Security of Supply and Organizational Change:

A European Challenge

LUCHIEN KARSTEN
Professor History of Management University of Groningen, The Netherlands
Director Energy Delta Institute, The Netherlands

Abstrak

Sejak pengiriman gas dari Uni Sovyet dimulai, faktor pengiriman merupakan hal yang sangat mencemaskan masyarakat Eropa. Di penghujung pergantian tahun 2005, penutupan pengiriman ekspor gas melalui Ukraina ke Eropa menyebabkan kerisauan publik. Sejak tahun 199an, Uni Eropa meneruskan kebijakan liberalisasi pasar energi agar pasar bebas tersebut dapat melayani kebutuhan masyarakat umum. Pada saat yang sama, liberalisasi tersebut mengakui peranan penting regulator publik untuk menghindari gangguan-gangguan pengiriman gas secara mendadak. Pertanyaan yang muncul adalah bagaimana Uni Eropa dapat menciptakan ruang gerak ekonomi bagi Rusia agar infrastruktur perbatasan dapat menjaga Keamanan Pengiriman dan pada saat yang sama menjaga hubungan bilateral, dan mengembangkan pengaruhnya dengan mambangun bentuk-bentuk kerjasama guna membendung pengaruh Eropa. Saling mempengaruhi antara sistem skala nasional, tingkat antar Negara Uni Eropa dan strategi komersial perusahaan gas akan mempengaruhi pembanguan di masa yang akan datang. Berdasarkan pendekatan untuk mencermati hal tersebut, proses persamaan dan perbedaan akan ditekankan menjadi hal yang penting. Pendekatan apakah yang akan berlaku guna memahami tantangan yang dihadapi Eropa dalam menjaga Keamanan Pengiriman.

Kata kunci: ketahanan energi, energi (pasar), kebijakan, kemitraan, Gazprom

* I greatly appreciate comments by Geert Greving of Gasterra, the usual disclaimer prevails

Introduction

Recently the British Labor government decided to build new nuclear power plants. One of the justifications for this decision was to increase the country's independence from dominant external energy providers. It was pointed out that France is a country with so many nuclear power plants that it covers 70 percent of its own electricity consumption. Next to an increasing autonomy in its provision of energy Great Britain stated that with more nuclear plants within its own borders it will be able to comply with carbon emission reduction goals.Other European countries have began to raise similar concerns about the building of nuclear power plants. After years of a moratorium on this issue, due after the disaster of Chernobyl in 1986 and the still unresolved issue how to cope with the nuclear waste of the power plants, politicians in the European Union now seem to be willing to put the topic back on the agenda. One of the driving forces to do so, is the increasing fear for a one -sided dependence on a few traditional, energy providers.Europe's current main suppliers are Russia (oil and gas), Middle East (oil and to a lesser extent gas) Algeria and Libya(oil and gas).

Since the gas deliveries from the Soviet Union to Europe started, the issue of the security of supply has been very important for European citizens. The recent shut-in gas exports through the Ukraine to Europe at the turn of the year 2005 by Gazprom for example caused public nervousness. Some 25 percent of Europe's gas imports suddenly stood in jeopardy(Stern 2006). The general public was questioning European energy distributors as well as governments about the European ability to exert control over gas flows from this region.How can the European Union guarantee the continuous provision of energy at their homes and businesses?

The mounting uncertainty is also fed by some global developments. In the next 10 years the world energy market will be confronted with a continuing strong demand from India and China. It is expected that OPEC will exert an increasing domination, that an increasing nationalization of oil and gas reserves will take place and that competition for supply contracts among energy -craving emerging economies will intensify. At the same time it is expected that oil production from non-OPEC countries may decline significantly. The decline rate of Norwegian oil production, for example, is higher than many experts had foreseen. This is due to the recent merger of Norske/Hydro with Statoil, which led to a general setback of quick Norwegian oil and gas reserves.

European politicians have reached a crossroads where they have to decide how to secure future energy supplies. Seen from a geo-political perspective some suppose that the real threat to the European security of supply comes from the east as the stand-off between the Russian Federation and its former Soviet satellite state has recently illustrated.They favor policies that make Europe less dependent on natural gas and promote developments in the area of NLG and nuclear power. Others stress that the biggest cause for unrest comes from within Europe's own energy system. It is the old institutional design of its energy infrastructure that is making Europe vulnerable. Traditionally the energy providers were monopolists who as highly-integrated and highly routinized firms operated within a network of cooperation that was mainly dominated by political interests. Within that network the recent debate of liberalization of the energy market the European Union has launched is causing turmoil. The changing composition of the organizational structures of the traditional players,the sudden presence of new players and new codes of conduct change the playing field as well as the roles of its players. One of the big issues is that gas chains from source to end-consumer have become increasingly cross-border entities. The reliability and maintenance of these entities will require more intensive cooperation between partners who must be willing to share huge investments and high risks.The increasing market agility which will be required forces players to change their bureaucratic company structures into entrepreneurial ones to make them fit and respond flexibly to market challenges .This transformation causes uncertainty. Although the industry is still dominated by long-term contracts and will continue to be for the foreseeable future, the companies dealing with these contracts will turn themselves into dynamic,flexible and proactive operating companies with an agile eye on issues as the destination of energy provision, the functioning of spot markets and short-term trading. The question is how these energy players are going to adapt and cooperate and to what extent they will still be able to safeguard the security of supply the European consumers are worried about.

Globalization versus National Styles

To understand how energy players can cooperate within a liberalized market and guarantee the security of supply, we first have to ask ourselves how we analyze this issue. Broadly speaking there are two different approaches.The one starts from the conviction that companies operating in the global arena will converge and develop similar company practices. Ohmae (1995) is one of the main defenders of the integration and convergence thesis.His basic argument is that in the global economy goods, capital, persons and services (knowledge and information) flow relatively unimpeded across national borders. After some initial struggles The European Union initiated this plan for freedom on January 1 1993.It tries to harmonize regulatory, political and institutional arrangements that work in the direction of greater convergence The effect is an increasing disintegration of national markets and a process towards a global setting where nation- states have less influence. At the same time an increasing internationalization of firms takes place and the relative convergence of their strategic orientations. In this new global setting Ohmae contends that national diversity will diminish rapidly. Nation- states may no longer have a market-making role to play. He is convinced that the trend towards globalization and integration is efficiency-driven and the search for scale and scope advantages is a powerful driver for large multinational companies. Convergence will not only take place at company level but globalization will also stimulate a convergence which will be brought about through institutional isomorphism which means that particular institutional structures and practices will spread globally and will be rapidly adopted. Mechanisms that drive this development can be any combination of imitation, search for legitimacy,political pressures or a strive after particular forms of professionalization (DiMaggio & Powell 1991; Geppert e.a. 2002). Within the gas sector this approach is defended by those who perceive gas as a commodity which can be traded most efficiently in a fully liberalized and open market. This market can be considered as converging beyond national gas market conditions. It is supposed that several changes that actually take place are heading in the direction of this ideal commodity model. The British Gas market is currently seen as taking a leading position in the liberalization process.

The other perspective on globalization can be found in the National Styles literature. The argument here stresses the fundamental differences in national, regional and sectoral institutions which generate significant variations in firm operations. This general argument is developed under several labels like 'Path Dependency' approach(David 1993), Business Systems (Whitley 1992; Dijck & Groenewegen 1994), Societal Analysis (Maurice and Sorge 2000) or 'varieties of capitalism' (Hall &Soskice 2001). The essence of this literature is that industrial development proceeds differently in different nations as national industrial settings draw on specific legacies and institutions in their national surroundings. Institutional, social and organizational factors will continue to produce national differences in strategic orientations of firms even under global competitive conditions (Guillen & Suarez 1998). This will continuously proceed into processes of divergence. The differences in resources, capabilities and institutional structures will lead a variety of particular organizational practices.

Within the gas literature this approach can be traced in analyses that look at companies that deal with gas as a public property or as a public utility. Gas producing countries like Norway and Russia typically take the position of the public property. They have national gas companies that take care of the exploration and distribution of gas and design strategies and policies related to the view that their product is explored and distributed within a particular institutional setting. Companies that deal with gas as a public utility respect the fact that they are institutionally embedded to safeguard the public utility service. This view can be traced in countries like Germany and France which do not have extensive domestic gas reserves (Arentsen & Kuenneke 2002). French institutional path dependency for example will create major obstacles to introduce a liberalized gas market. The recent merger between Gaz de France GDF and Suez has created a French cartel (with an extensive infrastructure and captive clients) and the world's fourth largest gas and electricity supplier.Its management is keenly aware of its political role within the national context.

Let us now see how these two approaches on globalization and convergence/divergence shed light on the functioning of the energy sector and the issue of the security of supply.For reasons of space the paper will primarily focus on the gas sector.

EUROPEAN POLICIES

In the 19th century the gas industry started from synthetically manufactured gases, but during the subsequent century exploration and production activities of the upstream industry has enabled natural gas to become increasingly the fuel of choice in electricity production, industry and households and thus may contribute seriously to the decarbonisation of energy. Before the liberalization was introduced, the gas market was predominantly nationally focused and regulated in the context of national interests. Security of supply was not a subject which was investigated a lot. National monopolies in Western Europe unilaterally decided which level of security would maximize customers' welfare. Interruptions hardly occurred. Liberalization of the gas markets in Europe was preceded by deregulation of the gas market in the United States. Some 15 years ago it was-due to governmental regulat-ions-rather unattractive to sell gas outside a gas producing American state. Non gas -producing American states therefore suffered severe shortages and put their own local industry in a disadvantaged position. To mitigate disintegration the federal government decided to deregulate the gas market (Arentsen &Kunneke 2002). One of the consequences was the inexorable rise of energy marketing and trading companies during the 1990s.A negative side effect was that some of the companies involved, especially Enron, run into unwarranted speculation, were declared bankrupt and its top management accused of financial wrongdoing. Inspired by American experiences the European Union nevertheless decided to promote an internally liberalized energy market. Market optimization was proclaimed to displace social or political evaluat-ions of public policy with measures evaluated primarily for their economic efficiency. The European Commission, as executive body, took the initiative and proposed a structural reform of Europe's gas markets. In its draft legislation it maintained a clear preference for ownership of the national players, but it demanded the unbundling of the national infra-structural networks which distribute the energy,from the suppliers. Full swing liberalization has been mitigated, however, by a soft tone regarding vested interests within the nation-states based on the principle of subsidiarity (i.e. actions should be executed at the lowest possible political level of decision making within the EU). In 1998 the Directive required nevertheless the opening of markets to competition.

The European parliament ratified a second Directive in 2003 which provided for complete opening of the market by July 2007 and a further unbundling of network assets. The Directive, however, did not contain a strategy as to how gas supplies were to be secured.It is left to the national and international gas companies to respond to market changes and satisfy the gas demand.

The direct impact of the market liberalization was a wave of mergers which swept through the European utility sector leading to a process of consolidation. Within the European countries, however, different policies are embraced. Some allow international takeovers to respect the process of internationalization, others resist that process and mould market rules to national purposes and national taste. While there was some serious resistance against a full unbundling,the European Union executive is now proposing the establishment of Independent System Operators (ISO's) which allows integrated energy groups to keep ownership of networks but at the price of abandoning any day-to-day control of these networks to independent operators.

In order to be assured that within the liberalized gas market the players can ascertain security of supply, regulators are put in place for surveillance of future developments. Security of supply (SoS) is the availability of energy, in whatever type or form, at all times in sufficient quantities, and at a reasonable and affordable price. To install an adequate functioning of SoS and withstand disturbances,the European Commission is striving for a public harmonization of the powers and independence of the 27 European Union states' national regulators.A new body, the Agency for the Cooperation of Energy Regulators, will be put in place which can collectively tackle cross-border issues. It will bring about a new network of European grid operators to set standards,plan investments and provide new rules on market transparency. This initiative of the European Commission is very significant while the new body can create an institutional dynamic of great benefit to a common European energy market. To reach that goal the European Commission intends to bring down a broad series of barriers to cross-border energy trade, investment and competition. These barriers include the temptation of bundled groups to use their networks as a weapon against rival suppliers. Another barrier to new entrants is the difficulty of preventing supply and network subsidiaries in integrated energy groups from privileging each other with potentially market sensitive information (Linden e.a. 2006;Jepma & Nakicenovic 2006).With its policy the European Union seems to embrace the approach of the gas market as an arena where gas as a commodity should be traded in a free manner.

Differences between National and International Players

The National Styles approach presupposes that large companies, even if they operate worldwide, are bound to national settings. A large part of their practices which are initiated and determined by headquarter issued strategies reflect a company culture that will be ingrained with a particular national culture. Within the energy market – in particular the oil and gas sector– national energy companies (NEC's)operate next to international energy companies(IEC's).It is generally supposed that the share of the IEC's in the world market will go down and that important decisions will be made much more by NEC's. While the national government's share in NEC's is quite high it is a truism to underscore that national interests as well as cultural and institutional factors will determine the strategies of these firms.Whereas IEC's will respect global market movements to earn a profit as they are driven by shareholder value and short term visions , NEC's will look after their own national interests and public service obligations first. For IEC's it may become more difficult to gain access to gas reserves because most such reserves are controlled by national gas companies rather than international ones.Myers Jaffe(2007) states that NEC's are considerably less efficient than comparable privately owned ones gas. Depending on whether a NEC has to sell its gas at subsidized prices,NEC's may suffer from a much higher efficiency loss than IEC's.Cooperation between these two types of firms can improve the overall efficiency in the energy sector if it would only operate as a commodity market. However that is not the case. These firms involved will also have to comply with criteria concerning the security of supply.This makes the expected development of a free energy market much more complicated. As has been indicated Gazprom is one of the main exporters of gas to the European Union.As a matter of fact Russia holds a leading position in the European gas market as one of its main suppliers..The European Union received in 2002 about 27% of its natural gas imports from this country (Engerer2002), Germany being its major customer. In a Europe of 35 countries,Russian gas accounted in 2004 for even 40 percent of total imports (Stern 2006). In 2005 over 140 billion cubic meters (BCM)of Russian natural gas were delivered to Europe (Zhiznin 2007).It is expected that Gazprom's total direct sales on the European market will increase during the next few years by about 17.5 BCM a year, which amounts to around 11% of all Russian exports to Europe. For the liberalization of the gas market and the maintenance of SoS as European consumer topic, it is therefore essential to understand the role Gazprom will play in the future.

GAZPROM

Until the 1990s the Russian gas industry was part of the planned economy. Enterprises were state-owned with hardly any scope for their own decision making. Gas production and distribution were planned by state authorities.After Gorbachev's Perestroika in 1986 the tight links between politics and economics dissolved (Aslund 1995). The law 'On State Enterprises' which came into force in 1988,provided for self-management (Engerer 2002). Gazprom was established in 1989 with an ownership structure whereby the Russian government holds almost 40%, Russian legal entities around 35%, Russian individuals 15% and foreigners some 10%. Although during the 1990s measures were taken to liberalize,deregulate and privatize the economy this only partly applied to the gas industry while this industry was assumed to be a strategic sector and should therefore constitute a natural monopoly. Soon Gazprom began to devise a strategy of moving downstream into European gas markets.In 1990 an agreement was established to set up a joint venture to market Russian gas to the eastern part of Germany. Based on this and similar initial steps Gazprom expressed its ambition to become more active in downstream activities and seek rents in parts of the value chain which were actually in the domain of Western energy companies. Contracts were signed with the German company Wintershall through its subsidiary Wingas and EON to explore and produce gas from the Yuzhno- Russkoye deposit in western Siberia and provide an access to downstream markets. In terms of reciprocity and and incorporation of the value chain Crucial in these forms of cooperation is the fact that Gazprom buys the gas straight from the well head and determines the destination of the gas. The joint venture with Wingas has been an opportunity for Gazprom to operate in a foreign commercial organization as equal partner(i.e. in Russia 49 percent to Wintershall ;in the EU 51 percent for Wintershall). It provides Gazprom with market intelligence about true costs and margins involved in the German gas market.

In 2005 three members of the management committee of Gazprom remained from the previous administration. Aside from Alexey Miller,eight of the new management team members came from St Petersburg or had close links to President Putin who himself originally came from the same city." With the arrival of the Miller management Gazprom, which had often been called a 'state within a state', became very much a part of the State with direct links to the president and accepted its rule as an instrument of government policy both domestically and internationally"(Stern 2005 172-3).

Shortly before the German Chancellor Gerhard Schroeder resigned in 2006, he and Russian President Vladimir Putin struck a deal that both leaders hailed as beneficial for European energy security. The deal is about the German- Russian plan to build a gas pipeline under the Baltic Sea stretching 750 miles from Vyborg near St Petersburg to Greifswald in the northern part of Germany. The Dutch company Gasunie provides transmission transparency for Russian gas in the form of transit, quality conversion, technical support and backup services while Gasterra is responsible for the storage of gas and is involved in the Baltic Sea pipeline (Nordstream) which is scheduled to go into operation in 2013.It will tap into the Russian Yuzhno-Russkoye field, which has an estimated annual output of 25 BCM of natural gas and may reach till 80 BCM per year.

Very recently Gazprom has struck a similar deal with the Italian company ENI and the Bulgarian government to build a pipe line called Southstream which leads through the Black Sea and will provide gas for downstream southern European customers.

However, various affairs, such as the take over of oil company Yukos which the 'owner' had tried to sell to Exxon Mobil ,(a deal which the Russian Energy governance body saw as an illegal act) and recent events on Europe's eastern border with the shut -in gas exports through the Ukraine have increased public unease in Europe over Russia as reliable partner. Worries about the securing of supply of gas have increased. Russia is still unwilling to ratify the Energy Charter Treaty, an international agreement aimed at integrating the energy sectors of the former Soviet Union and Eastern Europe into the broader world market.

The issue of security of supply is very important for European governments and companies from the import perspective, but also for their counterparts in Russia from an export perspective (i.e,.security of demand). Increasing quantities of Russian gas are being produced in remote harsh environments and need to travel thousands of kilometers to reach European markets. It is therefore necessary to ensure that shortfalls, for whatever reason, can be managed without causing inconvenience to customers. This is achieved by building storage reservoirs and additional pipeline connections allowing gas to be brought from other sources-notably the Netherlands-at short notice. Although Russia disagrees with Europe about the relevance and impact of the European liberalization policy, it at he same time continues to repeat its willingness to intensify cooperation. Europe at the other hand will have to cope with the Byzantine system of power that actually reigns in Russia.

Partnership

At the EU-Russia summit in Paris in October 2000 a high level energy dialogue was initiated to define the way both partners can cooperate, contribute to energy security and rationalize the production and transport infrastructure. At the EU-Russia summit held in St Petersburg in May 2003 both parties discussed the relevance of joint actions in creating common economic spaces to bring together their economies, making them more compatible with the aim of developing common investments and trade. Although Russia does not see the relevance of the Energy Charter Treaty, the overall end goal is to integrate EU and Russian markets.The framework of such an economic common space,the development of a main pipeline infrastructure and necessary links between the different energy systems may enhance cooperation in terms of a common business to business model. All sides believe that the dialogue between European Union and Russia is the only way to create such a common economic space and that dialogue is regularly on the agenda of all Russia- European Union summits. The political declaration on the 'northern measurement' adopted on the 24th of November 2006 by the Russian Federation, the European Union, Iceland and Norway contained a proposal to involve experts and international financial institutes in the extension of the cross border gas infrastructure is one of the examples to realize that goal.

Despite the favorable support of the dialogue and the fact that companies operating across European borders reinforce the transfer of regulatory power from the national to the European level, the European Commission recently indicated that Russian investments in the European energy infrastructure should be based on reciprocity within a common playing field. Actually Russian investments in Europe mount to 30 billion USD, whereas European investments in Russia have increased to a 300 billion USD. European companies invest in Russia to cope with ineffective and inefficient use of Russia' actual energy resources which is also in the interest of Russia. Cooperation means working together with the objective of mutual benefits. Competitors looking for cooperation will admit mutual needs to share risks in order to reach a common objective. Cooperation is meant to result in leveraging the partners' abilities through teamwork. The mutuality in needs, in risk sharing and common goals are the three elements crucial to every form of cooperation. 'Cooptition' is one of new labels describing cooperative competition. It focuses on cooperation between companies in imperfectly competitive markets in order to develop mutual benefits that would otherwise not be attainable (Brandenburger &Nalebuff 1997). The scaling up of gas companies by mergers, acquisitions and joint ventures will undermine national decision making,but it will lead to further transcendence of national borders of nation –states and puts these companies under the purview of European authorities. In that sense the European Union has to strengthen the dialogue for cooperation which will safeguard SoS.

Conclusion

There are substantial uncertainties for Russian gas sales to European markets of the next decade. These are related to the long awaited development of gas to gas competition and pricing, anticipated as a consequence of liberalization, which have yet to make a significant impact in continental Europe. The particular mixture of competition within the EU and partial regulation due to the principle of subsidiarity will characterize the institutional context for years to come.The emergence of a common gas market has been hampered by fragmentation of markets due to differences in national styles and institutional frameworks. Although EU's policy may facilitate the further development towards full integration and open trade, mergers and acquisitions may reduce the possibility for serious competition between providers of gas. The European market integration may therefore be undermined by companies that integrate and develop into greater units.

Russian attitudes towards increasing European exports will be strongly influenced by political relationships with the European Union and major European countries and commercial and regulatory conditions within these markets. Gazprom intends to become a multinational oil and gas company representing the interests of the Russian government and could become a Russian equivalent to Saudi's Aramco. It may,however, struggle to manage a very large European export portfolio together with an increasing national gas market and satisfy -from a corporate social responsibility perspective - its domestic customers. To do so it will have to improve its managerial capabilities and turn the bureaucratic company into an entrepreneurial one.

Some European countries like

Germany and France have been developing their own ties to key suppliers on a bilateral basis. This hampers the creation of a harmonized approach to energy supply security. It is as yet unclear how national policies will be able to strengthen the supranational European scene. It is as if market liberalisation and the discussions about international transport and trading activities have led to a fragmented European energy sector with a decreased incentive for cooperation amongst Europe's energy players. And yet, improving cooperation and intensifying reciprocal interdependency could facilitate the substantial goal of SoS in combination with security of demand.

It will, however, be difficult to derive from the two approaches that have been distinguished a clear picture about the actual strategic configurations European gas companies should pursue.The interplay between national systems, the supranational level and commercial strategies of gas companies probably steps beyond the actual perspective which is embedded in the present EU deregulation. A broader analytical framework is required to better understand its future impact.

As long as Gazprom is used as a cash cow for the Russian government, Stern(2005) of Oxford Energy Studies has his doubt as to whether Russia will be able to stick to its long-term ability and willingness to increase its export much beyond the current levels. At the other hand,realization of improved cooperation between Gazprom and European companies-even in a bilateral form- will greatly increase the availability of capital for investments in projects directed to the Western export market. To do so, a shift is needed from a traditional, highly structured gas world of government- backed, bilateral, fixed-priced international contracts towards a world much more structured by private,open market arrangements. Arrangements for exploration and exploitation of gas reserves based on public —private partnership can pay due respect to SoS. To explore these developments a more sophisticated institutional analysis of societal decision-making defined by the cooperation of individual partners is required. □

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