Nordstream: An Economic and Market Analysis of the North European Pipeline Project

Professor Dr. Alan Riley, City Law School, City University, London & Associate Research Fellow, Centre for European Policy Studies, Brussels.

1.0 Introduction

Most of the critical discussion in relation to the Nordstream project have focussed upon environmental concerns for example, the construction of the pipelines through the WWII munitions dumps in the Gulf of Finland.[1] This paper takes a different approach. It instead examines the underlying economics and market context in which Nordstream will operate. It argues that the cost of Nordstream is already substantially more expensive than land based pipelines and that the costs of building the pipeline are likely to grow.[2] As a consequence if the German domestic market remains substantially closed to competition German consumers particularly will face very high prices for Nordstream sourced gas. However, this paper argues that consumers are likely to be offered relief as a result of competition created by EU gas market liberalisation. The paper then argues that rather than consumers facing economic damage, it will instead be the shareholders in Nordstream, Gazprom, Gasuunie, EON and BASF who are likely to suffer[3] The impact of gas market liberalisation will be to permit cheaper land based piped gas from alternative sources, for instance from the new British gas hub to flow into Germany and the rest of Europe undercutting Nordstream sourced gas and forcing Nordstream to exit the market.

---

[1] Lips, *Possible Environmental` Impacts of the Nordstream Project (2007) Presentation at the Nordstream Project Conference*, (February 2007) Vilnius.
[2] Umbach, *Europe's Next Cold War: The European Union Needs a Plan to Secure its Energy Supply*, (Summer 2006) DG GAP IP.
[3] *Inquiry Pursuant to Article 17 of Regulation (EC) No 1/2003 into the European gas and electricity sectors (Final Report)*, Communication from the Commission, (January 2007), SEC (2006) 1724.

The paper argues that Nordstream is another example of Russia seeking to build expensive export infrastructure where the costs are unlikely to be recoverable all in order to avoid running gas supplies through transit states. It concludes by arguing that the Russian Federation and Gazprom would find a much more effective and cheaper solution to its legitimate concerns over issues such as gas theft and transit fees if it worked with the EU and its Member States in the Energy Charter Treaty (ECT) fora. It should be possible to establish a workable ECT Transit Protocol regime which could deal with issues such as transit fees, maintenance and gas theft, together with a dispute settlement regime, legitimate concerns could be laid to rest without engaging in expensive and uneconomic projects such as Nordstream.

This paper is divided into five parts. Part two outlines the history, objectives and route of the Nordstream project. Part three examines the true cost of the Nordstream project including the escalating environmental costs Part four examines the impact of market liberalisation and explains the importance of the gas deficit as to why Germany cannot oppose liberalisation. Part five offers a conclusion.

2.0 Nordstream: A New Energy Supply for Europe?

There are three key reasons why Russia and Germany sought to promote the construction of a gas pipeline beneath the Baltic Sea at the end of the 1990s. First, there was a legitimate Russian concern regarding gas theft from transit countries particularly the Ukraine in the mid to late 1990s.[4] In addition, there were concerns regarding the cost of transit fees and concerns as to the quality, stability and integrity of parts of the non-Russian pipeline network.[5] Second a less legitimate Russian strategic interest in

[4] In 2001 the then Deputy Ukrainian Prime Minister Oleg Dubina acknowledged that in that year alone 8.7bcm had been siphoned off from export contracts. Pirani, *Ukraine's Gas Sector,* (June 2007) OIES, 19, 30; Goetz, *The North European Pipeline: Increased Energy Security or Political Pressure?* (September 2005) SWP Comments 1. For a discussion of the ease with which gas was taken from the Ukranian pipeline system see Engber, *How do you steal gas from a pipeline?* (December 2005), Slate Magazine. http://www.slate.com/id/2133479/

[5] Pirani, *ibid,* 80. Reuters, *EU Tells Ukraine to Upgrade Pipelines After Blast* (May 2007). In this report there is joint EU and Russian concern expressed as to the state of the Ukrainian pipeline system. However, as Stern points out it is far from clear that the USSG, the central Russian pipeline network is in much better condition than in many transit states. Stern, *The Future of Russian Gas and Gazprom* (2005) Oxford, 36.

increasing economic and political leverage over transit countries by reducing their economic value to Russia and Western EU states as important energy transit corridors.[6] Thirdly, a major German concern in increasing the supply of gas into its domestic market and potentially also an interest in improving the security of supply.[7]

The initial discussions took place as early as 1993.[8] From these discussions the plan initially envisaged a new pipeline being sourced from the Shtokman field with a pipe running from the Barents Sea coast to Finland and then from Finland via the Baltic Sea to Germany. With this initial phase the lead partner of Gazprom was the Finnish firm Fortum. Feasibility studies were undertaken in 1997, an agreement to proceed was concluded in December 2000 and in 2002 the EU granted the project the status of Trans-European Network. However, in March 2004 the project was fatally undermined by a Russian decision to use the Shtokman field gas for LNG exports.[9] As a consequence of this decision, the Finnish part of the pipeline became unnecessary and Fortum ultimately exited the project.[10]

The exit of Fortum did not end the project. Potential German partners led by EON pushed swiftly ahead with a second proposal to draw gas from the existing Western Siberian system and run pipes down to the Russian side of the Gulf of Finland and then via the Baltic Sea to Germany. The project was finally announced by the three partners in April 2005 and approved by both governments the following September.[11]

The main pipeline will run 1200km from Vyborg on the Russian side of the Gulf of Finland through largely the international waters of the Baltic Sea to Griefswald on the German Baltic coast. In addition, a further 900km of pipeline will be built from the

---

[6] Goetz, *op cit* 1 and 4.
[7] Goetz, *op cit* 3-4
[8] Larsson, Sweden and the NEGP: *A Pilot Study of the North European Gas Pipeline and Sweden's Dependence on Russian Energy,* (June 2006) FOI (Swedish Defence Research Agency), and Larsson (2) *Nordstream, Sweden and Baltic Sea Security* (March 2007) FOI.
[9] Goetz, *op cit.* This decision was subsequently reversed in September 2006. Shtokman's gas resources, at least in its initial phase, will now be used for pipeline purposes including to the European Union and possibly the second pipeline of the Nordstream project.
[10] Goetz, *op cit* 1
[11] Larsson, *op cit* 16.

principal gas field Jushno-Russkoje to Vyborg. Nordstream also indicates on its website that it is willing to consider extensions to the pipeline system into a number of European countries en route to its final landing point on the German coast.[12]

Initially a single pipeline with a capacity of 27.5 billion cubic metres will be built which will be sourced from the Jushno-Russkoje field. This first part of the project is scheduled to be completed by 2010. A second pipeline carrying a further 27.5bcm is scheduled to be installed by 2012, however, it is unclear where the gas will be sourced from for this second pipeline.[13]

The cost of the offshore pipeline is variably placed at between €5-€12 billion[14].

The company building the Nordstream pipeline Nordstream AG is 51% owned by Gazprom, with the remaining shares being shared out between BASF/Wintershall, Gasuine[15] and EON/Ruhrgas. Former German Chancellor Schroeder chairs the Nordstream board.

Work on the overland route has already started and in respect of the Baltic Sea Nordstream has begun filing for the necessary environmental and regulatory permits which will allow the project to proceed.[16]

---

[12] http://www.nord-stream.com/eng/project/ Such peripheral extensions could include for instance the Russian enclave of Kalingrad, and potentially some of the Baltic States and Sweden.

[13] The Jushno-Russkoje field is identified as the gas source for the first pipeline and provides some detail regarding the operation of the field. The Nordstream website then merely mentions the Yamal and Shtokman fields as where the gas can be sourced for the second pipeline but no equivalent level of detail is provided. http://www.nord-stream.com/eng/gas/

[14] *Nordstream to Hike Cost Estimates in Early 2008*. Reuters, 13th December 2007. The Reuters report quotes the minimum €5 billion estimate on the Nordstream website and the Nordstream announcement that new estimates will be published in February or March. It also goes on to quote former Chancellor Schroeder that the costs of Nordstream may reach €8 billion and BASF of €9 billion. It quotes analyst estimates of €12 billion. For earlier much lower estimates see Goetz, *op cit* 2.

[15] Gasunie has recently agreed with Nordstream to become a shareholder. Gasunie will receive 9%, with BASF/Wintershall holding and EON/Ruhrgas holding 20% each and Gazprom retaining 51%. *Gazprom and Gasunie Agree on Nordstream Terms,* Nordstream press release 6th November 2007.

[16] For details of the filings and requests so far made by Nordstream see http://www.nord-stream.com/eng/feedback/

3.0 The True Cost of Nordstream

In any market analysis of Nordstream the first question must to be to consider the true cost of the project. There have been a number of widely differing projections of the cost from as low as $2 billion to as high as €12 billion[17]. The current Nordstream website projection suggests a figure of at '> €5 billion'[18].

There are a number of factors however to suggest that the cost of two underwater pipelines is likely to escalate substantially above the initial €5 billion, over and above the cost of putting in a second source field pipeline to Vyborg.

One factor is the knock-on impact in the gas sector of high oil prices which has created very significant additional demand for energy related plant and equipment and services. According to a recent British energy report 60% of the costs of investment in the gas sector are affected by demand in the oil sector including steel and energy services.[19] This factor appears to have seriously affected the price that Nordstream will have to pay for steel pipes and is the likely source of the imminent increase in budget estimates that are expected from Nordstream.[20]

Further costs which do not appear to be accounted for are the substantial costs of operating an underwater pipeline and the substantial costs of decommissioning the pipeline. In particular, experience from the nuclear industry suggests that to fully comprehend the total cost of any major energy project it is necessary to include not merely construction and operational costs but also decommissioning costs.

One of the other major cost issues arises from the principal environmental concerns surrounding the project: Principally, the prospect of having to survey and then remove munitions along the route of the proposed pipeline.[21] According to Lips a significant part

[17] Reuters 13th December 2007, *op cit.*
[18] http://www.nord-stream.com/eng/project/
[19] Poyry, *The Future of UK Gas: A Phase Diagram* (May 2007) Poyry Consulting 11.
[20] Reuters 13th December 2007, *op cit.*
[21] The Nordstream website indicates that the survey will be cover a minimum of 1KM either side of the pipeline. In all that will mean a 2400km area will be surveyed. http://www.nord-stream.com/eng/feedback/

of the Gulf of Finland is an undersea munitions dump, the main Baltic Sea channel is the site of a chemical weapons dump and as the pipeline enters German waters it enters an environmentally sensitive Nature 2000 area.[22] The cost of survey, removal of dangerous munitions and taking amendment measures in respect of the Nature 2000 area are likely to be significant and thereby increase the overall cost of the project.

A further cost concern, as Nordstream's own website indicates is that knowledge of the condition of Baltic Sea and Gulf of Finland is limited.[23] This however raises the prospect of significant and expensive readjustments in the course of the project. Already the initial plan to build the pipeline into international waters in the Gulf of Finland is threatened as surveys have revealed that the erratic topography in that part of the Gulf will impose heavy costs if it were to be levelled (and thereby also causing significant environmental damage).[24] More recently the Finnish government has requested that Nordstream's route be moved out of Finnish territorial waters because of the ecologically sensitive nature of the seabed and again its uneven nature requiring considerable hazardous construction work. Unfortunately the alternative route south of Hogland will also be expensive to develop as there are a significant number of cables and shipwrecks as well as heavy sea-going traffic above.[25]

Taking these factors into account costs are likely to be pushed up significantly toward €12 billion.[26] The author's estimate is that currently costs are heading in the direction of €12 billion or $17.5 billion given the increase in steel prices and energy services, operational costs, environmental requirements and seabed preparation. However, further major environmental requirements, price increases or alteration to the route are likely to further increase the costs of the project.

---

[22] Lips, *op cit.*
[23] Nordstream website, *Nordstream: A New Gas Route for Europe* (November 2006) 2. The paper points out that the extensive underwater survey being carried out by Nordstream is unique.
[24] *Gas Pipeline Officials Dangle Carrots for Balts,* Baltic Times, April 19th 2007. See also National Energy Security Fund, *Gazprom: Are there Limits to Growth?* (May 2007) 47-48.
[25] *Finland Urges Nordstream to change Pipeline Route*, AFX International Focus, 21st January 2008.
[26] Reuters 13th December 2007, *op cit.*

However, on the other side of the equation it is necessary to take account of the savings that are likely to be made by Gazprom in transit fees. This calculation is difficult to do as information in respect of transit fees is often commercially confidential. Larsson for instance reports that Polish transit fees on Yamal I are in the range of €150-€230 million per annum[27] (although note that Polish transit fee rates will fall from 2016 to $1per mcm per 100km)[28]. Ukrainian transit fees have had far greater publicity and those figures are currently calculated on the basis of $1.60 per mcm per 100 km.[29]

Whilst a comparative trade-off exercise of transit fees against cost of Nordstream will always be inexact we can use the recently upwardly readjusted Ukrainian transit fees to give some idea of the likely savings to Gazprom. If we take the Ukrainian transit fee rate for the whole 1200km offshore route the calculation for 55bcm is just over $1billion. However, this figure flatters to deceive; part of the offshore route would be otherwise on Russian Federation territory, which would reduce the foreign transit fee costs significantly below $1 billion.

More substantially, the headline saving is undermined by the reality that the source of gas for Nordstream is only clearly available for the first pipeline of 27bcm, from the Jushno-Russkoje field. There is no clearly identified source of gas for the second pipeline. Both the next major Russian supergiant fields, Shtokman and Yamal, which could guarantee have yet to be developed and indeed in 2007 Gazprom actually cut development funding on those fields.[30] The likelihood of either field being able to provide gas any time before 2020 is remote. Hence for the next decade at least the transit fee gain for Nordstream of building its very expensive pipeline is likely to be closer to $300 million than $1billion per annum, hardly a substantial offset for an offshore pipeline costing upward of €12 billion (US $17.5 billion).

---

[27] Larsson (2) *op cit,* 34.
[28] Pirani, *op cit,* 93
[29] Pirani, *op cit,* 92
[30] For instance in 2007 investment in Shtokman is cut from $670 to $335 million; peak production at Kharvutinskaya area of Yamburg field (30 bcm/year) postponed from 2008 to 2010; production at Neocomian strata of Zapolyarnoye field (15 bcm/year) postponed to 2011. Milov, *Nabucco, European Energy Supply Diversification and Russia,* 14th September 2007, Budapest.

There is a further cost-related problem with Shtokman and Yamal gas: The cost of recovery is enormous. CERA recently estimated that the cost of developing Yamal will be upward of $100 billion.[31] Shtokman has not only cost problems but technical issues concerning building a 560km pipeline in the Barents Sea where in addition to Artic storms, both pipelines and rigs have to be protected against icebergs. The heavy costs of such 'High North' development will inevitably be passed on to the ultimate consumers.

If the gas for the second pipeline does ultimately come from Yamal or Shtokman then Nordstream will be offering expensive gas delivered by an expensive pipeline, an unappetising prospect for European consumers.

One solution would be to look to the German government for state aid for the project. The difficulty here is that such state aid would require clearance by the European Commission.[32] Such a clearance would be very difficult to achieve. In the first place, there would be no doubt a large number of interventions by all the Baltic Sea states, plus transit states against such aid which could significantly delay the project. Secondly, it is difficult to see how the Commission in the end could grant aid clearance because ordinarily such projects are directly financed by the private sector with relatively little state input. One major factor which would weigh heavily with the Commission is that private capital would be available to build an equivalent cheaper pipeline system on land, for example the Amber or Yamal II project.[33]

Gazprom could consider writing off the cost of the project itself and not seek to recover its construction costs from consumers. However, Gazprom faces financial and regulatory difficulties in taking such a step. First, Gazprom following the acquisition of Sibneft

---

[31] Gustafason, *Conquering Yamal: Gazprom's Strategy for Developing the Next Generation of Russian Gas Supply,* (November 2007) CERA.

[32] All new major state aid projects have to be notified to the European Commission for clearance under Article 87 of the EC Treaty. The key assessment criteria is known as the Market Investor Principle. The major difficulty to justify the project is that Nordstream would have to demonstrate that any investment by the German government constitutes a rational market investment from which a real market return can be achieved.

[33] Yamal I is a gas pipeline through Belarus and Poland and into Germany. A second pipeline dubbed Yamal II could be built on the same route and using the same infrastructure at substantially less cost than building Nordstream.

already has $35 billion debt as well as huge demands of its capital for refurbishment of pipelines and compressor stations, and infrastructure projects such as Shtokman and Yamal.[34]It cannot therefore easily write off its share of a multi-billion dollar infrastructure project. Furthermore, given that its partners are private companies with shareholders it is difficult to see how EON, Gasunie and BASF would be able to agree to such a step.

The consequence of the Nordsteam project therefore is at first sight the project will result in very high priced gas entering the European market for which consumers will have no choice but to pay heavily. However, this initial analysis does not take account of the prospect of EU gas market liberalisation.

4.0 The Impact of Market of Liberalisation

Outside of the United Kingdom most Member States have maintained closed national gas markets. In these closed markets usually one domestic gas incumbent is the near monopoly wholesaler with a long term supply agreement with a gas producer such as Gazprom. Usually there are also a series of long term supply agreements down the supply chain sealing in major energy intensive users and retail gas companies. In some states this 'layered' system approach exists.[35] In other states the wholesaler may in fact dominate the supply chain and the supply of most of the gas.[36] The advantage of such closed systems is that they do provide a degree of predictability and stability. However, they also can result in industry and domestic consumers paying very high prices for such predictability. Furthermore, as pointed out below reliance on a few external long term supply contracts can potentially threaten the predictability and stability of gas supplies.

Clearly such balkanised markets in the European single market were likely to eventually be attacked by the Commission as offending foundational EU principles of open markets,

---

[34] Milov, *The Power of Oil and Energy Insecurity* (January 2006) Paris, CERI, 13.
[35] For a discussion of the layered German energy market see Lohmann, *The German Path to Natural Gas Liberalisation: Is it a Special Case?* (2006) Oxford.
[36] Cavaliere, *The Liberalisation of Natural Gas Markets: Regulatory Reform and Competition Failures in Italy* (2007) OIES.

non-discrimination and competition. As a consequence it is not surprising that the Commission sought legislation in the first[37] and second gas directives[38] and the gas regulation[39] This legislation required at a minimum the separation of the network and the supply operations of gas incumbents into separate companies, insisted on national regulators being appointed and introduced limited third party access.

What is perhaps also not surprising is that domestic energy incumbents and some Member State governments sought to frustrate this legislation. DG Competition's Sectoral Inquiry provided substantial evidence of incumbents frustrating the function of even the minimal liberalisation provided for in EU legislation, from signing up long term contracts with key suppliers before liberalisation legislation came into force to limiting access to information so that third parties could not rely on access rights contained in the legislation to access to the pipeline network.[40]

The Commission's Sectoral Inquiry into the energy sector launched in June 2005 gathered an enormous amount of evidence of the dysfunctionality of the EU gas market. DG Competition obtained evidence of heavy market concentration, lack of market integration, significant vertical foreclosure, lack of transparency and defective market formation.[41] In its final report on the sector DG Competition took the view that there were four fundamental deficiencies in the gas sector. Structural conflicts of interest caused by the lack of unbundling of the ownership of the networks; gaps in the regulatory environment, particularly in relation to cross-border operations; chronic lack of liquidity in the market and lack of transparency in market operations.[42]

Following on from the weakness of previous energy liberalisation legislation and the evidence obtained from the Sectoral Inquiry, the Commission proposed a third legislative package which recommended full ownership unbundling in the gas and electricity sectors

---

[37] 1998/30/EC
[38] 2003/55/EC
[39] 842/2006/EC
[40] *Final Report, op cit.*
[41] *Final Report op cit.*
[42] *Final Report, op cit* 5-9

or a tough independent system operator structure.[43] DG Competition, on the basis of the evidence that it has obtained of the frustration of the existing EU legislation argues that only full ownership unbundling can ensure that third party access is ensured to the pipeline network-and more fundamentally that ownership unbundling transforms the incentives of the network owner to maximise throughput which should result in increased capacity, more competitors and greater competition.[44]

A number of commentators have assumed that DG Competition will not be able to obtain radical reform of the European gas market. The assumption is based upon the political and economic power of domestic energy incumbents. However, this analysis does not take account of two key factors. First, in the course of the Sectoral Inquiry the Commission was provided with a significant amount of evidence in relation to breaches of the competition rules in the gas sector. As a result of which it was able to launch a series of unannounced raids on the corporate headquarters of a number of gas companies. These raids took place in May and December 2006. The consequence of these raids and evidence from questionnaires and complaints received by victims of anti-competitive practices in the energy sector is that DG Competition is rolling out a series of prosecutions throughout 2008. In the course of these prosecutions information will enter the public domain as to the scale and impact of anti-competitive practices on prices in the energy sector which will have a significant positive impact on the level of support for market liberalisation in the gas sector. Industry and domestic consumers are unlikely to have much sympathy for arguments that suggest gas firms should be protected from liberalisation when those self same firms are under investigation for competition offences which have kept prices high, reduce choice and reduced innovation.

The second major factor which will substantially assist the Commission in delivering full market liberalisation is the prospect of significant Russian gas supply shortages. A series of interlocutors over the last few years from the International Energy Agency[45], Professor

[43] For full details of the third legislative package see the link to DG Competition's page on the package. http://ec.europa.eu/energy/electricity/package_2007/index_en.htm
[44] *Final Report, op cit* 9-15
[45] IEA, *Optimising Russian Gas*, (Paris 2006) 34.

Jonathan Stern;[46] former Russian energy minister Vladmir Milov[47]; Michael Fredholm[48]; have raised concerns that interaction of the depletion of the Soviet era Nadym Pur Taz gas fields and the lack of investment in new gas fields has the potential to create very serious supply constraints. While the mild temperature of last winter has probably given some respite to immediate concerns of supply failure[49] recent cuts in upstream investments have raised further concerns as to the tightness of future gas supplies.[50]

EU gas market liberalisation can rescue the Eastern parts of the Union and Germany, the biggest Westerly customer of Russian gas from a future Russian supply failure. Legal and physical liberalisation will permit gas to flow into Germany and the Eastern EU Member States from a host of alternative gas suppliers.[51] There are significant gas supplies available from Norway, Algeria and Libya.

The rapid development of the LNG market is a noticeable new source of gas, which because of significantly falling costs along the supply chain is proving a competitor to pipeline gas and will be cheaper than gas from the Russian 'high north'.[52] Already in the UK, LNG from Egypt, Algeria and Qatar is able to compete with Norwegian pipeline and UKCS gas. The UK now has four LNG gasification terminals coming online with additional capacity being built which could permit the UK to become a significant exporter to continental Europe.[53] In a liberalised market such LNG energy sources could

---

[46] Stern, *op cit* 33.
[47] Milov, Coburn & Danchenko, *Russian Energy Policy 1992-2005*, Eurasian Geography & Economics, (2006) 285-313, 304.
[48] Fredholm, *Gazprom in Crisis* (Shrivenham 2006) UK Defence Academy.
[49] Monaghan, *Stakhanov to the Rescue? Russian Coal and the Troubled Emergence of a Russian National Energy Strategy* (Shrivenham 2007), UK Defence Academy.
[50] Milov, (Budapest 2007) *op cit.*
[51] While legal liberalisation by which ownership of network and supply is unbundled and there is access to the network to third parties is necessary for real gas market liberalisation it is of itself not sufficient. What is also required is physical interconnection of national networks. Hence gas hubs like the UK can move gas easily across the Channel and can gas islands, such as the Baltic States become physically connected to the main European pipeline network.
[52] *Russia Country Analysis* EIA (2006) 9.
[53] Approximately 60bcm of new capacity is coming on stream in the United Kingdom in the next few years, the majority of this new capacity is LNG. The new Norwegian pipeline is building up to a capacity feed of 23bcm; The Isle of Grain LNG terminal started with capacity of 4.4bcm in the summer of 2005 with a planned increase to 7bcm; Dragon and South Hook LNG terminals are coming onstream with capacity of 6 and 10.bcm a piece. These two terminals also have planned capacity increases of 12 and 10.5bcm

pose a significant competitor to gas from the expensive Nordstream pipeline, particularly if gas is sourced into Nordstream from the 'high north'. A further technological development could also make LNG more widely available across Europe further threatening Nordstream's business model. Technology patented by Exxonmobil allows for LNG to be returned to its gas state on board the ship and then be routed straight into the national pipeline system without any need for an expensive gasification terminal (these are known as Energy Bridge Regasification Vessels EBRVs). A specialised buoy needs to be set up for the LNG tanker to feed into the national pipelines and it takes longer to offload the gas than into a gasification terminal. However, the flexibility of this new technology and its ability to provide a rapid alternative source of supply could prove attractive to energy companies in a liberalised market who might want to undercut the price of Nordstream gas.[54]

For Nordstream the prospect of the liberalisation of national gas markets threatens the business model underlying the project. It is difficult to see how Nordstream can easily compete in a European gas market where Nordstream sourced gas has to compete against land based pipes and pipes where the infrastructure costs have already been amortised.

There is indeed a strong case to argue that in a liberalised energy market Gazprom might have to abandon Nordstream to insolvency. Gazprom could well find that in a liberalised energy market there would be few takers for its expensive Nordstream gas. In effect Gazprom would realise that it had built for itself a very expensive route to market which undermine its competitiveness and lost it money. In such circumstances in order to maintain competitiveness with LNG and other competitors it would, even with transit fees, seek to push gas through the existing Ukranian and Polish pipelines to get its gas to market.

---

respectively. Further terminal plans are being considered at Canvey Island, Croydon and offshore at Morecombe Bay. Poyry, *op cit* 6, 35-36.

[54] The principle proponent is Excelerate Energy. For details see http://www.excelerateenergy.com/ebrvs.html

Anti-liberalisers such as the German and French government could of course oppose market liberalisation in the gas sector tooth and nail to protect Nordstream. However, given the delays faced by the Nordstream project it is improbable that even the first stage of Nordstream will be completed by 2010, a 2015 date is a much more likely earliest date for the arrival of gas from the first pipeline.[55] Given the later arrival date of Nordstream gas and the fragility of the Russian gas supply system it would be courageous for the German government particularly to rely solely on the delivery of Russian gas supplies. It therefore has a strong supply security incentive to seek gas market liberalisation in order to ensure continued deliveries of gas supplies into the German market. Furthermore, to oppose market liberalisation would be to put the German government on the politically unpalatable side of major energy companies who are likely to face EU proceedings for anti-competitive behaviour including charges of taking high supra-competitive profits from voters. The poor German consumers via their consumer associations may well also make their voice heard when they realise that supporting Nordstream means supporting high German energy prices.

5.0 Conclusion

The Russian Federation and Gazprom have legitimate concerns over gas theft, transit fees and pipeline maintenance. However, the solution to those legitimate concerns is not to build an expensive underwater pipeline which will impose heavy costs on both Russia and the EU. Nordstream could only be commercially justified if the old quasi-monopoly national provider structures which relied on traditional long term supply contracts remained in place. It is however, very commercially challenging to deliver Nordstream profitably in a market which is being liberalised. This is particularly so when by 2015, which is the earliest practicable date for Nordstream to be completed, a substantial degree of market liberalisation will have been delivered into the EU gas market. Liberalisation

[55] The earliest date conceivable given environmental permit delays and no more difficulties with topography, environmental issues stemming from weapons dumps and the nature 2000 site is much more likely to be 2015 rather than 2010. If there are additional concerns regarding environmental permits and more topographical problems the completion date may be substantially after 2015.

will allow in other competitors who will be able to threaten Nordstream's ability to sell gas into the market. This is reinforced by two other factors. First, the increasing availability and competitiveness of LNG and second the high oil prices which with EU market liberalisation and significant additional gas sources threaten the traditional link between oil and gas prices. A major over supply in the European market in the next few years following liberalisation could force a retreat in gas prices leaving Nordstream extremely vulnerable.

The EU, Russia and Gazprom need to look for other less expensive options for gas transit. Although Russia has recently become much more outspoken against the ECT, the Charter and its Transit Protocol, which unlike the ECT itself is not legally binding on Russia is worth a second look.[56] The Transit Protocol provides for a transit regime which seeks to balance the rights of network owners and suppliers. The Protocol could provide Gazprom with a means to discipline transit states over delinquency such as gas theft, high transit fees and pipeline maintenance for as with the rest of the ECT legal order it would be possible under the Transit Protocol to hold Contracting States to account for breaches of the Protocol before an arbitration tribunal.

One option for the Russian Federation and Gazprom would to seek amendment to the Transit Protocol regime to provide for a tougher dispute settlement mechanism as part of the bargain for signature and ratification.[57] A tougher Transit Protocol would then provide Gazprom with a means of disciplining delinquent behaviour by transit states. It would also make it much more likely that Russia will obtain substantial EU and US support against delinquent acts such as gas theft.

[56] Russia signed up to the provisional validity clause, Article 45(1) which makes the ECT itself legally binding until ratification.

[57] For example, new amendments could provide for a supervisory agency to check the quality of the pipes and for gas theft, and an independent tribunal to make enforcement orders against states and provide a forum to settle disputes in regard to transit fees.

This reinforcement of the rule of law in relations between producers and transit countries would also provide a stable framework for investment in transit infrastructure.[58] Such investment would be a fraction of the cost of the planned investment in Nordstream while delivering the gas that Europe needs.

The EU, the Russian Federation and Gazprom need to reconsider the Nordstream project as a matter of urgency. It is also recommended that they look again at the Transit Protocol. Some tough bargaining with EU states could potentially hammer out a deal on the Protocol that would enhance gas supplies for Europe and save everyone a lot of money.

[58] A tougher transit regime which was supported by all major players would provide a better legal framework to encourage investment in the existing land based pipeline network.