with Russia and are ready to join upstream projects in East Siberia. However, Japan, South Korea, and even the United States and European countries are not too late for this race. The winner will be the one that understands Moscow's rules of the game and can utilize Russia's political motivation and its own capital.

About the author:
Yoshinori Takeda is a Japanese diplomat in Moscow. This paper represents the author's personal views and should not be construed as reflecting the position of the government of Japan.

Analysis

Shtokman and Russia's Arctic Petroleum Frontier

By Indra Øverland, Oslo

Abstract

The need to develop new sources of natural gas to supply domestic and foreign customers is pushing Gazprom into the Arctic. Two key Arctic projects could, at least in theory, become the company's and the country's new mainstays: Shtokman and Yamal. The realistic time-scales, cost frames and sources of financing for these two projects remain highly unclear. It is also unclear whether the projects will be developed in parallel or sequentially. So far, however, there has been far more organizational stir surrounding the Shtokman field, which is therefore the main topic of this article. The Shtokman field is located close to the Norwegian border in the Barents Sea, and the Norwegian oil major StatoilHydro has been selected as one of the two main foreign partners for the project. The development of the project therefore has implications for Russian–Norwegian relations in the north, which are also discussed in this paper.

Russian Gas Production and the Eurasian Energy Balance

Events in Ukraine in January 2006 and Belarus in January 2007 fuelled worries in some circles about Russia's reliability as a supplier to European markets. More recently, concerns have shifted to whether Russia will be able to supply its customers, even if it wants to. The supply crunch is envisaged as occurring sometime between 2010 and 2012. These fears revolve around Western Siberia's Nadym Pur Taz Region and its three super-giant fields: Medvezhe, Urengoy and Yamburg. Over 90 percent of Russia's natural gas is extracted in Nadym Pur Taz, but production in the region is falling fast. The fields have all been producing for over 20 years (37 in the case of Medvezhe), and injection techniques applied during the Soviet period to boost output have shortened their life span and steepened the production decline. At the same time, Russia's economy is expanding and natural gas remains heavily under-priced. As a consequence, domestic consumption is increasing. Foreign customers and Russian pundits are left wondering where the gas is going to come from in the future, and the simplest answer is Shtokman and or Yamal.

The Russian Arctic and World Energy Supplies

In a widely cited survey, the US Geological Survey estimated that up to 25 percent of the world's undiscovered oil and gas may be located in the Arctic. What is less often noted is that a large part of these resources are located in the Russian part of the Arctic. This is not just because almost half of the Arctic littoral is Russian, but also because the seabed along Russia's Arctic coast includes some of the biggest finds ever in the Arctic, some of the most promising areas, and some of the least explored areas. Thus, Shtokman and Yamal are the gateways to an Arctic Russian adventure that could satisfy a substantial part of the world's future oil and gas demand.

Shtokman versus Yamal

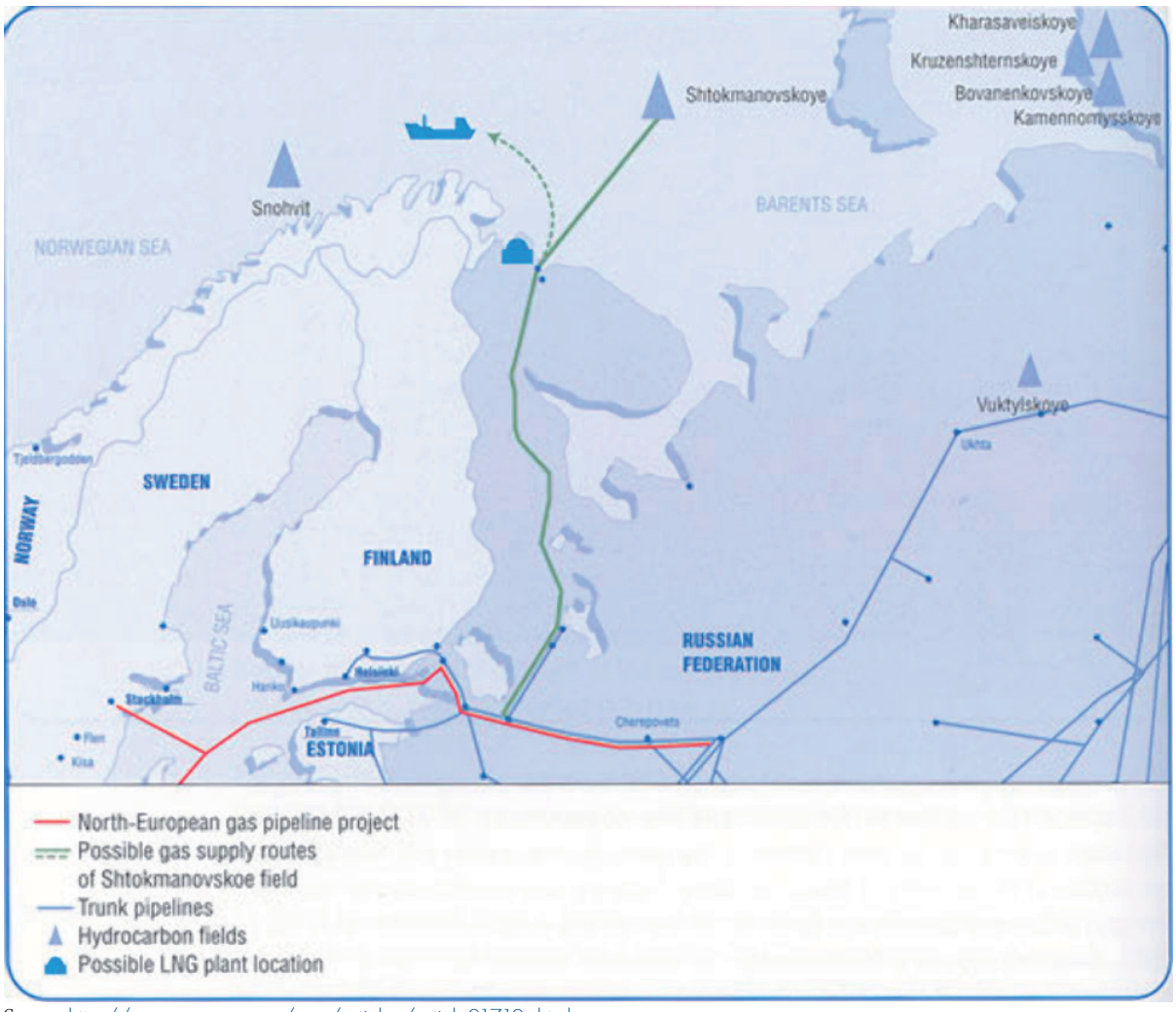
Shtokman is located in North-Western Russia, close to the Nordic countries. Yamal is located further east in the Asian part of Russia. Choosing between the two projects therefore has implications not only for Russia's internal economic geography, but also for the proximity and linkages to the Nordic countries, the EU and overseas markets (for LNG).

A commonplace perception of the Russian natural gas industry is that it is relatively well-equipped to build pipelines and carry out other operations onshore, its main tasks during the Soviet period. It is also thought that, whether the Russian actors admit it or not, the industry is woefully inexperienced and incompetent when it comes to offshore operations. This shortcoming has occasionally been cited as a reason why Russian industrial actors would prefer Yamal to be given priority over Shtokman.

In a seminal article from 2006 on Russia's Arctic petroleum sector, Arild Moe casts the choice between Shtokman and Yamal as battle between different groups within Russia's petroleum sector and within Gazprom. At the time, it appeared that the West Siberian lobby had won in pushing for Yamal and that it was unlikely any Western companies would be invited to participate in the project at all. Shtokman's current advantage over Yamal, however tenuous, probably does not indicate that the Western Siberian lobby has finally been defeated, nor does it reflect a particular urge to cooperate with Western countries. Rather, it could be an implicit recognition that it is better to go for a project where the capital, technology, and (not least) organizational skills of Western companies can play a central role. Bringing in Western partners may help the project move forward, and if it does not, there will be more companies to share the blame.

Yamal

The Yamal Peninsula, along with the Kara Sea, into which the peninsula juts, likely holds over 30 trillion cubic meters of gas, enough to supply the whole world for a decade. Like Shtokman, however, Yamal involves daunting challenges. Railways and proper roads are non-existent. Melting and refreezing of the ground on the peninsula pose even more daunting challenges, since these changes may literally undermine transport infrastructure, gas extraction and treatment facilities, and living quarters built for workers. Any on-



Source: http://www.gazprom.ru/eng/articles/article21712.shtml

shore gas extraction would infringe on the large-scale reindeer herding operations of the indigenous peoples of the region. Finally, the cost of fully developing the Yamal fields would be on the order of hundreds of billions of dollars and could take up to 50 years.

On the other hand, Yamal is relatively conveniently located in relation to Russia's existing pipelines from Nadym Pur Taz to its domestic and foreign markets. The accelerated ice melting currently observed in the Arctic Ocean, which far outpaces the estimates of the relatively conservative International Panel on Climate Change, also opens interesting opportunities for LNG/marine transportation and for the offshore fields.

While Yamal is bigger and in many ways more attractive to Russian actors than Shtokman, it is the latter that seems to be progressing fastest at the moment – however unpredictable that progress is. The rest of this article therefore focuses on Shtokman.

Shtokman

The Shtokman gas and condensate field is the largest offshore gas field in the world. It was discovered in 1988 and was recently re-estimated by Gazprom to contain 3.8 trillion cubic meters of gas and 31 million tons of condensate (previous estimates had usually been on the order of 3.2 trillion cubic meters of gas). It is located 555 km north of the Kola Peninsula, in the Russian part of the Barents Sea. Although smaller than Yamal, Shtokman contains more than twice as much natural gas as Canada's total known reserves.

For several years after they were included in a Gazprom shortlist, the oil companies Chevron, ConocoPhillips, Hydro, Statoil and Total vied to acquire ownership stakes in the Shtokman field. In Norway, where the project has received a lot of attention, the result was a rollercoaster of rising expectations and subsequent disappointment as uncoordinated statements and accidental signals from the Russian side fuelled rumors and media speculation on the Norwegian side that a decision was imminent, or that one or both of the Norwegian companies might be awarded a significant stake, or that the game was over and no foreign companies would be included. In their endeavor to join the project, the two Norwegian companies had extensive support from the Norwegian government and diplomatic apparatus.

In July 2007 it was announced that the French oil company Total had been awarded a 25 percent stake in the joint company that is to develop the first phase of Shtokman. It had long been clear that Gazprom would retain 51 percent ownership, so the final competition for the remaining 24 percent was between StatoilHydro and ChevronTexaco. To some extent this was a competition between Norwegian technology and good-neighborly relations in the North on the one hand, and US markets and big-power partnership on the other hand. StatoilHydro won the last 24 percent of the field on 24 October 2007.

It is important to understand the nature of the legal solution chosen for the inclusion of foreign companies in the Shtokman project. Total and StatoilHydro have not been awarded ownership of the field itself, but of parts of the company that will develop the field. This has resulted in a discussion about whether the two companies can count Shtokman as part of their reserves. The difficulties of replacing reserves is the main driver for Western companies to become involved in the Russian petroleum sector in spite of the difficulties already experienced by foreign companies in projects such as Sakhalin-II, Kovykta and Kharyaga. Therefore Total and StatoilHydro are fighting hard for Shtokman to be fully recognized as part of their reserves by international financial markets and on international stock exchanges.

Another important aspect of the deals that have been made is that they are more like options than ownership stakes. During the coming year or two Gazprom and the two foreign companies will attempt to hammer out the technical and financial details of the Shtokman project, which are far from clear at the moment. In 2009 Total and StatoilHydro are to decide whether they want to make use of their right to a quarter each of the project under the conditions which they must negotiate with Gazprom. In spite of the symbolic and political weight of the project and its importance for international cooperation and European energy security, this will ultimately have to be a business decision. It is worth remembering that perhaps the most disruptive point in the bumpy negotiations leading up to the decision to include Total and StatoilHydro was the distribution of the financial burden and risks between the Russian and Western sides. There is no guarantee that Total and Statoil, as the company will then most likely have been renamed, will find the terms offered sufficiently attractive when a decision is to be made in 2009.

The Importance of the Shtokman Field

The Shtokman field is now officially slated for production in 2013, though few believe it will be possible to stay within this timeframe or even near it. Should the project nonetheless develop according to schedule, it would both be the biggest energy-related event and the most important international cooperation project in northern Europe in the decade 2010–2020. There are several reasons for its importance:

(1) The Shtokman field theoretically contains enough gas to satisfy the entire consumption of the EU for seven years. In addition to Shtokman's direct

importance for European energy supplies and security, it is important for Europe because it includes the French oil company Total, and because it involves cooperation between Europe's biggest and third biggest external suppliers of natural gas – Russia and Norway (which jointly supply 65 per cent of EU imports). Russia and Norway are also respectively the world's second and third biggest oil exporters, and from this perspective the cooperation is also an interesting development in the global petroleum sector. It should not, however, be interpreted as a precursor to a Russian-Norwegian led gas cartel, as all of Norway's main political parties seem to be firmly committed to avoiding the politicization of Norwegian energy exports.

(2) Shtokman has widely been seen as driver of Russian–Norwegian cooperation across the border and of a joint Russian-Norwegian regional industrial boom in the High North, including northern Sweden and Finland. Expectations have run particularly high in northern Norway, where hopes for a petroleum boom with Shtokman at its centre have injected dynamism and optimism after decades of Cold War confrontation and unemployment in the fisheries. One of the most optimistic visions for the development of the region includes the so-called "Pomor Zone," a joint Norwegian-Russian industrial and economic cooperation zone straddling the border near Kirkenes.

(3) Norwegian-Russian cooperation in the development of the Shtokman field has occasionally been cast as a possible precursor to a solution of the Norwegian–Russian border dispute in the Barents Sea. It is widely thought that the disputed area may include large petroleum resources, although the two parties have agreed to place a moratorium on exploration in the area. Due to the sensitivity of the topic, it is not possible to acquire reliable official information about the border negotiations, but several possible solutions have been discussed by people outside the negotiation process. One of these assumes that successful Norwegian-Russian cooperation on Shtokman could provide a precedent for a solution of the border dispute involving extensive cooperation in the formerly disputed area. According to this solution, the parties would first have to agree on a new borderline in the disputed area. Once the border were decided upon, the resources in the Norwegian part of the formerly disputed area could be owned 51 percent by Norway, and 49 percent by Russia, whereas those in the Russian part of the formerly disputed area could be owned 51 percent by Russia and 49 percent by Norway. Obviously such a solution would require a high degree of cooperation and coordination between the two countries, which could – it is thought – be demonstrated through successful cooperation on Shtokman. Due to the closed nature of the negotiation process, it is not possible to ascertain whether such a solution is on the table. But the fact that it is discussed outside the negotiation process does say much about the importance for Norwegian-Russian cooperation ascribed to Shtokman.

(4) Developing the Shtokman field also involves making difficult choices about the marketing and transportation solution for the gas. The three main options are: (a) to build a liquefaction plant on the coast of the Kola Peninsula (most likely at the derelict fishing village of Teriberka) and export the gas as LNG by ship, (b) to build a pipeline from Murmansk to the Petersburg area and connect it to the Nord Stream pipeline going to Germany or (c) to lay a pipeline southwards through the Norwegian part of the Barents Sea and halfway down the Norwegian coast to connect with the Norwegian pipeline network. To some extent decision-making about Shtokman is thus also decision-making about whom Russia is going to trade and cooperate with internationally. Option (a) – exporting the Shtokman gas as LNG – is often thought of as synonymous with exporting it to the US, but the LNG could also be shipped to Europe. One of the advantages of an LNG solution is therefore that it gives some flexibility as far as the export market is concerned, although buyers would obviously need the appropriate terminals for receiving the LNG. So far it seems the preferred solution is (a) (LNG), later to be combined with (b) (a pipeline connection with Nord Stream). Solution (c) (connecting Shtokman with the Norwegian pipeline network) may be mostly wishful Norwegian thinking. Although it could make sense in some practical respects, it is hardly a politically or economically attractive option for Russia.

Lessons Learned from the Shtokman Experience

Above all, the many phases of hope, ambition and disappointment in Western attempts to become involved in Shtokman illustrate how Western actors often intensively debate cooperation with Russia on the basis of all kinds of assumptions and expectations, without in fact engaging properly with significant Russian actors or being in touch with the reality on the Russian side. In this respect it is interesting to compare Shtokman with Norway's Integrated Management Plan for the Barents Sea, which also involves great ambitions for involving Russian actors in environmental processes and solutions that rest on uniquely Norwegian and Western perspectives and assumptions.

The official reason most often mentioned by Russian actors for the initial decision to exclude all foreign actors from the Shtokman project was that none of the suitors made sufficiently attractive offers. If one takes this argument seriously, the Shtokman case indicates

that ultimately financial considerations and profit may be the main driver in Russian energy cooperation with Western countries.

On the other hand, the politicization of the Shtokman negotiations, with multiple meetings between Russian and foreign politicians and high-level state functionaries, indicates that while business is important for the Russian side, business is controlled by politics. Western actors who want to cooperate will need the support of sufficiently strong politicians on the Russian side.

The development of the Shtokman field provides yet another illustration of the importance and sensitivity of strategic resources to the Kremlin – which is determined to stay in control. These Kremlin priorities are also mirrored in other developments in Russian-Western energy cooperation, where Russia has been taking back control from Western companies that bought into Russian fields in the 1990s. On the other hand, because the legal-institutional infrastructure for the Shtokman field is being developed under the full control of a sober Kremlin from the outset, cooperative relations may prove more stable, and it will be more difficult for the Russian authorities to unilaterally blame problems on Western partners, though the pain of industrial delays and cost overruns may provide strong incentives to attempt to do so.

All discussion about Shtokman and other major petroleum developments in the North is generally disconnected from the EU's Northern Dimension, Barents cooperation, the Arctic Council and other multilateral frameworks for cooperation. One could get the impression that cuddly multilateral cooperation is acceptable, as long as it does not deal with the really big issues, which are handled in bilateral or narrow ad hoc multilateral settings. This situation may in particular be due to Russian preferences and Russia's image of itself on the international stage (not as one country among others, but as an exceptional case) or to hardcore Russian realism in international relations. In that case it may be questionable whether the West in the short run can really lull Russia into full-hearted participation in a multilateral framework such as the Energy Dialogue, the Northern Dimension or other multilateral options that are available, while buying its resources at the bargain prices that importing countries expect.

About the author:
Indra Øverland is Head of the Energy Program at the Norwegian Institute of International Affairs (NUPI)

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