

## CEPS COMMENTARY

*Thinking ahead for Europe*

# Abolishing Oil Indexation in Gas Contracts:

## Is it the cure-all?

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On 22 May 2013, the European Council met in Brussels to discuss EU energy policy. EU leaders agreed that in times of economic downturn, the supply of affordable and sustainable energy was vital for the EU's economy. Since then, the EU energy debate has been dominated by the discussion on energy prices and the competitiveness of European industry. These issues will most likely be back on the agenda during the forthcoming European Council, scheduled for March 20<sup>th</sup> and 21<sup>st</sup>.

There is a difference in prices of natural gas between the EU and the US. In recent years, significant amounts of domestically produced shale gas have pushed down the price levels in the US. According to the latest estimates of the International Energy Agency (IEA, 2013), gas prices in the US are one-quarter of those in Europe. Moreover, the price of imported gas varies throughout the EU member states (European Commission, 2013). Since there is no global market for natural gas, fears of carbon leakage are fuelled by the existence of this price gap between the two regions (IEA, 2013).<sup>1</sup>

Some EU policy-makers hope that the completion of the internal energy market and the transition to a hub-based pricing mechanism for natural gas will be a cure for these problems. On 10 September 2013, the European Parliament adopted a report on the internal energy market. Calling for a review of the existing gas contracts, the report stated that oil indexation “imposes high prices on consumers”. In this context, the report emphasised “the need to develop and support all products and mechanisms aimed at strengthening short-term gas trading capacities” and called for the abolishment of oil-indexation and conversion to “more flexible alternatives” (European Parliament, 2013).

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<sup>1</sup> As there is no global market for natural gas, regional disparities in gas prices could prevail for several years to come. However, due to the increasing popularity of liquefied natural gas (LNG), existing price gaps may be largely reduced by the mid-2020s.

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## Two pricing mechanisms

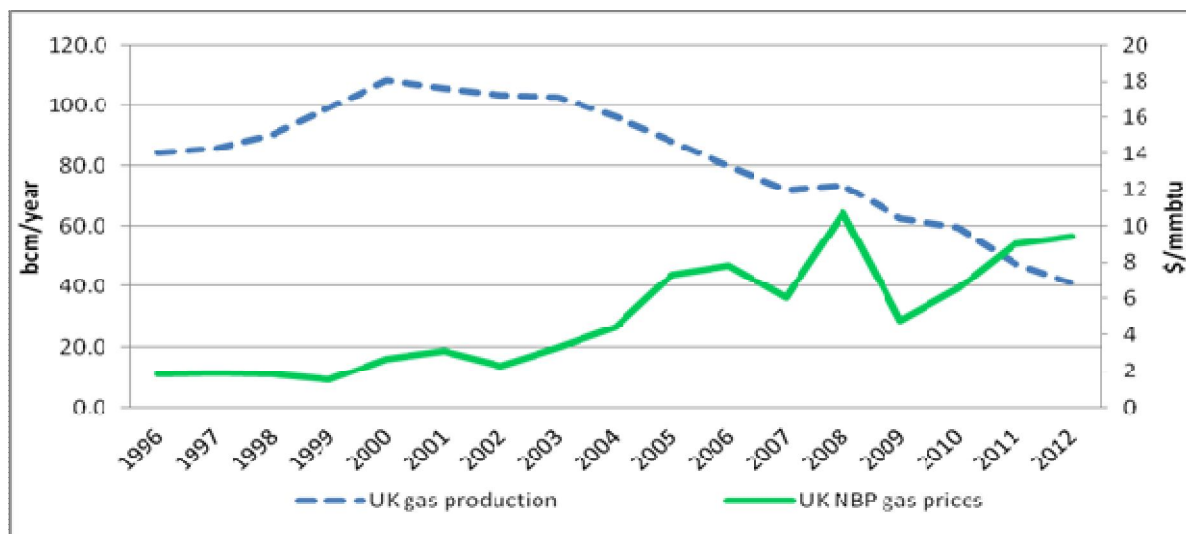
The origins of oil indexation date back to the 1960s. Masterminded in the Netherlands, it pegs the price of gas to the price of other competing fuels, mostly oil and oil products.<sup>2</sup> Traditionally, oil-indexed gas is traded under long-term supply contracts. Long-standing contracts provide security of supply for buyers and guarantee a form of security of demand for producers. Thanks to the introduction of this pricing system, gas was able to rapidly penetrate the EU electricity generation and heating market. While in 1960 only 22.7 bcm (billion cubic meters) of natural gas were consumed in Europe (Stern, 2005), by 2011, gas consumption had grown to the level of 492 bcm (IEA, 2013) – representing a huge increase, even if one takes into account that the EU has grown as well during that period.

At present, roughly half of the gas consumed in Europe remains oil-indexed. The other half is traded under hub-based pricing. In times of relatively high oil prices, oil indexation of gas contracts faces criticism as a price driver. Critics of this pricing mechanism underline that oil indexation is obsolete because oil and gas are no longer competing fuels (IGU, 2013).

In line with the objectives of the Gas Target Model,<sup>3</sup> the completion of the internal gas market will be accompanied by a gradual transition to hub-based pricing. As opposed to oil-indexation, the main price driver under this pricing mechanism is not the price of oil, but the market value of gas as a result of the *equilibrium* between supply and demand.

Such a system exists already in the UK. By 1996, hub-based pricing was established with the National Balancing Point (NBP) setting the price for natural gas traded in the UK. Gas prices remained low until the year 2000. However, as illustrated by Figure 1, this period of low prices coincided with a period of relatively high and increasing natural gas production.

Figure 1. UK gas production vs. NBP gas prices



Source: BP Statistical Reviews (2010 and 2013).

<sup>2</sup> Sometimes, however, gas can be pegged to other commodities. For example, in November 2013, Statoil and Wintershall concluded a 10-year contract for the delivery of 45 bcm of natural gas. According to the agreement, gas is priced based on price movements at major gas hubs located in north-western Europe (Statoil, 2012).

<sup>3</sup> The Gas Target Model (GTM) is a conceptual model of the Internal Gas Market approved by the European Commission. It posits the creation of a number of interconnected regional wholesale markets, structured as entry-exit zones. According to the GTM, gas should be able to flow freely from zones of low demand to areas of high demand/price. Accordingly, the implementation of the GTM should ease the development of trading hubs across the EU, and hence foster the transition to hub-based pricing (CEER, 2011).

Starting from the early 2000s, declining production levels were followed by price increases. This trend is even more visible after the year 2004, as the UK became a net importer of natural gas (see Figure 1).

### Hub-based pricing will not necessarily entail lower gas prices

The abolition of oil indexation in the EU should not automatically be equated with lower gas prices. Possibly misled by the British example, some EU policy-makers presume that the transition to hub-based pricing will inevitably result in decreasing gas prices. A number of points are worth mentioning here.

Firstly, under hub-pricing, gas prices are determined by the supply and demand *equilibrium*. Hence, gas prices could surge as a result of a demand (or possibly less likely) supply shock. It is entirely possible that prices of hub-linked gas surpass oil-indexed prices in periods of high demand (e.g. during a cold snap). Storage sites could help address this. However, such facilities are capital-intensive and costly; therefore, their large-scale deployment should not be expected for years to come and carry a significant price tag.

Secondly, the supply factor is of paramount importance. As domestic production is declining, EU dependency on gas imports is increasing. In 2011, the EU relied on imports for 62% of its gas consumption.<sup>4</sup> The IEA estimates that the share of imported gas will have risen to 77% by 2025 (IEA, 2013). In addition, if domestic shale gas extraction proves to be unviable, the EU could become even more dependent on gas imports. In fact, according to the IEA's calculations, the EU's demand for natural gas should rise by 0.5% per year, reaching the level of 554 bcm by 2035 (IEA, 2013). Growing consumption, combined with a shrinking domestic production, will negatively affect the EU's bargaining position vis-à-vis external suppliers. Moreover, the rising import dependency could reduce the EU's ability to counterbalance potential supply and demand shocks. Therefore, even if oil-indexation was fully abolished, the EU's growing dependence on gas imports could contribute to price increases, as the European gas market will gradually become more reliant on (increasingly integrated) international markets. In this context, an important question is whether Europe be able to attract LNG shipments at prices lower than those of piped gas.

Thirdly, prices of oil-indexed gas would fall in the years to come if oil prices fall. Unlike gas, oil is a global commodity. Oil production in North America is surging. Canada is determined to explore its tar sands deposits. The Energy Information Administration (EIA) forecasts that by 2016, oil production in the US will have risen to 9.6 million barrels per day (mb/d, reaching almost the highest level in 50 years (EIA, 2013b). Moreover, some OPEC member states (namely Iraq, Iran, Libya and Algeria) are also intending to boost their production levels in 2014. Hence, if the growth rate of Chinese demand for oil slows down<sup>5</sup> and if the social and political unrest in the Middle East and North Africa were to calm down in the months to come, the oil market could regain its lost stability. These factors may result in excessive oil supplies, possibly leading to price adjustments of oil and oil-related products.

<sup>4</sup> Note that these figures include gas imports from Norway, a member of the European Economic Area, and therefore fully integrated into the EU's internal market.

<sup>5</sup> Since 2009, China is the second-largest oil-consuming country in the world. In 2012, China consumed an estimated 10.2 mb/d, namely about 11.5% of the total world demand for oil. Between 1992 and 2012, the Chinese oil consumption increased from roughly 2.6 mb/d to 10.2 mb/d, i.e. + 292% (EIA, 2014). The IEA estimates that the pace of China's oil demand should grow by an average of 3.7% per year until 2020. Starting from that year, the Chinese appetite for oil should increase by only 1.3% per year (IEA, 2013).

The purpose of this Commentary is not to challenge the rationale of abolishing oil-indexation. Rather, it is to warn policy-makers that they should not expect it to automatically result in lower gas prices.

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