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The European Refining Crisis: what is at stake for Europe?

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The European Refining sector is in crisis. The wave of refineries closures spared no EU Member States. In less than five years, eleven refineries were simply shut down and no less than seventeen changed ownership in the UK, in France, in Germany, in the Netherlands, in Sweden or in Spain. As closure is a last resort measure, given its high costs, this gives an indication of the situation's seriousness.

The present situation reflects more than just the widespread effects of the economic crisis. If the sector has always been known as cyclical, the change however comes from the shift in demand and trade patterns for oil products. In the ongoing globalization of the oil market products, Europe appears to be the most vulnerable piece and this raises questions as regard the European security of oil product supplies.

The European Refining sector against the grain

The European refining sector encounters several difficulties. On the one hand, the European refining sector needs to restructure, and therefore needs financing. Initially designed to process light sweet crude oil, refineries now have to adapt to heavier and sour crudes as oil production from the North Sea declines sharply. More generally ageing although still energy efficient, European refineries are not always large enough to benefit from economies of scale nor do they fit the European demand for products. Europe is actually over-producing gasoline and under-producing diesel, encouraged as the fuel of choice for transport by national fiscal policies. On the other hand, there is a severe contraction of oil products demand in Europe. This has been triggered

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This situation raises questions as regard the European security of oil product supplies as shown by the highlights presented in Brussels, on February 19th, 2013, at an Ifri's *Energy Breakfast Roundtable,* by Antoine HALFF head of the oil division and director of the *Oil Market Review* at the IEA, Saïd NACHET president of Energy Consulting and Professor at both IFP School and Science Po Paris, and Chris BEDDOES, director general of Europia. *The following paper reflects the views of the author only.*

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by different factors, among which transport efficiency oriented policies, and aggravated by the economic crisis. For the investments to be made, positive signals or at least clear visibility on the evolution of the European markets are necessary, which is not currently the case. European and national policies are not always favoring investments in the sector. For instance, EU environmental policies further reduce refining margins. In the European Trading Scheme (the EU CO2 cap and trade scheme), around 25% of the CO2 are bought by refineries according to Europia, the sector federation. Even more, the EU which was so far exporting its gasoline surplus to the US (around 30% of its production), has now to cope with the US' demand contraction. Europe needs to find new export markets for its products where it will actually face fierce competition.

Worldwide developments indeed further challenge the competitiveness of the European refining industry. While in the last years most of the supply growth came from Former Soviet Union, new players are entering the market and traditional oil producers are integrating their value chain. Demand is shifting towards Asia, and refining assets apparently follow the flow. Taking the opportunity of their growing domestic market for oil products, new Asian players have rapidly built refineries. The large chunk will come from China, which has apparently planned by accident refining capacity ahead of domestic demand while India has deliberately designed part of its refining capacity for export. Large projects in Korea or South East Asia, mostly set up in Joint Ventures with Middle Eastern oil producers, are also burgeoning.[i] But competition is also coming from traditional oil producing countries which are trying to integrate upstream and downstream. Middle East countries are indeed increasing their capacity. Countries such as Saudi Arabia and Kuwait, which have traditionally exported oil products, are now reinforcing their businesses not only to supply domestic demand but also to capture a larger part of the value chain. The creation of jobs for their ever growing young populations is at stake. Qatar is appearing to be next with a similar strategy.

On top of these developments comes the North American unconventional fuels revolution. While demand is not growing fast in the US, the declining refining sector has been rebooted among others by cheaper feedstocks, lower energy prices thanks to more than friendly gas prices. A virtuous circle is being set up because of the shale gas boom,[ii] the proximity of production with refineries decreasing the cost of transport, the high quality of feedstocks coming from shale oil improving the refinery yield. Latin America yet failed to follow the move. The development of refining capacities in Mexico is slowed down by strict regulation while, following the North American refining revival Brazil has been forced to shelve projects.

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On all these fronts, the challenge is immense for the EU. The EU needs new markets to survive and to sell its gasoline surplus as the US demand is also contracting. But it is simultaneously challenged by the world's oversupply and faces fierce competition from Asian players which often supported by their states and closer to consumption centers, from traditional oil producers which benefit of feedstock's subsidies, and from North American players which are surfing on their unconventional resources. As a matter of fact, many European refineries being closed and the traditional ownership of refineries is switching as International Oil Companies are therefore devising their assets to foreign and National Oil Companies (such as Essor, Petrochina, Lukoil etc.). Producing companies which were long denied access to refinery for security reasons, are actually now asked for help. NOCs companies benefit from cheap assets in Europe to secure demand for their products or crude but also to have insider knowledge on the market so as to price products adequately.

As a whole, should these developments be perceived as a threat to the security of Europe's oil products supply? This question is of utmost importance: major issues are at stake.

Is the EU refining crisis threatening EU security of supply?

This question is important. As a matter of fact, oil products are not only used for maritime, road or air transport, a strategic asset of the economy, but they also play a key role in the wider EU industrial chain which the European Commission recently decided to reinforce. The EU will now be more vulnerable to price volatility which is due to price differential across countries and it will be all the more vulnerable to price disruptions than we observe a structural trend towards mega refinery (the closure of one refinery is therefore likely to impact the market more severely). If this inconvenient could be partly addressed by storage facilities, storage is not relevant for some short-life-storage-products such as jet-fuel, for which the EU dependency level will be very high. In a perfect global market, there shall be no problem. However the market is not perfect and the demand for oil products is quite inelastic. Even in a liberal market perspective, challenges to European security of supply therefore do have to be identified.

Changing ownership of European refineries is not in itself the main concern to European Security of supply. The real challenges come from the markets. First there is no one market for all oil products, but rather separated markets with seasonal variations. Second, the structure of the market is evolving dramatically. Refining is now more and more a standalone business while it used to be an integrated business, rooted in a local market. This is the result of the distribution companies' emancipation. Distributors are now looking for profit and can play markets and prices (this is already the case in the US, but also coming in Europe). This has actually strategic implications for the security of supply as the flow of information is reduced. The ability of refineries to take long term views or risks is decreased. On the other hand distributors are no more informed buyers as they do not own the refinery.

Uncertainties on world demand for oil products and current oversupply may have a negative impact in the longer term on EU security of supply. Currently there is an oversupply of oil products mainly because China has been overshooting. China's exports are likely to increase significantly for the next five years. This is reassuring as regard the short to medium term availability of products on the market. However, emerging countries consumption will likely resume in a few year times. By then, cards will have been reshuffled at the expense of Europe. The current overcapacity is indeed not working in favour of the European refining sector. Additionally in the longer term, the availability of product supplies will also depend on Iraq output, which is currently uncertain.

Last but not least, the lack of visibility not only on volumes needed and available but also on demand by type of products will further weaken the ability of investors to make the right decisions so as to secure adequate supply. By the time the investment come, the market may indeed have changed. So far the demand for middle distillates has grown significantly, driven by the industrial development and the installation of backup generators in many Middle Eastern and emerging countries. This trend could actually reverse. The sector is known for over or undershooting and things should thus not be taking for granted.

Conclusion

The European refining industry is facing an ever growing list of challenges: fierce external competition from both producing and emerging countries, the decline of domestic and probably US demand, the mismatch between the type of products produced and the demand (i.e. gasoline surpluses and lack of capacity for middle distillates), the development of substitutes such as bio-fuels. Despite the long term need to restructure the sector, as pointed out by the European Commission in a 2010 working document, the European market, framed partly by European or national legislations, does not send the right signals in the shorter term. It nowadays appears increasingly difficult to renew, exit or enter the market. The economic crisis comes on top to further weaken the sector. As a whole EU security of oil product supply is an issue to be seriously considered. While Europe has to find solutions to secure its supply, its member states will surely have to find solutions to secure their budget. They surely do not want to miss the €240 billion collected in duties and taxes each year by the refining and distribution sector.

[i] See the Ifri note of Thierry Kellner, The GCC States of the Persian Gulf and Asia Energy Relations, September 2012, available at http://www.ifri.org/?page=contribution-detail&id=7305
[ii] In Europe, the cost of energy accounts for 60%, while it is now only 20% in the US