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LNG -A Wolf in Sheep's Clothing?

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1. Introduction

Barely two months after the January 2009 Ukrainian-Russian "Gas War" ended, during which Russia blocked gas deliveries to the European Union for two weeks, Japan began receiving large-scale Liquefied Natural Gas (LNG) shipments from Russia's Far East LNG Liquefaction terminal, Sakhalin-2. It appeared paradoxical that at a time when Europe was desperately seeking to diversify gas supplies away from Russia, Japan was looking to diversify its own supplies of gas by turning to Russia which was rapidly losing its reputation as a reliable supplier.

For some, LNG has been touted as a magical formula for countries overly dependent on pipeline gas deliveries from unreliable producing countries and who are looking to diversify supplies. At the same time, LNG has been vilified as a vehicle which might facilitate the cartelization of the price of gas and raise it to unjustifiable levels. LNG has also been denounced by critics as being a potential weapon of mass destruction in the hands of terrorists bent on inflicting catastrophic damage to heavily populated cities where LNG tankers dock. Finally and most significantly, LNG has been depicted as a powerful geopolitical weapon, a factor which is destined to become even more important in the coming decade. In the age of rapid depletion of hydrocarbon-based energy, how great a role will LNG play in the national security plans of importing states?

The purpose of this policy paper is to expand the far from extensive debate on what role LNG will have on global energy security in the coming decade and beyond. Will it bring greater security by creating large scale gas supplies not reliant on overland (and underwater) pipelines and turn gas into a fungible commodity or will it become another weapon in the hands of unstable producer regimes and nationalist leaders determined to implement their political agendas via LNG tankers?

2. Current Trends in LNG

2.1 The Rise of LNG

Liquefied Natural Gas has historically been relegated to the fringes of the fuel scene by Americans and Europeans, with the exception of France and Spain. For decades it was seen as a toy for the super-rich; LNG was expensive to liquefy and store and seaborne vessels which carried the stuff were pricy and scarce. Few countries had regasification facilities and few American investors were willing to put money into domestic LNG terminals and regasification plants.

Yet, a trickle of LNG was making its way into the United States from Trinidad and Tobago for years. This new role of the island state, best known as a pirate hideout in the 17th and 18th centuries and as a producer of fine rum, came as a surprise for most Americans who learned that the modern Pirates of the Caribbean also produced gas, cooled it to minus 260 degrees Fahrenheit, loaded it onto specially built tankers and made more money this way than by looting Spanish Galleons.

LNG has had a very limited market in the United States, a mere 2 percent of consumption, for one good reason: the U.S., the largest natural gas consuming country in the world, produced enormous quantities of gas and bought the rest of its needs from Canada and Mexico. There simply was no market for LNG. However, when US gas production appeared to peak in the early 2000's and Canadian gas exports were diverted to shale oil production needs in Alberta, many US energy companies felt that it was time to begin investing into LNG import infrastructure. This trend soon came to a screeching halt.

The U.S. Energy Information Administration (EIA) explained the change of heart in the U.S. towards LNG:

"Total U.S. proven natural gas reserves – resources that have been identified and tested and either have been or will be developed – have increased for the last eight years, and in 10 of the last 11 years. Recent drilling trends indicate continued growth, with a stronger concentration on unconventional resources like shales. Shale formations in the lower 48 States are widely distributed, large, and contain huge resources of natural gas. They are just starting their full development. Already, the production from just one Barnett Shale field in Texas contributes more than 6 percent of production from the lower 48 States, which is more than from the large producing State of Louisiana."¹

These recent gas field discoveries in the U.S., as well as community opposition to LNG, dampened plans by U.S. investors to invest billions of dollars into LNG projects and, by 2008, most were cancelled or put on hold.²

In Europe and Asia meanwhile, the exact opposite was taking place. Spain, the largest LNG importing country in Europe, is likely to set new records. In 2007, natural gas accounted for almost 21 percent of Spain's total energy needs, second only to oil. Limited natural gas resources forced Spain to begin importing LNG from international markets.³

A key factor of the natural gas industry has always been the fact that gas depends on pipelines for transportation and that there is no spot market for gas. This is set to radically change as mega-markets in China⁴ and India prepare to join the queue for gas not dependent upon expensive pipelines and less-than reliable suppliers. LNG's ability to challenge the traditional nature of gas markets, while wavering in the past one and a half

¹ http://tonto.eia.doe.gov/energy_in_brief/natural_gas_production.cfm

² Hess LNG CEO Gordon Shearer said that the construction of new liquefied natural gas (LNG) import and processing terminals in the U.S. is highly unlikely over the next 10 years due to community push-back and overly-restrictive laws at the state and local level. Hess is familiar with construction constraints, given the fact that one of its own LNG import projects in the northeast U.S. is embattled. http://www.energycurrent.com/index.php?id=4&storyid=2044

³ http://www.rncos.com/Press_Releases/LNG-Import-in-Spain-is-likely-to-Set-New-Records.htm

⁴ According to the website http://www.chinaccm.com/4S/4S03/4S0301/news/20070325/110358.asp, the Chinese LNG industry will face stiff competition from coal in China for future growth due to higher prices for LNG as compared to low coal pricing, however, China is expected to become a major LNG importing destination for the Middle East & Australia in the Asia Pacific region.

years, will ultimately triumph and there is little doubt that LNG will play a major role in the global gas market in the near future.⁵

For example, India is looking to significantly increase its imports of LNG:

"We expect the demand for LNG to be far greater this year (2009) than what it was last year on account of a shortfall in domestic gas supply," said a senior official from Royal Dutch Shell, India, on the condition of anonymity. "The overall economic slowdown in the West will favor LNG supplies to India as new capacities are also being commissioned the world over," he added ⁶

Shell and Total, operators of the Hazira LNG terminal in Gujarat with a capacity of 2.5 million tons (mt) a year, recently completed 'de-bottlenecking' of its terminal in December, increasing its capacity to 3.6 mt per year.

Historically, LNG demand has largely been confined to the Asia-Pacific region, primarily due to Japanese and South Korean requirements, which account for over 50 percent of the world LNG trade. Yet, according to a senior official from Gujarat State Petronet, "due to falling industrial demand coupled with the fall in crude oil prices, spot demand from these two regions has suffered."⁷

Meanwhile the major LNG exporting countries, Algeria and Qatar, which have long standing contracts with France, Spain and Asian countries, will now face competition from newly commissioned LNG facilities in Norway⁸ and possibly from Russia.

Furthermore, rising coal-seam gas production in Australia is on the verge of increasing Australia's LNG exports from 20 million tons to 50 million or 60 million tons within a decade, insuring a steady supply to Asian clients who are highly reliant on LNG for decades to come.⁹

One indicator of global LNG supply is orders being placed for LNG tankers under construction. According to industry sources, Qatar, the world's biggest LNG producer, has ordered 45 LNG tankers from three South Korean shipyards capable of carrying more

⁵ According to <u>http://www.guardian.co.uk/business/2006/jun/28/china.australia</u>: "China's growing thirst for energy is set to be partially quenched after the opening today of a giant terminal to receive liquefied natural gas from Australia under a record US\$19bn (£10.4bn) deal between the countries. The Dapeng gas terminal in Shenzhen, the manufacturing heartland of southern China, is the first of more than a dozen similar facilities planned or under construction along the Chinese coast as the world's fastest-growing economy races to secure overseas power supplies."

⁶ http://www.business-standard.com/india/news/lng-imports-may-double-this-year/00/36/350578/

⁷ http://www.business-standard.com/india/news/lng-imports-may-double-this-year/00/36/350578/

⁸ After seven years of fitful progress, Norwegian energy firm StatoilHydro announced July 31 that its most ambitious and technologically advanced liquefied natural gas terminal will be able to operate for the rest of the year, albeit at 60 percent of capacity. Norway's emergence as a real player in LNG — one capable of cornering the market for far-north deepwater production and LNG — will make waves in the global energy industry.

The Snovit natural gas field, discovered in 1983 in the Barents Sea near Hammerfest, contains 300 billion cubic meters of natural gas. To exploit these resources, StatoilHydro in 2002 began building the largest industrial complex in the country's north, and the first in the icy Barents Sea. Production began in September 2007. To separate the natural gas from other materials and condense it into liquid form, Statoil also built Europe's first export-oriented LNG plant on Melkoya Island, 100 miles away. Statoil sent its first shipment of 145,000 cubic meters of LNG from Melkoya to southern Europe in October 2007. (http://www.stratfor.com/analysis/norway_new_lng_player)

⁹ http://business.smh.com.au/business/gas-boom-to-fire-lng-exports-20080406-243j.html

than 200,000 cubic meters each. The ships include 31 so-called Q-Flex ships, with a capacity about 1.5 times that of conventional tankers, and 14 Q-Max vessels.

However, according to Wayne Perry, managing director of Galway Group LP, a Houston-based energy advisory firm, "a reduction in the rate of project approvals is causing oversupply of shipping and import terminal capacity". Moreover, according to estimates by Wood Mackenzie Consultants, about 45 million metric tons a year of new plants, equivalent to almost a third of existing capacity, are being held up in Nigeria and Egypt as governments seek to ensure adequate supplies for local markets.¹⁰

At the same time, a surge in construction costs is delaying commitments by some companies to invest in new supply projects, such as the Chevron-led Gorgon venture in Western Australia.

2.2 Russia as an LNG Supplier

In 2006, Russia's state-owned gas monopoly Gazprom announced that it harbored ambitions to become a leading LNG supplier to the enormous U.S. market. Gazprom was eager to claim more than 10 percent of this market by 2010 and then increase its share up to 20 percent. The company also signaled that it is interested in downstream assets, such as transport and regasification terminals, in the U.S.¹¹ "The U.S. market has a great potential for growth," Gazprom spokesman Sergei Kupriyanov stated. "We can only reach it using LNG technology. After all, you can't build a pipeline from Russia to the United States," Kupriyanov told the Russian media.¹²

By October 2008, Gazprom formalized its interest in becoming a global LNG player by creating a new wholly owned subsidiary, Gazprom Global LNG Limited.

According to Gazprom Marketing and Trading, "Gazprom Global LNG allows Gazprom to focus the LNG expertise within the company and create an LNG identity across the group over the long-term. This group will be responsible for the negotiation of sale and purchase agreements for the Shtockman LNG project in the Barents Sea, the associated LNG ship building program and building the capability to trade around these long-term commitments".¹³

Russia's belated entry into the LNG market is a story unto itself. The conventional market for Russian gas has traditionally been the EU and the countries of the former USSR. The overwhelming majority of gas, some 80 percent, delivered to the EU transits through overland gas pipelines owned and operated by Ukraine, a country which finds itself in a protracted struggle between Russian ambitions to keep it in its "sphere of influence" and the belief of some in the West that it should be somehow linked to the West, or, in the worst case scenario, become a buffer zone between an aggressive Russia and the West.

 $^{10\, \}underline{\rm http://www.gulfnews.com/BUSINESS/Oil_and_Gas/10197208.html}$

¹¹ Moscow News, Sept 7, 2006

¹² www.rb.ru June 10, 2008

¹³ http://www.gazprom-mt.com/ourbusiness/lng.asp

In the early stages of Russian LNG planning, a tentative decision was made to build an LNG terminal on the Baltic Sea to ship LNG to Canada and possibly the US. This plan was eventually dropped in 2008 when it became clear that the US gas market began having doubts about the need to import large quantities of LNG.

In Canada, however, new LNG facilitates are currently being constructed in Saint John, New Brunswick¹⁴ and Quebec, where Gazprom is playing a major role.¹⁵

Given the current drop in the market price for gas which, in Europe, is pegged to oilbased products such as diesel fuel and gasoil (and in some markets to coal), will a significant percentage of Russian pipeline gas meant for delivery to the EU be replaced by LNG going to other consumer states, and above all to Asia?

Russian Prime Minister Vladimir Putin, the "shadow CEO" of Gazprom, has already begun a campaign, viewed by some as blackmail, by stating that if some EU member states continue to obstruct the projected Nord Stream pipeline, Russia "will drop Nord Stream and build liquefaction plants and send the gas to other markets. We will sell it to you [Europeans], too. But it would be more expensive [in liquefied form]."¹⁶

On what basis did Putin calculate the "more expensive" price of LNG for the EU? According to the US Energy Information Administration:

"LNG trade evolved differently in the Atlantic and Pacific basins, and this continues to affect import volume, pricing systems, and contract terms. Importing countries in the Pacific Basin are almost totally dependent on LNG while countries in the Atlantic Basin use domestic supplies and pipeline imports as well as LNG to meet natural gas demand." And:

"Recent changes in the LNG market have trended towards increased flexibility. Contracts have loosened terms on both price and volume, and can be negotiated for shorter periods of time. Additionally, flexibility in LNG shipping has led to an increase in shortterm contacts." And finally:

"Costs of liquefaction, shipping, and regasification have declined over time, lowering costs to producers. Since the LNG market is primarily driven by long-term contracts

^{14 &}quot;Canaport LNG is constructing a state-of-the-art liquefied natural gas (LNG) receiving and regasification terminal in Saint John, New Brunswick. The facility will become the first LNG regasification plant in Canada. We will supply natural gas to Canadian and American markets. Our initial send-out capacity (or, the ability to distribute via pipeline) will be 28 million cubic meters (one billion cubic feet) of natural gas a day." (http://www.canaporting.com/).

¹⁵ Gazprom (GAZP.MM) moved a Canadian liquefied natural gas terminal ahead on Thursday by taking a stake and agreeing to supply all the gas needs from the Russian producer's huge Shtokman project, the companies said on Thursday. Gazprom, the world's largest natural gas company, is joining Enbridge Inc (ENB.TO), Gaz Metro (GZM_u.TO) and Gaz de France GAZ.PA in developing the C\$840 million (US\$840 million) Rabaska LNG project in Quebec, which has been stalled pending a secure supply of imported LNG. It will be the Russian firm's first major investment in North America, Alexander Medvedev, deputy chairman of Gazprom's management committee, said in a statement. The companies did not disclose the size of stake Gazprom will acquire in the 500 million cubic feet a day project, to be located on the St. Lawrence River at Levis, Quebec. Gas from the plant would supply the Quebec and Ontario markets. (http://www.reuters.com/article/companyNews/idUSN1530231620080515)

¹⁶ Kommersant, November 13, 2008.

with pricing mechanisms pegged to petroleum products, however, lower operating costs do not necessarily translate into lower LNG prices, at least in the short-term."¹⁷

This strategy of pressuring the West into accepting Nord Stream reemerged dramatically during the January 2009 "Gas War" between Ukraine and Russia, at which time the supply of to gas to the EU was cut off by the Kremlin for two weeks. At this critical time, when Europe was deprived of Russian gas, Putin underscored the importance of building the Nord Stream pipeline. As written in an article in the Wall Street Journal:

"[Putin] chided the EU for putting obstacles in the way of Russia's planned Nord Stream gas pipeline, which would bring gas supplies direct from Russia to Germany, circumventing transit nations such as Ukraine. 'If nobody had hampered our construction under the Baltic Sea it would be functioning already,' Putin said, referring to environmental objections from some EU nations adjoining the Baltic Sea. Last year, shortly after the EU published an updated strategic energy review proposing to cut back on gas imports, Mr. Putin warned the EU that if it didn't want Nord Stream, Russia wouldn't build it, which would reduce the EU's energy security."¹⁸

LNG, in the eyes of the Russian leadership, was no longer the stepchild of the international gas business as it was becoming its own entity, but Putin's threat to "sell LNG to Europe" at higher prices appears to be a hyper bluff given that the price of Russian gas remains linked to oil prices. Putin understood that Russia was beholden to this formula and could not control the global gas market and would have to confine its LNG ambitions to European and a minority share of the Asian markets.

Japan, which is completely dependent on LNG for it gas needs, will now be getting 7.2 percent of its supply from Russia.¹⁹ However, Japanese Prime Minister Taro Aso, in an interview with the Russian newspaper Kommersant, made it clear that this was not merely a commercial deal, but had important political overtones. Aso, who was taking part in the ceremonial opening of the Sakhalin-2 terminal, reminded Russian President Dmitry Medvedev:

"Regardless of the increasing mutually beneficial cooperation between two important neighbors, Japan and Russia, there still exists the unnatural situation that no peace treaty has been signed (between Japan and Russia) because of a territorial dispute."²⁰

The issue of the return of the Kurile Islands to Japan which Russia claimed after World War Two is high on the list for all Japanese political leaders and Aso made clear that he would continue to insist on the return of the islands. While Aso might have made this statement purely for political effect in Tokyo, it is also clear that beginning in 2011 Japan will lose three quarters of the LNG it buys from Indonesia due to increased domestic consumption in Indonesia.

Russian LNG deliveries to Japan will not make up for the decrease in imports from Indonesia and the country will continue to be reliant on Australian and Qatari LNG, but

¹⁷ http://www.eia.doe.gov/oiaf/analysispaper/global/lngmarket.html

¹⁸ Europe's Attempt at Gas Deal Stumbles" Wall Street Journal, 8 January 2009.

¹⁹ http://www.vedomosti.ru/newsline/index.shtml?2009/02/18/729891

²⁰ Kommersant, 18 February 2009

for Japan, it was a high priority goal to diversify away from Middle Eastern LNG. The Russian/Japanese LNG contract will last for twenty years and will lay to rest part of the angst that Japanese companies have had over future gas shortages.

2.3 A Gas OPEC?

The Russian daily "Kommersant" reported on March 19, 2007 that an agreement on forming a gas cartel, popularly labeled a "Gas OPEC" was reached that month. The consortium, as reported, will initially include Russia, Iran, Qatar, Venezuela, and Algeria -- which together account for nearly 70 percent of the world's reserves of natural gas.²¹

The idea of a "Gas OPEC" gained traction in 2006 after a NATO report alerted members of the alliance of the dangers of the possible formation of a natural gas cartel. Such a grouping could include major gas producers according to NATO experts. The purported goal of such an alliance was, in NATO's view "To use energy policy to achieve political objectives."²² According to the Financial Times, a confidential study by NATO's economics committee warned that Russia may be seeking to build a gas cartel including Algeria, Qatar, Libya, the countries of Central Asia, and perhaps Iran.²³ Dmitry Peskov, a deputy spokesman for the Kremlin, told the daily "there was no substance at all"²⁴ to the suspicions.

The main proponent of a "Gas OPEC" has always been Iran, whose thoughts on the issue were made crystal clear during a visit to Tehran by Russian Security Council Secretary Igor Ivanov on January 29. "Our countries can establish an organization similar to OPEC" Nezavisimaya Gazeta quoted Ayatollah Ali Khamenei as telling Ivanov.²⁵ Moreover, during a meeting in Tehran on October 21, 2008, Iranian Oil Minister Qolam Hosein Nozari told a press conference that "There is a demand to form this gas OPEC and there is a consensus to set up a gas OPEC"²⁶

Gazprom CEO Alexei Miller, however, avoided using the term "gas OPEC" and stressed that the newly formed "Gas Troika", Russia, Iran and Qatar "would review projects such as exploration, refining and sales"²⁷ In the past Gazprom has played down the notion of a gas cartel calling the idea "not feasible"²⁸ although Vladimir Putin had called it "interesting".²⁹

But can a cartel influence the price of gas? Iran has the world's second largest gas reserves but is a relatively minor exporter, selling primarily to Turkey. It will take at least a decade if not longer for Iran to develop its gas industry – even with substantial infusions of capital by European companies and banks. Qatar deals mostly in LNG, the price of

²¹ Kommersant, 19 March 2007

²² Financial Times, "NATO fears Russia plans for 'gas OPEC'", 13 November 2006

²³ Financial Times, "NATO fears Russia plans for 'gas OPEC'", 13 November 2006

²⁴ Kommersant, 19 March 2007

²⁵ Nezavisimaya Gazeta 29 January 2007

²⁶ http://www.iht.com/articles/2008/10/22/business/22gas.php

²⁷ Ibid

²⁸ Ibid

^{29 &}lt;u>http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=34072</u>

which is linked to petroleum products. If Qatar were to limit sales to prop up prices as a partner in a gas OPEC, its customers would soon turn to Algeria, Nigeria, Norway, Australia and other LNG producers, as Russian energy analyst Mikhail Korchemkin pointed out.³⁰

A potential gas cartel, despite the present Iranian government's dreams of becoming a major LNG exporter and Russian hopes to divert future Iranian gas deliveries to Asia and thus bypass Europe in order to maintain its grip on Europe, might well turn out to be baseless.

3. Policy Implications of the Rise of LNG

3.1 LNG – Impact of Domestic Factors in LNG Exporting Countries

In March 2007, PricewaterhouseCoopers released a report predicting that LNG will account for 31 percent of all gas trade by 2010 and 62 percent by 2020.³¹ If LNG, as PWC claims, is to become a major component of the world energy scene in two years time, Western and Asian policy makers as well as energy company executives should stand up and take greater notice of this fact and have a close second close look at the countries which produce LNG. How stable are they? Will they be reliable suppliers in the long run? How could their political agendas influence their commercial decisions as they assume even greater muscle in maintaining the industrial might of the industrialized globe – the US, the EU, Japan, China, India and the EU?

The largest producer of LNG, Qatar, is rated by Freedom House as "Not Free". The same applies to Algeria, Russia, Iran, the United Arab Emirates, Brunei and Oman. Only Trinidad and Tobago, Australia, Norway and Indonesia are rated "free" among the currently LNG producing states. Malaysia and Nigeria are somewhere in between with a "partially free" rating.³²

The Freedom House ratings of LNG producers mirror in some ways the ratings of OPEC oil producing countries by Freedom House. What these ratings mean in terms of the reliability of these countries to meet their contractual commitments is a separate question, but the short answer is that thus far it has not been reliable.

"Not Free" and "Partially Free" countries are ripe for instability, revolutions and drawnout conflicts. If instability (and corruption) persists in Nigeria, or begins in Qatar, the United Arab Emirates, Brunei, Oman, Malaysia or Algeria, not to mention Iran, it is prudent for recipient states to plan for yet another alternative supply of gas or the construction of larger gas storage facilities in case a disruption of LNG shipments occurs from any one of these potentially unstable producing countries.

³⁰ Vedomosti, 21 October 2008.

³¹ LNG Will Supply 31 percent of Global Gas by 2010, PricewaterhouseCoopers says, Bloomberg.com, 1 March 2007.

³² http://www.freedomhouse.org/template.cfm?page=22&country=7506&year=2008

One impact of a disruption in supplies could be unpredictable price fluctuations as speculators jump into LNG spot markets, just as they did in Asian oil markets in 2007. Another danger is that of an LNG boycott of the West by producing countries who might be tempted to use their newly found status as "energy giants" as leverage for furthering any one of a number of political agendas (Palestinian rights, frozen conflicts, territorial disputes etc.)

3.2 LNG – A Weapon in the Terrorist Arsenal?

"Security specialists are concerned that pirates might someday seize a tanker carrying pressurized liquefied natural gas, or LNG, then blow it up or sell it to terrorists. 'If an LNG tanker were seized, we're looking at something potentially catastrophic,' said Candyce Kelshall, a specialist in maritime energy security at Blue Water Defence, a Trinidad-based firm that provides training to governments and companies combating piracy. 'An LNG tanker going up is like 50 Hiroshimas.'"³³

Such demonizing views of the possible use of an LNG tanker as a "weapon of mass destruction" by a terrorist group was given wide publicity after the September 11th attacks on the United States. Claims that LNG's explosive power "has specifically [been] cited as a desirable target by Al-Qaeda", made by Rob Knake, a senior analyst of Good Harbor Consulting LLC, a homeland security private consulting firm that helped create a powerful anti-LNG lobby in the United States.³⁴

This fear was first aired by the former White House counter-terrorism official Richard Clarke in the hours after the Sept. 11 attacks. Clarke rushed to get the US Coast Guard to close Boston Harbor. His main fear was that Al Qaeda might attack a huge liquid natural gas tanker as it glided past downtown buildings.

The U.S. Council on Foreign Relations however, concluded that "in the absence of foul play, LNG is quite safe. Over four decades, the U.S. LNG industry has operated without incident, the tankers that transport LNG have safely logged more than 100 million miles over 45,000 voyages.³⁵

4. Tentative Conclusions

Is LNG a wolf in sheep's clothing? The available evidence shows that while LNG tankers are slightly vulnerable to terrorist attacks, such attacks are not likely to succeed given the high levels of security of Western ports by national security agencies.

The greater risk of the growing LNG trade is the geopolitical factor – the possibility that LNG providers might attempt to manipulate gas supplies by refusing to honor long-term or spot contracts for political reasons remains a distinct probability. Buyers, on the other hand, might be tempted to use their political goals to force producers to lower their prices and change the terms to suit their political agendas. In both cases LNG could well be-

³³ http://articles.latimes.com/2008/nov/18/world/fg-piracy18

³⁴ Q&A: Liquefied Natural Gas: A Potential Terrorist Target, New York Times, 11 February 2006.

³⁵ http://www.cfr.org/publication/9810/

come a major weapon in what is likely to become a decade or more of worldwide energy "wars" as supplies of oil and gas become much more difficult and expensive to produce, and while alternative energy sources remain under development to supply huge markets.

Regardless of the potential geopolitical factors, LNG is on the verge of becoming a major supplier of alternative gas supplies to states that fear for where their next daily fix of a million or more cubic meters of gas will come from.

Russia's emergence as a major supplier of LNG could represent either a blessing or a curse depending on how the Kremlin and Gazprom decide to use this commodity. Presently Gazprom is faced with diminishing demand and falling prices for gas in Europe and the CIS, as well as a steady drop of production in its major gas fields. Will this trend reverse itself once the global economic crisis ends? Will demand for Russian gas rise once again? By how much, and when?

Many experts do not expect a quick solution to the myriad of problems confronting the European, American and Russian financial systems. Moreover these experts are wary of Gazprom's ability to meet its debt obligation to Western banks in 2009.³⁶ As opposed to Norway, Qatar and Algeria, Gazprom is faced with a lengthy period of decreasing profits, rising debt and is being forced to lower investments into developing desperately needed new gas fields. It will need to seek financial help from Asian and Western oil and gas companies to build such ambitious LNG projects as Sakhalin-3 and Shtockman. Whether or not Gazprom's emerging LNG business can weather the storm is the question being debated today in boardrooms in Tokyo, Seoul, Sydney and in European capitals. Can Russia be seen as a reliable LNG supplier as demand for gas in Russia's unstable Far Eastern regions continues to mushroom and production decreases? The answers are uncertain but will have monumental consequences for Asian, European and North American energy markets in the years to come.

³⁶ According to http://www.bu.edu/phpbin/news-cms/news/?dept=732&id=52407 Gazprom's overall debt is US\$60 billion.

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The project employs a uniquely collaborative approach on three separate levels:

- Through engaging stakeholders from all sectors industry, government, academe and civil society throughout the process, including through the establishment of a multi-sectoral Project Steering Committee;
- Through our transatlantic partnership with various partner institutions in the US; and
- Through contextual and financial support from the European Commission, the Dräger Foundation, the German Marshall Fund of the United States and various other donors.

To ensure that the key project findings are heard throughout the policy world, the research process is generating a number of publications, including a final research volume, policy papers, articles and op-eds. Furthermore, the Project Team organizes and takes part in various events, including the established TESD program, author workshops, "policy breakfasts" for engaging policymakers in the EU and the US, and a concluding Learning Forum, all of which include representatives from government, industry, academe, civil society and the media.