

## EUROPEAN ENERGY: THE ‘SOLIDARITY’ CONUNDRUM

European energy policy is critically flawed. It has proven impossible to square the circle between security of supply, greater sustainability, and affordable prices. Despite claims of ‘solidarity’, national politics still trumps the ‘European good’ on energy matters. Progressing liberalisation remains important for competition and resilience, but Europe’s real challenge is to re-level the low carbon technology playing field to properly realign global emission concerns and security of supply in future.



*EU Commission President Barroso and Russian Prime Minister Putin after talks in Moscow on European gas supplies, 6 February 2009*  
REUTERS / RIA Novosti

Despite brave attempts from the European Commission to craft a cohesive common energy policy, the Lisbon Treaty was only able to commit to a ‘spirit of solidarity’ across Member States. By way of confirmation, the Treaty even notes that Union measures “shall not affect a member state’s right to determine the [...] general structure of its energy supply”. This underlines the national political realities in play: a common policy framework is more virtual than operationally real for European states, and despite best efforts, little solidarity actually exists.

Nowhere is this more evident than on the supply side: individual European capitals are still trying to beat their own path towards greater ‘energy security’ by striking bilateral deals with external supplies. This plays out well for some, but disastrously for others. The same problem is refracted through ongoing stubbornness to genuinely liberalise or integrate disparate European markets in

order to drive competition, economic efficiencies, and enhance demand side bargaining positions. If anything, competition policy has paved the way for greater consolidation of national champions with GdF-Suez standing tall as the latest ‘mega-merger’ looming over the European energy landscape.

Where the EU has seemingly found greater common purpose is on climate change; but this is also misleading. Not only has climate policy created major costs for consumers to bear, it has vastly complicated the ‘security of supply’ equation with the net result of increased dependence on external gas supplies given that the ‘20 20 by 2020’ targets to reduce emissions and increase renewables and efficiency are unlikely to be met. Things would not be quite so bad if such policies actually had a discernible effect in reducing net emissions, but this remains a function of economic and demographic fundamentals, not one

of policy instruments given the conflicted approach Europe has taken to date.

In helping to pick ‘market winners’ by introducing multiple policy instruments rather than sticking to a single target and a single price instrument, the EU has arguably missed the biggest trick of all on clean energy production: trying to promote nuclear energy and carbon capture and storage (CCS). Both remain deeply flawed from a technology and costs based perspective, but they are arguably the most credible way the EU has of squaring the circle between security of supply and lower emissions. Brussels is understandably transfixed with solving its economic woes of late, but it simply cannot afford take its eyes off energy policy. Unless Member States start thinking on a European rather than parochial basis, little progress will be made.

### Gas supply complacency?

Before the deep recession that gripped Europe in 2008/9, many analysts were warning of an imminent energy market failure. Capacity margins were tight, emissions continued to rise, and investment was lax as utilities sweated assets for all they were worth (even with oil and gas prices trading at historically high prices). The economic downturn not only pulled Europe back from this awkward brink, it has made policy look as though it is vaguely functional. Emissions actually fell, capacity looks plentiful, commodity prices slackened, and with demand ebbing, structural dependence on Russian gas does not look as overwhelming as once thought, particularly as greater volumes of Liquefied Natural Gas (LNG) provide greater elasticity of supply. ‘Shale gas discoveries’ in the US and emerging coal

bed methane technologies are also starting to seriously raise the specter of gas on gas competition. At a minimum, gas is once again a buyer's market.

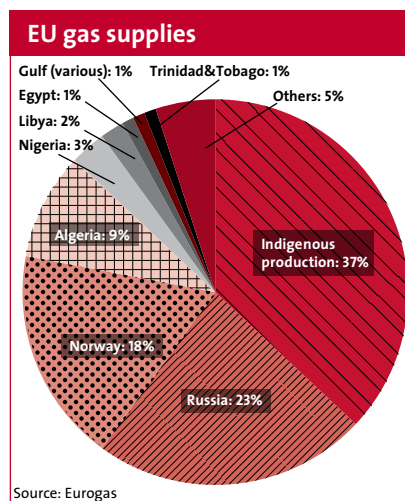
But far from rejoicing at such 'policy hits', this could actually raise serious problems for the EU down the line, not least because it creates a credibility problem for European 'security of demand' for gas. The 'four corridors' strategy to tap into Russian, Scandinavian, Middle Eastern, and Central Asian reserves was always politically shaky, but a physical lack of demand presents an even more formidable short-term challenge. If Russia, North Africa, and Middle Eastern producers take dampened European demand forecasts seriously, they will need to rise to the challenge of diversifying their export routes and markets away from the EU.

Priming the Pacific Basin with LNG is an obvious and relatively easy move for Qatar to make given collapsing Atlantic Basin spot prices – and is one that West African producers might follow. The outlook for Iran (which remains a net importer of gas despite sitting on massive reserves) is also now considerably more complex in terms of how, where, and when it should bring new gas to the market. Any additional supplies from the Middle East would not only rail against rising domestic demand, but the political intricacies of multiple transit states needed to feed gas to European markets via Iraq to Egypt and beyond.

This bodes badly for the nascent Nabucco pipeline; slumping demand will do little to enhance Europe's prospects of sourcing either Middle Eastern or Central Asian reserves or a combination of both. China is clearly now the export market of choice for Central Asian players wanting to break the Soviet mould, with Europe little more than a useful negotiating tool as far as Turkmenistan, Azerbaijan, and Kazakhstan are concerned. Even if Europe could secure an upstream stake, transit routes via Georgia (or more tangentially the legally contested Caspian Sea) would come with a major commercial (and political) premium. The same logic applies to Turkey, which is perfectly placed to leverage its position as a regional energy hub either from the Middle East or Central Asia. This would have a considerable impact, not only on transit agreements, but Ankara's broader accession issues towards the EU.

But analysts should not get too hung up on Nabucco. Its capacity would never be

more than 30 bcm/y in its wildest dreams by 2020, and in the short term, would struggle to muster a meager 7 bcm/y – most of which would go through the old Soviet system across Central Asia. Rather, its significance remains in the political realm in order to maintain pressure on Russia, not only in relation to the competing South Stream pipeline (a pipeline that many European states are taking a 'spread bet' by simultaneously backing both initiatives) but to establish Europe's credibility in diversifying its supply. For Nabucco to happen, infrastructure investment would come first, the gas second. This can only be delivered by acts of political commission, not the 'free hand' of the market – a reality Brussels is slowly waking up to.



The inverse is true of Russia. Gas is in plentiful supply, but major decisions need to be taken in Moscow on capital investment on liquefaction and new pipelines between eastern and western markets amid growing capital constraints. Many in Europe have finally conceded that getting Russia to ratify the Energy Charter is simply not on the cards. It is not in Moscow's economic or political interests. If anything, Russia has half an eye on perfecting its arbitrage potential between these markets while pushing Gazprom's internationalisation strategies to influence the lion's share of European supplies. The good news for Europe is that the sheer geographical size and infrastructure deficiencies make it close to impossible for Russia to switch gas flows between West and East at will, and rather like North African supplies, Moscow's pipelines are hardwired towards European consumers through historical design and political practice of bilateral gas purchase agreements. But despite the mutual dependence this supposedly creates, the critical flaw is that such agreements tend to further under-

mine any notion of European solidarity in external energy policy. This was the case in 2006 following initial gas disputes, and remains so now.

Nord Stream is a stellar example. The German government has been pressing Finland and Sweden hard to drop their 'environmental' opposition to construction of the 55 bcm pipeline linking further Russian supplies to German demand. The pipeline takes assiduous care to bypass Polish territory: the more 'favourable' transit terrain across the Baltic Sea is the preferred political option. Finland and Sweden have even gone to embarrassing lengths to underline the 'very limited geopolitical impact' this pipeline would supposedly have. The reality is that Russia would use this new found leverage to maximum effect against Ukraine (depending on the hue of Orange at the time) and other former Soviet states, either to exact higher gas prices (given upstream revisions across Central Asia) or greater political influence. This is a strategic reality the EU, and more importantly, individual Member States must face up to. Russia will be banking on EU members to look after their own bilateral energy security interests rather than safeguarding the autonomy of post-Soviet states in future pricing disputes. This is particularly true in countries where Russian cuts can be made without affecting broader European supplies. Moscow even had the audacity to use its latest price dispute with Kiev in 2009 as strong evidence to support Nord Stream to maintain Western European supplies at the expense of 'problematic' Eastern European states. What Germany might be offering Russia in 'security of demand', it is sorely taking away from Central and Eastern Europe, in terms of politically hanging them out to dry on energy related matters. Just look at the feeble launch of Europe's 'Eastern Partnership' to get a reference point for where this is heading.

**Tortured liberalisation**

On this basis, 'security of demand' is only really viable for Europe if it is applied across the board. Selective pipelines work well for some, but are politically disastrous for others. The great challenge for the EU is to secure diversified gas supplies for all, at a time when demand looks highly uncertain.

Europe could make its life considerably easier in this regard by properly integrating infrastructure and establishing a single competitive energy market to reduce bilateral pressures from key suppliers. But

as the tortured passage of the third legislative package in 2009 shows, national politics remains a formidable problem. As the ink was drying on the deal, a number of states were still busy dragging their heels on proper implementation of the second package dating back to 2003. The European Commission has even launched infringement proceedings against 25 Member States for non-compliance on third party access and regulated energy prices.

With this backdrop, it is hardly surprising that the third package buckled to utility interests by failing to drive through full ownership unbundling of energy production from transmission, distribution, and storage in favour of an ISO type model. Putting the legal niceties of 'independent' entities to oversee transmission aside, national champions in Germany, France, Austria, and beyond remain vertically integrated. Implementing the agreement towards 2011 will thus be decidedly patchy, particularly with Germany's Günther Oettinger now holding the energy commission seat. This has already spurned calls for a fourth package from some of the more liberally minded states.

Perhaps more worryingly, Europe failed to stick to a strong 'third party country' position (dubbed the Gazprom clause) to prevent external players gaining a downstream stake in European transmission. In the absence of a European regulator, this will be left to national bodies to adjudicate, albeit taking 'utmost account' of the Commissions opinion. This is unlikely to cut much ice with European utilities searching for lucrative 'swap agreements' upstream in Russia.

Politics is not the only problem here though; irrespective of whatever agreement the third package struck, it would still have foundered on insufficient investment in physical infrastructure. The Commission has put the competition cart before the connectivity horse throughout the 1990s, which means competition between European countries is inevitably limited. Where interconnections have been made, this has been on a bilateral and regional basis. The Commission knows this, so much so, that it even has started to 'sell' unbundling on grounds that it would promote the formation of regional grids to one day make a European whole. This helps to explain why trans-European energy networks (TEN-E) only has a €250m budget for infrastructure provision: the political imperative is not to build a European grid, but to protect

national champions. This is despite the fact that they cannot even get utilities to seriously invest in gas storage to cushion supply side shocks: a clear European interest in the medium and long term.

Competitiveness will of course suffer, as will effective management of excess capacity to reduce CO<sub>2</sub>. But it is the political dimension that will remain Europe's biggest Achilles heel, as it leaves upstream supplies to be brokered on a bilateral, and therefore politically vulnerable, basis. Assuming European demand rebounds and pressures towards emissions targets grow towards 2020, this could be a costly mistake indeed.

### Security vs. sustainability

For despite its good intentions, European climate policy is likely to result in more gas, less coal, and at best, aesthetic window dressing of minor increases in renewable-installed capacity. The reason for this is that the Commission did not understand security of supply implications when it rolled out its 2008 climate package. It was merely assumed that setting '20 20 by 2020' targets would deliver the desired market results. The snag is that renewables prescribe a share of a specific technology, whereas the EU Emission Trading System (ETS) leaves it to the market to divvy up renewables, nuclear, energy efficiency, cleaner coal, and gas. Advocates of such an approach see merit in this kitchen sink strategy (i.e. chuck everything into the policy mix), but this comes with major implications, not least because of definition of what constitutes a renewable technology is likely to stretch. This creates uncertainty for investors. At the very least, they remain unlikely to plump for low carbon technologies given the failure of ETS thanks to economic rents and politically lax credits to date. This has merely made gas (spark spreads) a better option than coal (dark spreads), rather than driving investment into renewables. Even now, the carbon price stands at a paltry €12/mt.

But amid this policy mish-mash, it is the renewables targets that lack most credibility. The 20 per cent relates not to generation, but total energy demand. In some countries this would actually mean seeing 35-40 per cent of renewables in the space of ten years. To 'decarbonise' generation to that extent would require massive intervention that European utilities are simply not willing to make. It is also spending that governments could have directed towards energy demand measures that would arguably have a greater effect. The overall impact of

a renewables laden approach will see another 'dash for gas' to backup renewable intermittency, and could even feasibly see an expansion of coal to ensure security of supply and replace old plant. As the ETS shows, nobody really wants to price coal out of the market for fear of seeing the lights go out. If anything, Member States will start pushing for derogation from the Large Combustion Plant Directive (LCPD) should capacity margins begin to tighten. New coal build is by no means off the radar in Eastern or Western European markets either.

Indeed, European leaders (particularly in the CEE states close to the Russian line of fire), have few doubts that burning plentiful coal supplies remains the obvious choice to make. Western European states face a similar dilemma. While they will rhetorically couch new coal build under the prospect of CCS one day becoming a reality to 'capture' the carbon impact on their soil, this actually points to one of the biggest missing links in European climate policy: the EU erroneously believes that a volatile carbon price will deliver CCS technologies. This flies in the face of previous funding pumped into CCS from Washington under the FutureGen initiative that failed to make discernible progress, and the fact that the EU had to sponsor twelve demonstration plants just to get the CCS ball rolling.

The other ten tone elephant in the room for Europe is nuclear. The fact that the 2020 targets or the EU ETS have no direct correlation to nuclear new build given the time horizons involved is not particularly helpful, nor indeed surprising given the national politics in play. Nuclear would clearly benefit from a long-term carbon price, and long-term contracts to bind consumers to the considerable sunk costs involved. Alas, any kind of European nuclear licensing remains in the long grass; for all the states looking to embrace nuclear, there are just as many firmly committed to phasing nuclear out, or at least have a moratorium on future development.

### What to do?

This all begs a major question as to what new measures should be put in place to improve matters? The standard 'fix list' normally starts with calls towards a genuinely integrated and liberalised market to increase elasticity of supply and reduce bilateral pressures from key suppliers. This is operationally obvious, but remains politically tortuous, and if anything, will take many years before Europe is willing to

start putting together a ‘fourth package’ raising thorny issues of a much needed European regulator. This leaves the Competition Commission in the driving seat for now. If competition is to have any meaning, Joaquín Almunia must pick up where Neelie Kroes left off: using the full extent of Commission powers to push through unbundling provisions with the threat of massive fines for utilities that do not comply. This is where the liberalisation agenda can be most effective in the short run and indeed, must also be applied to third country companies to take the political sting out of Gazprom’s tail. But relying on the Competition Commission must not be used as an excuse for Europe to stop directly scaling up infrastructure investment as it has done through the European Economic Recovery Plan. Physical interconnection is critical for a credible single market in the long term, while greater LNG and storage capacity would do much to enhance resilience and elasticity of supply in the interim.

On the supply side, Brussels needs to seriously integrate energy policy into foreign and security policy. Even though political support will remain lacking for such a move, it would certainly make compelling sense for a politically bereft Baroness Ashton (as the new European foreign policy chief) to take ownership of such areas having already effectively ‘lost’ neighbourhoods. Progressing Nabucco would be an important test case (for political leverage rather than sheer volumes) for Ashton’s External Action Service to cut its geopolitical teeth.

Brussels should also consider tabling a buyer’s cartel to enhance the European negotiating position, rather than being selectively bought off on a bilateral basis vis-à-vis Russia. Where Europe still has some edge here is in its buying power: producers – be they in Russia, Central Asia, North Africa, or the Middle East – want nothing more right now than to hear that oil price indexation to prevent gas on gas price competition remains the order of the day in the midst of a gas glut. Although few believe that a global spot market for gas is just around the corner, the EU should still give them a reassuring message. The basic rationale would be to tie up long-term indexed supply contracts, to ensure that demand security blips now do not turn the lights out and put emissions up in a few years. More importantly, it would reduce Europe’s political exposure to producer states that could haunt them in future. Gas on gas competition could clearly have short-term price

benefits for consumers as E.ON’s, Eni’s, and Gdf-Suez’s recent contractual revisions with Gazprom attest, but Europe should be careful what it wishes for. Not only could this jeopardise upstream Russian investment in Shtokman and Yamal, it would see Moscow redouble its efforts to co-ordinate prices with Middle Eastern and African suppliers, while strengthening its grip on Central Asian reserves. In effect, the prospect of gas on gas competition could be the glue needed to stick ‘Gaspec’ together (or at the very least strengthen bilateral price collusion) in order to maintain ‘healthy’ spot prices over competing consumers. In ‘net present value terms’, continuing to play the energy game now will be politically cheaper for Europe than trying to pick it up later, even if this ironically means playing to a Russian tune.



[www.sta.ethz.ch](http://www.sta.ethz.ch)

On renewables, the EU can either continue the charade of assuming the 20 per cent (sic 40 per cent targets) will be met as it has with other previously failed targets dating from 1997, or take drastic measures to push towards such ends. This would more likely than not need to come through some form of subsidy or feed-in-tariff. But even this fails to take into account manufacturing capacity constraints or the investment needed to link new capacity into pre-existing grids. Readjusting targets towards a more credible figure might be the wiser option now, to avoid disappointment and indeed, major supply side consequences later.

Put more bluntly, Europe needs to re-level its low carbon technology playing field. Those who worry that this will raise the political risk bar for investors in future have half a point, but in reality, it was starring them in the face ever since the renewables targets were set. If anything, pressures will grow towards a carbon tax to provide greater cer-

tainty for the private sector to invest, or at the very least to provide a ceiling and floor for the EU ETS. This would enable some of the costs of renewable programmes to be absorbed through taxes, and could underpin the economics of nuclear investments given the considerable capital expenditure costs upfront and waste legacies out back. Common European licensing for new nuclear build would certainly help in this respect. Perhaps more importantly, revenue streams could help to fund CCS, particularly if an imports tax was put into the mix. This may sound draconian, but it should be borne in mind that the EU only measures home carbon production rather than total consumption, which would have to consider Europe’s ‘outsourced’ carbon footprint to Asian manufacturing. This is why technology really matters, and why supporting large-scale carbon capture and storage is critical if the ‘magical’ 550 parts per million stabilisation goals are ever to be met globally.

The bottom line is that Europe has a torrid hand to play that will make it very hard, if not impossible to address availability, affordability, and sustainability concerns all under the same roof. If policy is not set across the board, at a pace that all members can keep up with, the chances are that the wheels could totally fall off – be it on security of supply or climate agendas. If it becomes a choice of keeping the lights on or the emissions low, it is clear where the main imperative still resides. European leaders cannot even come clean to consumers on what the real costs associated with more sustainable forms of energy would be. Europe has to start picking its ‘least bad’ policy options if disastrous outcomes are to be avoided. Brussels is not only a long way off this mark, it is not sure what target it is truly aiming for to align the state, markets, and law towards a well-rounded energy policy. New found ‘solidarity’ from Member States is unlikely to help in this regard, with stability of capital market and reducing fiscal pressures the order of the day. Once these are ‘fixed’ and economic demand rebounds, Europe will assuredly find its energy policy broken.

- Author: Matthew Hulbert  
hulbert@sipo.gess.ethz.ch
- Responsible editor: Daniel Möckli  
sta@sipo.gess.ethz.ch
- Other CSS Analyses / Mailinglist:  
www.sta.ethz.ch
- German and French versions:  
www.ssn.ethz.ch