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"GROWING TOGETHER TOWARDS A FRIENDLY PLANET"



26th World Gas Conference | 1-5 June 2015 | Paris, France

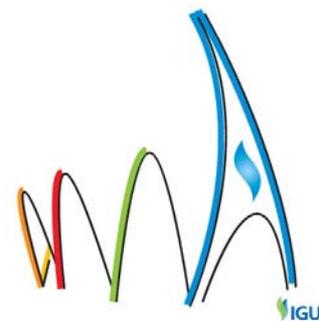
Eastern Gas Program of Russia – a new phase

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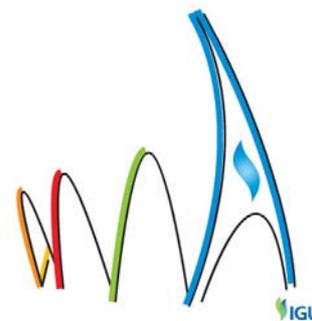
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Background

The Program for formation of a Unified Gas Supply System (UGSS) in Eastern Siberia and the Far East of Russia (further on – the Eastern Gas Program or the Program) was approved by the Russian Government in 2007. This document represented a comprehensive approach by state to the development of gas industry in this new gas producing region of the country that covers 60% of the national territory.

Aim

This goal was set to be achieved by the year 2030 in some stages subject to having in place all necessary economic, first of all, market conditions. As one of the major strategic planning concepts in Russian gas industry, the Eastern Gas Program, constituted an integral part of a current General Plan for the Development of Gas Industry in Russia up to 2030. Just to remind, the base case of Eastern Gas Program was setting the following main production goals:

Annual production of gas - 162 bcm

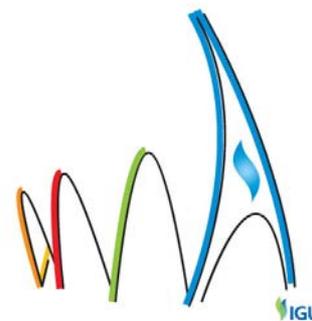
Annual export of pipeline gas – 50 bcm

Annual export of LNG – 27,6 bcm.

Eastern Gas Program was covering 4 main producing areas in the East of Russia with Sakhalin in first place, followed by Sakha (Yakutia) and Irkutsk in the Eastern Siberia and completing the whole system in Krasnoyarsk area in the very center of Siberia. A separate gas producing center was to be formed in Kamchatka.

Methods

Gazprom was nominated by the Russian state as a coordinator for the implementation of that Program. 7 years have passed since then. Today we can turn back and say that all major goals of the Program and the proposed sequence of events were generally correct. For instance that is true in terms of putting Sakhalin gas production in the first place in the overall development in the region. Not only two PSA projects as Sakhalin-1 and Sakhalin-2 are now in place. Gazprom has conducted a major geological survey and exploration program here that resulted in substantial (2/3) increase of proved gas reserves of Kirinskoye gas condensate field (up to 160 bcm) and in a new discovery – South Kirinskoye gas condensate field with currently proved reserves of gas more than 550 bcm and more than 100 million tons of liquids. As the first one will serve as a main supply source for domestic market, the latter will serve for export needs.



Last year saw the first gas of Kirinskoye gas condensate field moved to domestic market on the continent, being the first experience in Russia of installation of totally undersurface gas production and collection facility. This experience will be helpful in our new projects in Russia and worldwide.

This gas is now being transported from Sakhalin island to the mainland via Sakhalin – Khabarovsk – Vladivostok (further on – “SKV”) pipeline built in 2011.

After a marketing scenario for South Kirinskoye field gas is finalized that trunk gas pipeline will see a further expansion either to move this gas to China as pipeline gas or to other Asia Pacific countries in the form of LNG.

To do this Gazprom has already conducted FEED for Vladivostok LNG project (VLNG). VLNG plant first phase capacity is set for 10 million tons consisting of two trains of 5 million ton each. It can be followed by one more train of the same capacity.

The same time we see some new developments in LNG production on Sakhalin island itself. Sakhalin-2 project with Gazprom having 50%+one share is currently studying project expansion plan by one more train of 5 million ton. To proceed with this project the operator of Sakhalin-2 is now discussing the possible purchase of gas from neighbouring Sakhalin-1 PSA project, which is also planning to produce LNG and market it, thus asking for access either to Sakhalin-2 or SKV gas pipeline infrastructure.

Both in terms of optimal gas production profile and possible decrease of CAPEX the two projects represent a classical example of potential synergy and win-win situation for both projects. The third Party to win will be the Russian Federation as a country as it is a Party to PSA to partly reimburse that expenditure. Here is a big field for us in studying the experience of Australia shelf projects in terms of finding additional synergy by sharing some neighbouring infrastructure.

The Eastern Gas Program has also proved to be true in predicting the next phase of development of gas industry in the region by brining on stream gas reserves of Sakha (Yakutia) and Irkutsk gas fields in Eastern Siberia. That phase of development has started last year after signing of a record gas deal with China for supplying of 1 trillion cm of gas in 30 years. That deal marked a new milestone in the Eastern Gas Program implementation as this phase is linked to laying more than 2000 km long pipeline from Siberia to North-East China. Power of Siberia pipeline will form a central section of the projected and still missing Eastern section of the national Unified Gas Supply System (UGSS). In case future market conditions are in place it can be further extended westward and eastward to set up a unique nationwide UGSS.

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Construction work for Power of Siberia Gas Pipeline is currently underway; the construction of the Russian section has already started and the construction of a Chinese leg will start this year.

Due to the rich and complex composition of East Siberian gas alongside with upstream and midstream parts of Power of Siberia project Gazprom is also planning the construction of a world class Gas Processing Plant near the Chinese border. Besides treatment of gas to contractual requirements this plant will produce up to 2 million ton of propane and butane and also liquid helium for further transportation to the Russian Far East ports and subsequent shipment overseas. This work is currently being done together with our Russian partners from SIBUR and National Chemical Group.

Besides the Eastern leg of Gazprom pipeline export to China we are currently continuing joint efforts with our Chinese partners from CNPC to implement the Western leg as well, which is broadly known as "Altay" project. This project fits well with further development of Chinese market making that project even more effective due to the fact it will go the same corridor as already existing West to East pipeline in China and a set of gas pipelines from Central Asia going to the Eastern and South Eastern China.

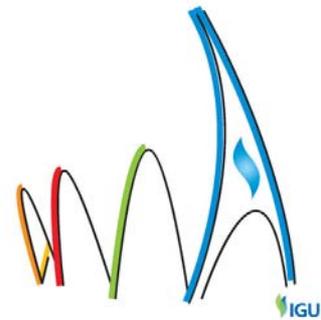
Last year both Gazprom and Russian government signed basic agreements with their Chinese counterparts on this matter. They are supposed to be followed by a commercial deal this year.

Besides its huge export potential the Eastern Gas Program is also emphasizing the domestic market as one of the key points. The significance of gas for the Russian East can now be compared to the role American shale gas can play for reindustrialization of the US.

Although the current consumption volume is modest and stands about 6 bcm a year it already represents 56% increase since 2008 when the program started.

Natural gas as a source of primary energy for the region has already resulted in big ecological benefits for main industrial cities in the east of Russia as the emission levels in Primorsy, Khabarovsky, Kamchatsky regions and Sakhalin fell from one half to two times. But the main economic effect of gas for the local economy is still approaching: we see a number of new gas-based projects initiated in the region, some part of them are methane-based chemicals.

Besides that Gazprom is cooperating with SIBUR in the terms of supplying ethane for a future world class polyethylene plant of SIBUR in Amur region close to the Chinese border.



Gazprom gas processing plant to be located in the same place will provide not only the cost-effective solution for ethane supply for ethane-based chemicals by SIBUR but will also mean another world class helium plant for the market. We believe that Asia Pacific market will absorb the whole production volume of liquid helium to be produced at that plant. We are eager to enter into flexible commercial deals with the existing and perspective players in that market by 2018.

In case of favorable tax and pricing treatment from the State natural gas in the East of Russia can bring a handful of ammonia, urea and methanol production in almost at all territories the existing and prospective gas pipeline go or will go through.

We expect the Russian state will build on its preferential policies for the industry which are partly effective already but still not enough to fully support all possible upstream, midstream and downstream projects in the region. Gazprom is closely working with the Russian government on that.

Results

The same time we cannot share some remarks by IEA that Russian gas in the East is not an option for the Asia Pacific due to big capital expenditure on future infrastructure. We strongly believe such view is incorrect and too pessimistic. Vice versa we are sure that both Russian pipeline gas and LNG will be competitive in the Asian market and will even substitute some LNG either currently coming or due to come from outside Asia. We strongly believe that competitive conventional Russian gas with proven reserves in the region exceeding 6 trillion cm will be a realistic and practical choice for our future customers in Asia Pacific and India taking into account the drastic changes in the Asia gas market triggered by the oil price decline.

Conclusions

Gazprom is not a sole holder of those reserves, some of them are belonging to other Russian players and PSA operators. As the State-nominated coordinator for the implementation of the Eastern Gas Program Gazprom is keen to finding the optimal and comprehensive solutions to bring those reserves to the market in a timely and most cost-effective manner.

References