesses that would service these new facilities," said Peter L. Cella, Chevron Phillips' President and CEO. "In addition, constructing polyethylene infrastructure at Old Ocean better positions the location for potential future investments"¹³.

⁷ Chevron Phillips to Spend \$5 Billion on Texas Ethylene Plant, Bloomberg, 15 December 2011;

⁸ Factiva; Dow Chemical's new cracker at Freeport, Texas, to cost \$1.7 billion, platts, 19 April 2012

⁹ Factiva; Sasol Studies \$4.5 Billion Ethane Cracker in Louisiana, Bloomberg, 30 November 2011

¹⁰ INSIGHT: Indorama joins US ethylene fray, ICIS, 12 March 2012

¹¹ <http://plattsenergyweektv.com/news/article/203900/293/042912-US-Petrochemicals-Surge-on-Bullish-Gas-Outlook>

¹² <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/Petrochemicals/6243222>

¹³ <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/Petrochemicals/6243222>

US shale gas fields



Source: EIA, Geology.com, 4 June 2012

Environmental concerns

It must be noted that shale gas extraction remains a contentious and divisive issue for many politicians, communities and even the chemical industry at large. The debate largely revolves around the extraction process (known as hydraulic fracturing or 'fracking' for short) which requires large amounts of water and chemicals being pumped into the shale rock to release the natural gas that is captive inside. Some are concerned that the chemicals involved in the process may contaminate local drinking water or the environment and, as a result, the issue has quickly risen up the government agenda at both the state and federal levels.

For example, in New York State, the Department of Environmental Conservation is currently in the process of conducting a review of high-volume

fracking that has taken nearly four years during which all permits for fracking have been on hold. In Michigan, lawmakers recently debated a bill that would add new regulations to the shale gas industry in that state. In April, President Obama signed an executive order establishing a high-level task force charged with ensuring that fracking techniques are safe and responsible¹⁴.

Recognizing the simmering challenge, nearly a dozen major energy companies including Chevron Corp and Royal Dutch Shell recently released a set of shared standards for fracking in the Appalachian region. The document addresses best practices for drilling, well-design, water use and equipment use as well as opportunities for community outreach within the regions most impacted by natural gas fracking¹⁵.

Despite the ongoing regulatory debate, the commercialization of shale gas has already heralded in a new era of growth and prosperity for the US chemical industry. While some risks still remain on the horizon, there is little doubt that the US industry is embarking on a path that will lead to massive competitive advantage and significant transformation within the industry itself.

"We believe that the historic new supplies of natural gas liquids will provide abundant, affordable feedstocks and form a lasting platform not only for chemicals but also for economic recovery in North America," Don Condon, senior Vice President of olefins and corporate business development at Westlake Chemical said at CERA Week. "We believe this trend is sustainable and it will continue¹⁶."

¹⁴ <http://thehill.com/blogs/e2-wire/e2-wire/221395-obama-signs-order-establishing-natural-gas-task-force>

¹⁵ <http://www.foxbusiness.com/news/2012/05/01/big-natural-gas-producers-set-voluntary-fracking-standards/>

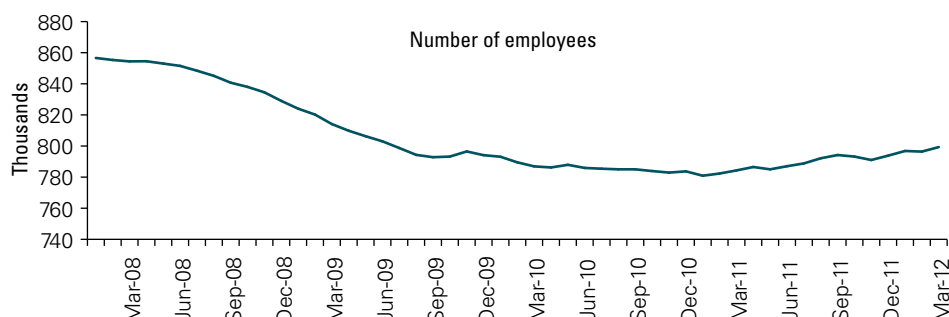
¹⁶ http://www.chemweek.com/markets/basic_chemicals/petrochemicals/ethylene/42235.html

The drive of cost-efficiency

While the global financial crisis certainly caused bottom line pain for many US chemical companies, there are strong signs that many organizations took the opportunity to execute smart cost cutting and rationalization measures that have placed them in a strong position for the market upturn.

US chemical industry employment numbers indicate that companies across the country took strong measures to reduce overhead. Between 2008 and 2010, the industry shed around 75,000 jobs hitting an employment low of 785,000 in September 2010. While some of these costs have clearly returned as the industry prepares for growth, they have not flooded back to the same degree. In March 2012, employment numbers stood at just under 800,000, or six percent below their pre-recession level in 2008¹⁷ and in general, chemical companies in

US chemical industry – monthly employment figures, January 2008–March 2012



Source: U.S. Department of Labor: Bureau of Labor Statistics, accessed on 25 April 2012

the US continue to operate with much more discipline than they did before the financial crisis.

Companies have also spent much of the past four years examining a range of other cost cutting measures within the organization. For example, many companies have rationalized

their supply chains to take advantage of scale and lower-cost commodities to enhance margins and reduce organizational complexity. Tax Efficient Supply Chain Management was also front and center for US chemical companies as multinational players focused on the tax implications of their supply chain strategies.

The return of the mega merger

Company	Cash on balance sheet (US\$ million)
Dow Chemical	3,608
DuPont	3,410
Monsanto	3,123 (as on 29 February 2012)
LyondellBasell	1,670
W.R. Grace & Co.	1,008.2
PPG	978
Westlake	895.1
Celanese	727
Ashland	599
Eastman Chemical	569
Albemarle	519.4
Momentive Specialty Chemicals	400
Georgia Gulf	38.9

Source: SEC Filings and Q1 2012 earnings press releases, accessed on 18 May 2012

This cost cutting and operating efficiency combined with the impact of cheap gas feedstock has driven profitability and cash generation across the industry. Indeed, with tightly rationalized operations and – in many cases – bursting treasuries,

US chemical companies have started to focus on optimizing their portfolios and combining complimentary or supplementary product slates that will provide stronger revenue streams and/or access to new markets.

United States
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¹⁷ U.S. Department of Labor: Bureau of Labor Statistics, accessed on 25 April 2012



As illustrated in the accompanying chart, the environment of economic uncertainty and a strong desire to achieve financial flexibility in the face of continued market turbulence has led many of the top US chemical companies to build up significant war chests and financial reserves that are now being cracked open to enhance shareholder value and take advantage of synergies in the market.

As a result, the industry has – since the start of 2011 – executed a number of mega mergers. For example, in January 2012, Eastman Chemical announced

the intention to acquire Solutia for US\$4.7 billion. Having recently exited its polyethylene terephthalate and polyethylene product portfolios, Eastman was seeking to secure growth opportunities in the market. According to Eastman chairman and CEO James Rogers, “We saw the need for growth and M&A is one of the best ways to create value. Solutia quickly rose to the top as we evaluated candidates¹⁸.” Other recent billion-dollar deals include the purchase of Nalco by Ecolab for US\$8.1 billion, Danisco’s acquisition by DuPont for US\$6.4 billion, and Ashland’s purchase of ISP for US\$3.2 billion.

Recognizing the long-term prospects of the US chemical industry, a number of private equity firms have also begun to snap up deals. Likely the most pronounced was the purchase of Lubrizol by Warren Buffet’s Berkshire Hathaway group for US\$9.7 billion. As a sign of the strong growth potential anticipated in the chemical industry, Berkshire Hathaway offered US\$135 per share, pricing the company at a 28 percent premium over its recent closing price and an 18 percent premium over its highest ever closing price¹⁹.

¹⁸ http://www.chemweek.com/home/top_of_the_news/42530.html

¹⁹ <http://dealbook.nytimes.com/2011/03/14/berkshire-hathaway-to-buy-lubrizol-for-9-billion/>

The growth dilemma

The discovery and commercialization of shale gas has already provided a lift to the overall US economy through job expansion, the availability of lower-cost products and cheaper fuel bills. US consumer spending is expected to pick up speed, growing by approximately US\$2 trillion between 2012 and 2016²⁰. The impact of the rising economy can already be seen in US motor vehicle production – a critical downstream sector for the US chemical industry.

Monthly auto production rose by more than 240 percent (seasonally adjusted) between January 2009 and January 2012²¹.

As a result, sales of US chemicals have also risen to fuel the restarting economy. Sales in chemical products increased from US\$187.6 billion in the first quarter of 2010 to US\$208.8 billion in the fourth quarter of 2011. Sales of basic chemicals, resins and synthetics went from

US\$57.6 billion to US\$68.7 billion in the same timeframe. Statistics show similar growth for the pharmaceuticals and medicine sector and the 'all other chemicals' group²². Despite a weaker fourth quarter of 2011, due to industry wide de-stocking, sales and profitability have recovered strongly in the first half of 2012.

However, the US remains a mature market which will be unable to absorb all of the announced capacity likely to flow from shale-related investments.

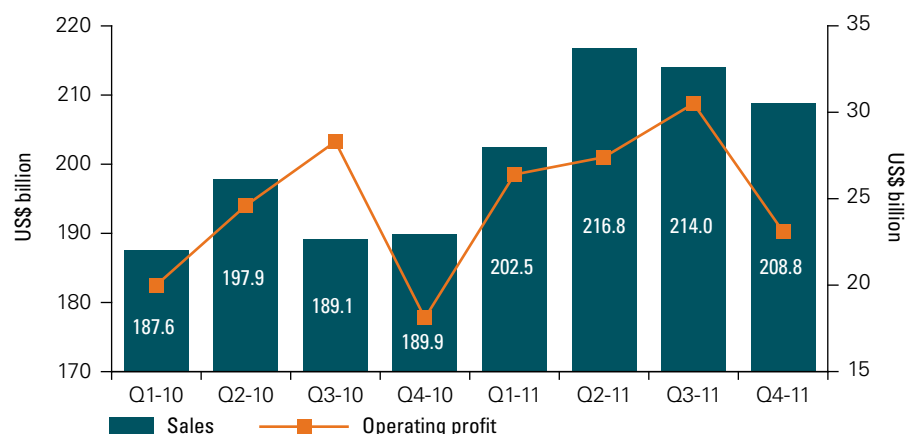
Over the last decade, the chemical industry experienced a rapid shift in demand away from the more mature markets of North America, Europe and Japan and towards the emerging markets. Over the decade, annual growth in the North American market averaged a mere 2.7 percent while Japan was an even more sedate 1.4 percent. The EU, partially buoyed by manufacturing growth in Russia and Eastern Europe, achieved an average 4.3 percent growth rate²³ up to 2008, but has capitulated since due to the ongoing economic concerns.

Monthly US motor vehicle production



Source: Bureau of Economic Analysis (BEA), accessed on 25 April 2012

US chemical products – sales and operating profit



Source: United States Census Bureau, QFR for Q1-Q4, 2011 – <http://www.census.gov/econ/qfr/historic.html>

However, the United States remains a **mature market** which will be **unable to absorb** all of the announced capacity likely to flow from **shale-related investments**.

²⁰ The Economist Intelligence Unit, CountryData – Annual Time Series and Market Indicators, accessed on 25 April 2012.

²¹ Bureau of Economic Analysis (BEA), accessed on 25 April 2012

²² United States Census Bureau, QFR for Q1-Q4, 2011

²³ CEFIC

In contrast, the emerging markets have experienced a decade of notable chemical sales growth led by China which saw 19.5 percent average annual growth over the decade. While the growth rates for the rest of Asia (8.6 percent), India (7.4 percent) and Latin America (7.3 percent)²⁴ seem docile in comparison to China, they still reflect an era of shifting demand towards the emerging markets.

The clear challenge for US chemical companies going forward is that of a potential oversupply within the US market that will peak within the next four to five years as the new shale gas-driven capacity comes on-stream. It therefore seems clear that – to meet revenue targets and maintain production objectives – US companies will need to shift their focus towards an export-led operating model focused on the emerging markets.

This will require a significant transformation of operating models for US chemical companies who have traditionally been focused on the US marketplace. Success in the emerging markets will also require a very sophisticated understanding of the pros and cons of each individual market. This must include considerations such as growth prospects, business environment, infrastructure maturity

and tax implications, as well as a slew of regulatory and legal considerations such as investor protection, contract enforcement and ease of doing business.

US chemical companies seeking to expand into new markets will also need to place significant focus on creating and formalizing appropriate business structures to maximize their entry into foreign jurisdictions. In many cases, this will involve developing a joint venture agreement with an existing national player who can provide local insight, customer portfolios and some access to infrastructure within the host country.

At the same time, many companies will also need to focus on creating new capabilities to manage their global operations. Tax Efficient Supply Chain Management and transfer pricing (discussed in previous editions of KPMG's Reaction) will be key considerations for companies seeking to export both finished and unfinished chemical products, as will a keen understanding of global accounting standards and national compliance requirements.

However, these types of organizational changes do not happen overnight. US chemical companies will need to move quickly if they hope to successfully open up new markets to head off the growing threat of increasing capacity.

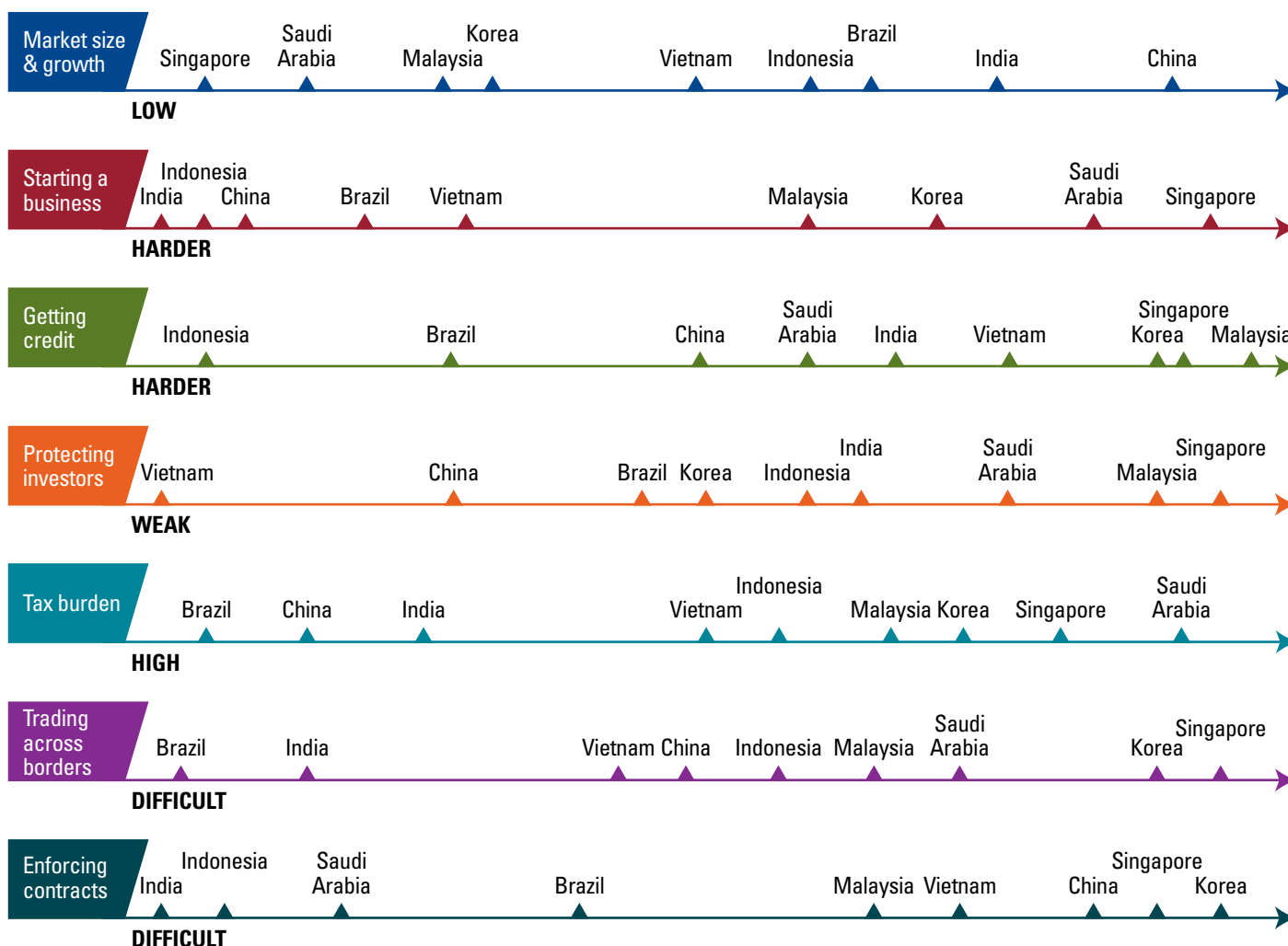
The clear **challenge** for United States chemical companies going forward is that of a **potential oversupply** within the United States market that will peak within the next four to five years as the **new shale gas-driven capacity comes on-stream**.

Simply put, the growth prospects for US chemical companies is almost entirely dependent on their ability to extend their footprints into high growth markets. Failing that, the US market is destined to fall back into the historic cycle of oversupply followed by rationalization.

²⁴ CEFIC, Facts and Figures 2011



Emerging market comparison



Source: World Bank, KPMG analysis, 2012

Conclusion

Clearly, the outlook for the US chemical industry is unprecedentedly bright. The commercialization of shale gas has acted as a powerful catalyst to growth and has spurred the industry into what can only be characterized as a wholesale transformation. Low-cost feedstock and tight operating models are clear portents of exceptional growth in margins and unparalleled competitive advantage versus peers in other areas

of the world. The anticipated steady and expansion of the US economy provides a strong supporting foundation for optimism.

However, if they are to fully benefit from the historic opportunity afforded by shale, US chemical companies should seek to alter their business models to embed more of an export focus. This will require significant investment in supply chains, overseas sales and marketing

and potentially also joint ventures with emerging market producers to ensure they have captive markets for the new shale-related capacity due on-stream. If they can overcome these challenges, US chemical companies can look forward to an exciting era marked by rapid growth and sustainable competitive advantage in the near and medium-term.



EU tariff suspensions and quotas: a hidden opportunity

By Bart-Jan Kalshoven

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With customs duties adding up to 6.5 percent on chemical substances imported into the EU, many chemical companies – both inside and outside of the EU – may find they can potentially achieve significant savings through an EU customs duty suspension or quota.

An introduction to tariff suspensions and quotas

In the EU – much like most other jurisdictions – customs duties are generally imposed in order to protect domestic production. But, if specific requirements are met, companies operating in the EU may benefit from a suspension of duties granted by the European Commission.

In simple terms, ‘tariff suspensions’ allow unlimited quantities of raw materials, components or semi-finished products to be imported into the EU without paying duties while ‘tariff quotas’ provide for limited quantities to be imported without paying duties.

As of 2011, approximately 1,500 autonomous tariff suspensions and quotas were in place, a number that has likely increased as a result of the recent recession within the EU economy, which triggered significant growth in the number of requests registered with the European Commission.

EU tariff suspensions or quota applications will not be approved in situations where:

- *identical, equivalent or substitute products are manufactured in sufficient quantities within the EU;*
- *the measure could result in a distortion of competition between EU companies;*
- *the goods are finished products* intended for sale directly to end-consumers without either substantial processing or forming an integral part of a bigger final product;*
- *goods are covered by an exclusive trading agreement which restricts EU imports;*
- *goods are traded between related parties with an exclusive intellectual property right;*
- *the benefits of the measure are unlikely to be passed on to the EU processors or producers concerned;*
- *other special procedures exist to serve EU producers such as inward processing;*
- *the applicant will use the goods for trade purposes only;*
- *the measure would create a conflict with any other EU policy;*
- *the anticipated duty savings would be less than EU15,000 annually.*

* *Finished products are commodities that are: ready for sale to the end-user; disassembled finished goods, already have the essential character of the finished product; or are not intended to undergo any substantial processing or transformation (according to the ‘list rules’ regarding the determination of non-preferential origin).*

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How the concept works



The potential for tariff suspensions or quotas offers an important opportunity for the EU and non-EU chemical industry.

For example, an EU manufacturer who imports approximately US\$3 million in polyvinylidene fluoride powder for the production of medical equipment would normally be subject to a 6.5 percent duty rate. But with a successful application for a suspension between 2011 and 2015, the manufacturer can effectively recoup savings of roughly US\$800,000.

However, there are a number of limitations and requirements that must be met before a tariff suspension or quota will be provided. For example, applicants must demonstrate that the imported materials cannot be sourced or supplied in sufficient quantity from EU Member States. The measures can also not be

used to simply import goods for resale, meaning the goods must always be used in a subsequent production process (above and beyond repackaging) within the EU, although not necessarily by the importer.

At the same time, the allowance does not apply to goods for which anti-dumping or countervailing duties may be applicable, nor do they apply to goods that are subject to import prohibitions and restrictions such as the Convention on International Trade in Endangered Species (CITES).

It is important to note that these tariff suspensions or quotas are not intended to provide a competitive advantage to any individual company. Indeed, goods imported under the arrangement enjoy freedom of movement across the EU and – once a tariff suspension or quota is granted – any operator in any EU Member State is eligible to benefit

from it. As a result, suspensions or quotas could have consequences across the EU and therefore requires close and extensive cooperation between Member States and the European Commission to ensure that all EU interests are taken into consideration.

Tariff quotas are allocated on a first-come first-served basis and are managed by the European Commission in close cooperation with the Member States through a central tariff quota database.

The European Commission submits its proposals to the European Council each year on 1 January, and takes into account new requests and technical or economic trends in products and markets on 1 June.

Navigating the application process

Requests for tariff suspensions or quotas are generally submitted by the importer or processing/manufacturing company to the designated government agency²⁵ of the country in which they are either established or importing the eligible goods. Following a thorough review, applications approved by the government agency are forwarded to the members of the Economic Tariff Questions Working Group (ETQG) who discuss the application over a series of three meetings.

Measures are proposed by the ETQG only after they carry out an examination of the economic reasons upon which the request is based. This will require applicants to provide detailed documentation such as technical data sheets, explanatory leaflets, sales literature, statistics and samples. Furthermore, the European Commission may ask the EU Member State to provide additional information relating to an application if they deem it essential for the preparation of a proposal to the European Council.

The application process also requires the use of the denominations and wording of the Combined Nomenclature or, if not suitable, the International Standard Organization (ISO), International Non-proprietary Names (INN), International Union of Pure and Applied Chemistry (IUPAC), European Customs Inventory of Chemical Substances (ECICS) or Color Index (CI) names.

While confidentiality requests will be honored, it is important to note that applications will not be reviewed if any piece of information essential

for scrutiny or discussion cannot be supplied for whatever reason (even if to protect company confidential information, manufacturing processes, chemical formulae or compositions).

Once approved, tariff suspensions are normally valid for several years, while tariff quotas are generally valid six to 12 months. In situations where the tariff quota has been used sufficiently, an automatic renewal will be granted. Otherwise, the European Commission will review whether it is necessary to maintain the tariff quota.

Protecting confidentiality

The ETQG and the European Commission officials responsible recognize the need for confidentiality with regards to proprietary processes or information and – where the dossier is clearly labeled as confidential and the level of confidentiality is specified (i.e. for European Commission use only, for information of the members of ETQG only) – are required to take all necessary precautions to protect that confidentiality. However, the Chairman of the ETQG may, with the explicit permission of the representative of the EU Member State responsible for the application, communicate this information to another Member State or European Commission Service at its express request.

Taking advantage of the measure

While the criteria for tariff suspensions and quotas are rather stringent and the application process is somewhat burdensome, tariff suspensions and quotas can be quite beneficial to the chemical industry.

For example, in 2012, an EU importer obtained a tariff quota for the duty-free

importation of 400,000 Kg of D-Xylose (a sugar substitute) which would normally be subject to a duty rate of 6.5 percent. Assuming an average market price of approximately US\$6 per kilogram, the measure provided an approximate duty savings of US\$1.5 million.

Clearly, both EU and non-EU chemical companies may want to explore the potential for using tariff suspensions or quotas as a viable way to minimize their EU duty burden and generate cost savings for themselves and their customers.

²⁵ In most EU Member States the application is handled by the Ministry of Economic Affairs



KPMG in the Industry

In this feature, we update you on some of the ways member firms have been involved in the industry since the last edition of Reaction. It has been a busy few months for our Global Chemicals & Performance Technologies team as we stay embedded in the heart of the industry.



KPMG in Australia was a Gold Sponsor of the Plastics and Chemicals Industry Association's National Conference held in Sydney in June 2012.

The key challenges for the industry in Australia are high energy and feedstock prices, and the high value of the Australian currency, both of which are putting pressure on local manufacturers and exporters. These and other challenges including industry regulation, innovation and the introduction of carbon pricing on 1 July, were discussed by a range of speakers from the industry as well as from government, trade unions, media and banking. KPMG is a long standing member of PACIA and a regular sponsor of the National Conference.



Later this month, KPMG in the US will sponsor the annual American Chemistry Council – Chemical Industry Tax Conference which brings together the VPs of Tax from some of the largest chemical and oil and gas companies in the US. Mike McGoldrick and Tom Stout, both of KPMG in the US, are speakers on the agenda and will lead individual sessions on rate reduction and tax reform.



KPMG in the UK recently hosted a table at the CBA's Annual Luncheon in London this past April, the biggest chemical industry event in the UK was attended by over 1,000 industry members and their guests.

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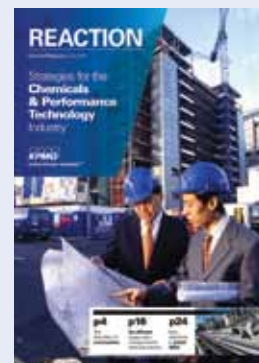
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