2011 has been a remarkable year for the normally steady-state world of gas in Europe and Asia. The upsets began with revolution in major gas exporting countries in North Africa, followed by a major upheaval in global coal, gas and carbon markets in the aftermath of the catastrophic tsunami in Japan, and ended with a series of encouraging shale well results in Poland and the UK. These could have a dramatic impact on European pipeline projects and the security of supply debate that hinges on European dependence on Russian gas. Russia, meanwhile, has just started up the first of its Ukraine bypass pipelines, bringing gas directly to Germany for the first time.

There has been little of comparable interest on the other side of the globe. For North Americans, another year of splendid isolation from the global market is drawing to a close with another seemingly in the cards. An endless stream of unconventional gas means that consumers in the US and Canada continue to enjoy some of the lowest natural gas prices in the world. A lack of liquefaction capacity prevents producers from capturing arbitrage opportunities elsewhere—a problem that may be addressed. The operator of at least one of the US's near-idle LNG import terminals is seeking permission to re-engineer it to take Henry Hub gas, liquefy it and export it abroad.

**Spot LNG**

The drama being played out in Europe and Asia concerns the rise in cross-basin trade in LNG. This has created an almost genuinely competitive market as spot cargoes from the Atlantic Basin and the Middle East undercut the delivered cost of pipeline gas in Europe. Until March 11, there was little difference: Japan and Korea were paying roughly the same for Atlantic LNG as European customers, plus or minus the cost of shipping from one basin to the other. However, the tsunami has created a step change in the price received in Japan and Korea, which now trades at parity with long-term oil-indexed contracts—a level too rich for Europe. Instead, Europe is turning to shale to reverse its addiction to gas imports, in an attempt to emulate the glorious isolation in which North America finds itself—a low-priced gas island amidst rising global markets.

Japan has been sucking in LNG to replace lost nuclear output, driving spot prices for natural gas back up to parity with long-term oil-indexed contracts—a level too rich for Europe. Instead, Europe is turning to shale to reverse its addiction to gas imports, in an attempt to emulate the glorious isolation in which North America finds itself—a low-priced gas island amidst rising global markets.
other. Both spot markets were offering prices much lower than those prevailing under European or Japanese long-term contracts.

However, the disaster in Japan in March quickly put the price of spot LNG for delivery in Asia on an upwards trend, to the point where it has exceeded the equivalent price of European spot gas. Even nuclear plants that were not hit by natural forces suffered, as Japan’s nervous—and now retired—prime minister told major Japanese utility Chubu to close down its 3.5 GW Hamaoka plant—a decision based on the precautionary principle. The effect of Japan’s nuclear closures sent buyers scrambling for replacement oil, coal and LNG. But the structure of integrated upstream LNG projects does not allow much flexibility for disasters on this scale, leading to a shortage of spot gas.

By end-September, spot deliveries for December at Japanese and Korean ports were approaching or exceeding prices based on long-term contracts indexed to oil. Some companies have been able to increase their contractual purchase rights, in the same way they exercised their downward quantity clauses when there was an oversupply of gas on the market.

This is not a battle Europe can win. There is no pipeline gas in Japan or Korea to speak of, nor are there competitive markets in gas supply. High-priced cargoes add to the weighted average cost of gas that is clawed back from utilities, which in turn can pass the cost on to their customers.

The buyer in Europe has to hedge exposure differently. Storage is one solution: a cargo of LNG that is bought in October for delivery in November to make use of ship-or-pay terminal capacity might be vaporized and injected into storage and not be withdrawn until the peak demand days of January. Other cargoes are taken to Zeebrugge. The terminal has been reconfigured so that it can reload an empty vessel for redelivery to Asia. Traders say this circumvents the Qatari policy of not selling cheap spot LNG into oil-indexed Asia, since the cargo has initially been “sold” to Europe.

**Precautionary Principle**

Europe itself was not immune to the precautionary principle. German Chancellor Angela Merkel shut down seven of Germany’s oldest nuclear plants with almost immediate effect following Japan’s Fukushima disaster. The closure of the

![](image-url)
others in 2022 is costing operators €32 billion ($45 billion) at net present value and 0% interest rates in foregone profits, according to preliminary calculations by a senior economist at the OECD Nuclear Energy Agency, Jan Horst Keppler.

But the gains for gas could be considerable. Nuclear’s replacement with wind, coal and gas will require some juggling with the country’s carbon emissions targets and the willingness of German taxpayers—still groaning under the weight of the government’s commitment to support the euro—to pay for expensive and intermittent sources of renewable energy. Gas is cheaper than wind and lower in emissions than coal. But that is not a problem for now, at least.

Heavily encumbered with gas that they do not need, but must nevertheless pay for under their long-term contracts, Europe’s gas merchants have sought an end to oil indexation, but to little effect and, as winter approaches, they might be glad of this as spot prices rise again. The oil link has long been a bone of contention, but mainly with regulators and economists at one step removed from the market and unable to appreciate just how illiquid the gas market is in continental Europe.

It is much safer to hedge gas price exposure against very heavily-traded and highly-transparent oil product markets. As Russia’s Gazprom is fond of pointing out, no one player can manipulate the oil price, the unspoken assumption being that between the two of them Norway’s Statoil and Gazprom could send prices very high by withholding a modest amount from the market. As it stands, the shrinking discount of spot prices to term could well vanish and even turn into a premium, if there are enough cold snaps or supply reductions over the winter.

Still recovering from recession, rather than bemoan it as a catastrophe, gas traders in Italy felt some relief when the Green Stream pipeline from Libya was taken out of action in March as a result of Libya’s civil war. The effect was not to choke off supply in Italy, as would have happened at a time of economic prosperity, but rather to allow some of the over-supply to be absorbed at a higher price than otherwise would have been the case.

Norway’s Statoil has acceded to requests from its buyers to move more of its long-term gas to spot market indexation, but has also reduced exports to Europe, especially through the Langeled pipeline that brings Ormen Lange gas to the UK, as analysts say it is pursuing a “value not volume” strategy. Gazprom’s position is different. So far it has rejected requests for direct contract renegotiation. It sees the acquisition of downstream assets in the power sector as a means to capture more of the gas value chain, and it is in talks with German utility RWE on a

2. European gas continues to follow crude.

Source: Platts
deal of this kind. On a similar theme, Algerian gas supplier Sonatrach is taking equity in a customer, Spain’s Gas Natural, which also finds itself in a relatively weak negotiating position.

Another major German utility, E.ON, suffering under the weight of its multi-billion euro take-or-pay gas commitments, is being forced to restructure and develop its business outside Europe. E.ON’s gas unit Ruhrgas itself might be sold off, perhaps to a pension fund for which a low, but secure rate of return will be acceptable. Ruhrgas would live out the remainder of its days as a closely-regulated pipeline company, while its commercial assets and liabilities are incorporated under E.ON.

**Shale Upheaval**

But while utilities and external suppliers grapple with competition between LNG and pipeline gas, September saw two companies, one in Poland and one in the UK, announce successes with shale gas. It is too early to make any firm predictions about the production rates and costs as not enough wells have been drilled, but on the face of it, the volume of gas in place is enough to justify optimism about both countries’ security of supply, and even possibly their neighbors’ security of supply too.

Cuadrilla is sitting on almost 6 Tcm of resources in northwest England, it believes, which at a 15% recovery rate is not far short of 1 Tcm. If the cost of production is low enough, the impact on the UK economy would be significant, reducing energy bills and improving the country’s balance of payments and its tax revenues. Compressed natural gas filling stations might even start to dot the landscape.

This is, of course, dependent on the extent to which drilling is allowed to proceed. Cuadrilla does not expect to submit a development plan to the government until the middle of next year. The anti-shale lobby is likely to object, raising environmental concerns that could impact on UK regulation of the nascent industry.

The story in Poland and Ukraine is if anything more exciting. In addition to all the other benefits there would be considerable satisfaction in no longer being dependent on Russian gas. Just as Gazprom makes another bid for control over the country’s vast pipeline network, Ukraine has signed a slew of memoranda with companies like ExxonMobil, Shell, Eni and Halliburton, covering shale and other types of gas. At the same time it has started up the first of the Nord Stream pipelines to bring gas direct to Germany under the Baltic Sea, bypassing all transit states.

Politics and gas have long gone hand in hand where Russia and its former satellites are concerned: if self-sufficiency in gas allowed Ukraine to reform its energy sector along market-oriented lines, then that truly would mark the end of the old order.

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**3. Non-oil linked gas prices.**

$/MMBtu

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*Source: Platts*