

Russian Gas Export Policy – Asia, LNG, Europe: fundamental change post-2014?

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OIES

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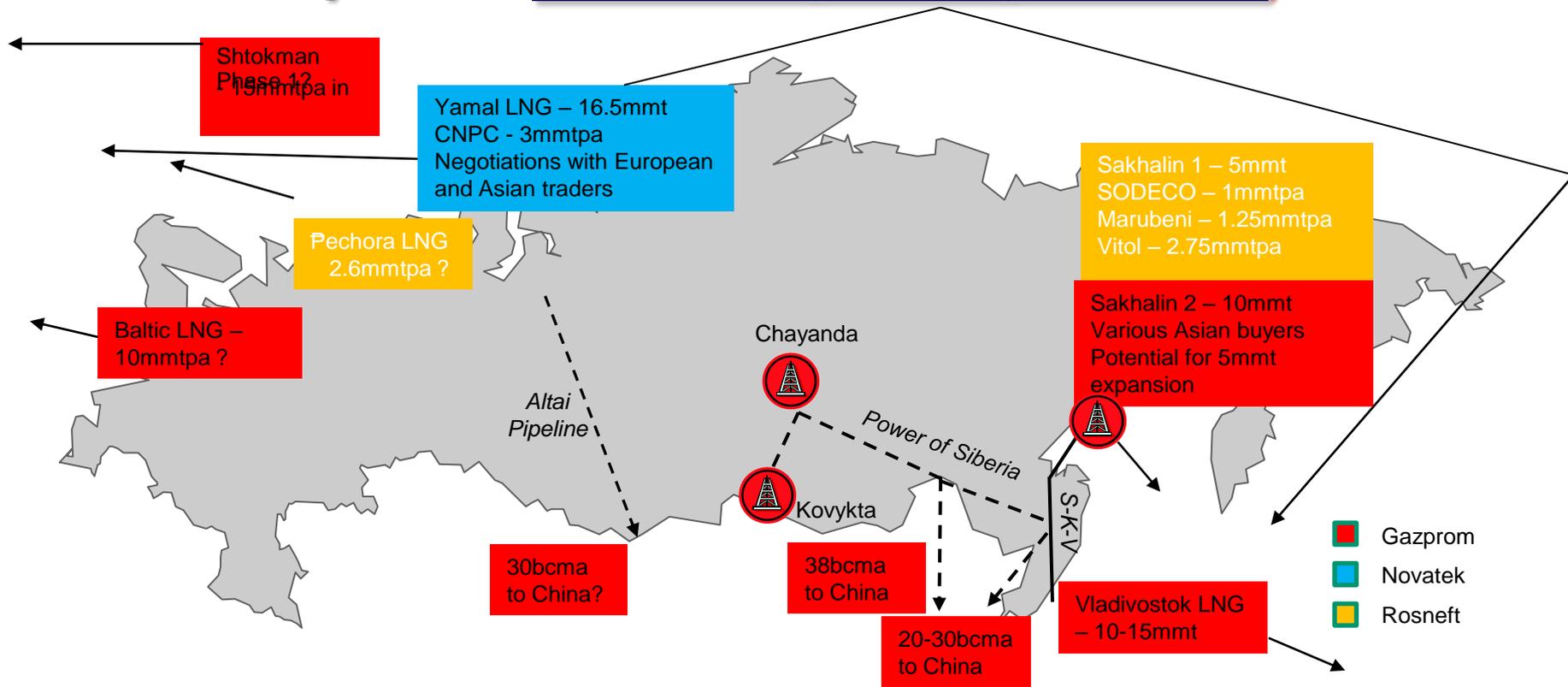
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Exports to Asia and LNG

Russia's LNG and Asian gas export expansion options at the beginning of 2014



- A significant number of options for Gazprom and others
- Diversification to Asia catalysed LNG options, but the example of Shtokman showed that economics were difficult
- Gazprom's LNG monopoly position abolished; serious competition from Rosneft and Novatek



The Ukraine crisis and the international response

- **February 2014 – Ukraine president Yanukovich leaves office and the country**
- **March 2014 – Russian invasion, referendum and annexation of Crimea**
- **April 2014 – pro-Russian separatists occupy government buildings in Donetsk and Lugansk; military conflict between separatists and Ukrainian government troops begins**
- **April 2014 – first US/EU sanctions**
- **July 2014 - flight MH 17 shot down**
- **Further US/EU sanctions – Russian counter-sanctions**
- **Feb 2015 ceasefire agreement – successful??**



Targets of International Sanctions

- Travel restrictions on individuals close to Putin including the CEOs of Novatek and Rosneft
- Financial restrictions on:
 - major banks including Gazprombank
 - energy companies including: Lukoil, Rosneft, Novatek and Gazprom (sanctioned by US but not EU)
- Technology sanctions on all finance and equipment for: deepwater (>150m) oil; offshore oil, tight oil, shale oil, hydraulic fracturing

No direct sanctions on the gas sector



Impact on Gas Export Projects

DIRECT IMPACTS:

- Inability of Novatek, Gazprombank and Gazprom to raise long term finance from the US; EU financing for Novatek and Gazprom not sanctioned but limited;
- No \$ finance available to Novatek's Yamal LNG and all Gazprom's pipeline and LNG projects

INDIRECT IMPACTS:

- EU refusal to negotiate post-Crimean annexation led to cancellation of South Stream
- Gazprom introduced major strategy change away from downstream investment in Europe and direct sales to customers

Gazprom is very keen on Baltic LNG but Pechora LNG project remain more notional than actual



- Gazprom has rekindled the idea of the Baltic LNG project – a 10mmt scheme due online by 2018 that Miller is keen to promote
- Rosneft has partnered with Alltech at Pechora LNG (2.6mmt) although project has not received export approval yet
- Cost of supply could be very competitive if based on net forward from Russian domestic price

Yamal LNG will be the first (only?) new project, with gas going west as well as east

Yamal LNG project to access eastern and western markets



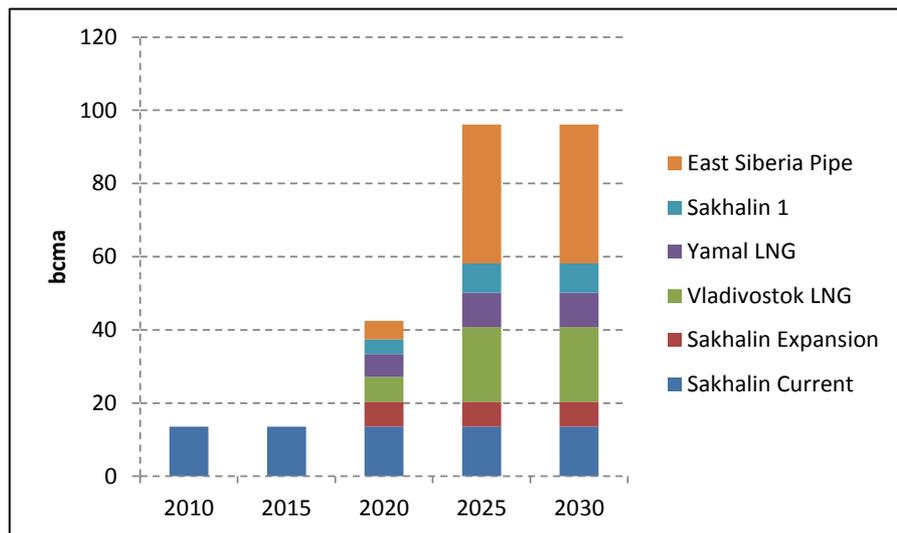
Yamal LNG production forecast



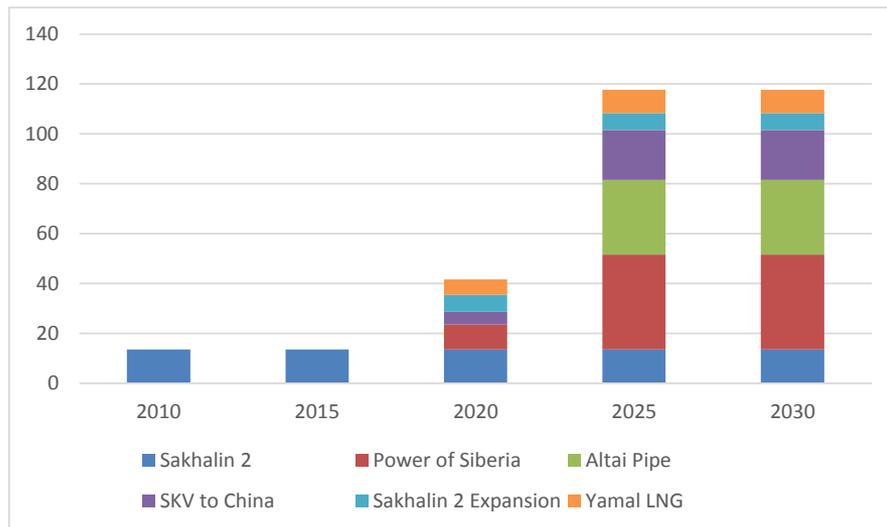
- The Yamal LNG project: 3 trains totalling 16.5mmtpa with first gas coming in 2017/18 – construction is well underway
- Contracts signed to cover majority of LNG output – Gas Natural (2.5mtpa), Gazprom (2.9mtpa), project partners (9.4mtpa); gas will be transported to Asia for up to 5 months of the year
- Technical complexity and the harsh environment could cause some delay, financing of total \$27 billion budget remains biggest problem
- CNPC as a 20% partner and LNG purchaser

Two scenarios for Russian gas exports in Asia

The LNG export scenario



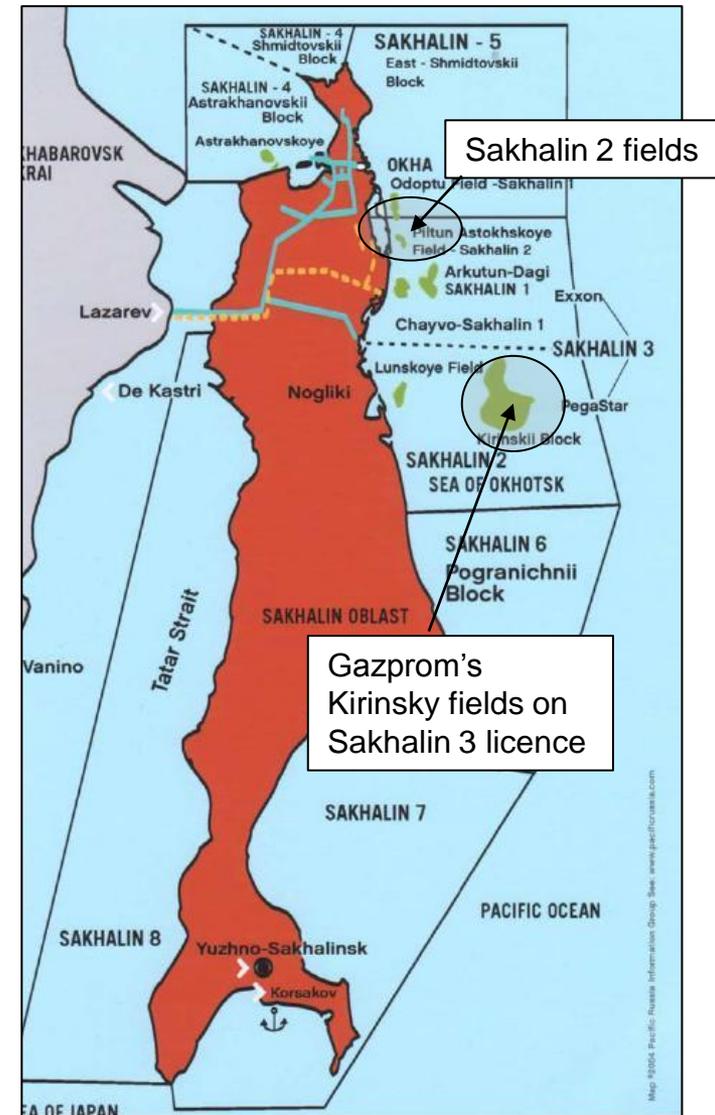
Alternative pipeline export strategy



- Pipeline sales important because they generate export tax revenues
- Potential to increase export sales, but more focussed on one market so higher risk
- Sanctions could reduce Russian LNG exports to just current Sakhalin 2 project
- Novatek still highly motivated to complete Yamal LNG, but could be further delayed
- Rosneft may now view its gas strategy, including Sakhalin 1 LNG, as lower priority given financial constraints

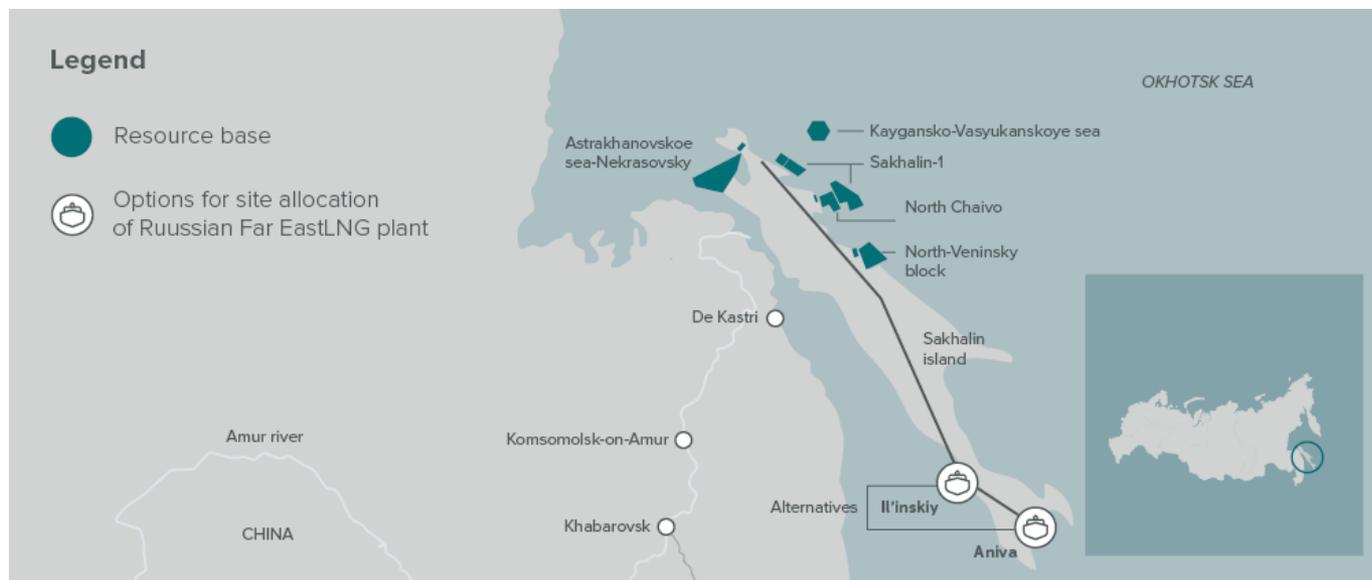
Sakhalin 2 and 3: slow progress?

- **Sakhalin 2 infrastructure is ready for a third train; Shell and Gazprom have finally agreed to progress plans**
- **Sakhalin 2 partnership will not be keen to see third train as a tolling plant for Sakhalin 3 gas**
 - Gazprom owns Sakhalin 3 with 100% interest, while it has 50.1% in Sakhalin 2
 - Shell (27.5%) and the Japanese consortium (22.5%) unlikely to countenance Gazprom's use of 3rd train without their involvement in equity gas
- **Sakhalin 3 gas reserves approaching 800bcm, but oil now an issue**
 - Will the gas go to VLNG, stay on Sakhalin or be delivered by pipe to China?
- **Gazprom has to date been reluctant to offer IOCs equity in Sakhalin 3**
 - Direct sale of gas to China may be the preferred option if Gazprom remains 100% owner



Rosneft's plans for "Far East LNG" may be deferred due to financial constraints

Rosneft's Far East LNG concept for Sakhalin 1 gas



- Rosneft had planned to compete with Gazprom to export gas from Sakhalin, following liberalisation of LNG exports in Dec 2013
- MoU's with Far Eastern buyers have been signed for a 5mtpa project
- However, partnership with Exxon would be undermined by sanctions and Rosneft can hardly afford the project at present
- Location of LNG terminal not yet decided and pipeline access remains an issue
- Project likely to be deferred with continuing uncertain outlook

From LNG to Pipelines: the strategy change began in Asia in mid-2014

- **Russia and Gazprom have had a long term objective to become a key LNG player to access new markets and to increase flexibility to complement EU pipeline sales**
- **Geo-political significance for Russia and for Gazprom as a global gas major**
- **But financial sanctions, and unwillingness of Asians to sign new long term contracts have undermined LNG prospects....**
- **and lower oil prices have led to a review of overall strategy among the key Russian gas companies**
- **All Russian LNG projects (except Yamal) now in some doubt**

Pipeline exports are the key focus again, especially into China

Power of Siberia, Altai and other pipelines



- Power of Siberia to stop at Blagoveshchensk
- Altai pipeline negotiations ongoing – contract in 2015?
- Pipe exports to NE China from Sakhalin a possibility
- Pipelines to Korea and Japan also mentioned

Impact of lower oil and gas prices on Russia-China pipeline contracts

Power of Siberia:

- a 30 year contract, with peak flow of 38bcma; ramp up period of five years, starting in 2019
- Miller quoted as saying that total value of contract was \$400bn
- Oil-linked price in the range \$10-11/MMbtu (@\$100/bbl), implying \$12-13/MMbtu on east coast
- equivalent to rough estimate of the US LNG export price and emerging Chinese domestic price
- Gazprom has ordered the pipe and started work

Altai pipeline:

- can also reach markets in China at similar price levels
- unclear whether Chinese side will want to sign another large contract so quickly

Major analytical problems: capex must be calculated in rubles not \$; at oil-linked gas prices of \$60/bbl neither project is viable but significant gas flow not until 2020



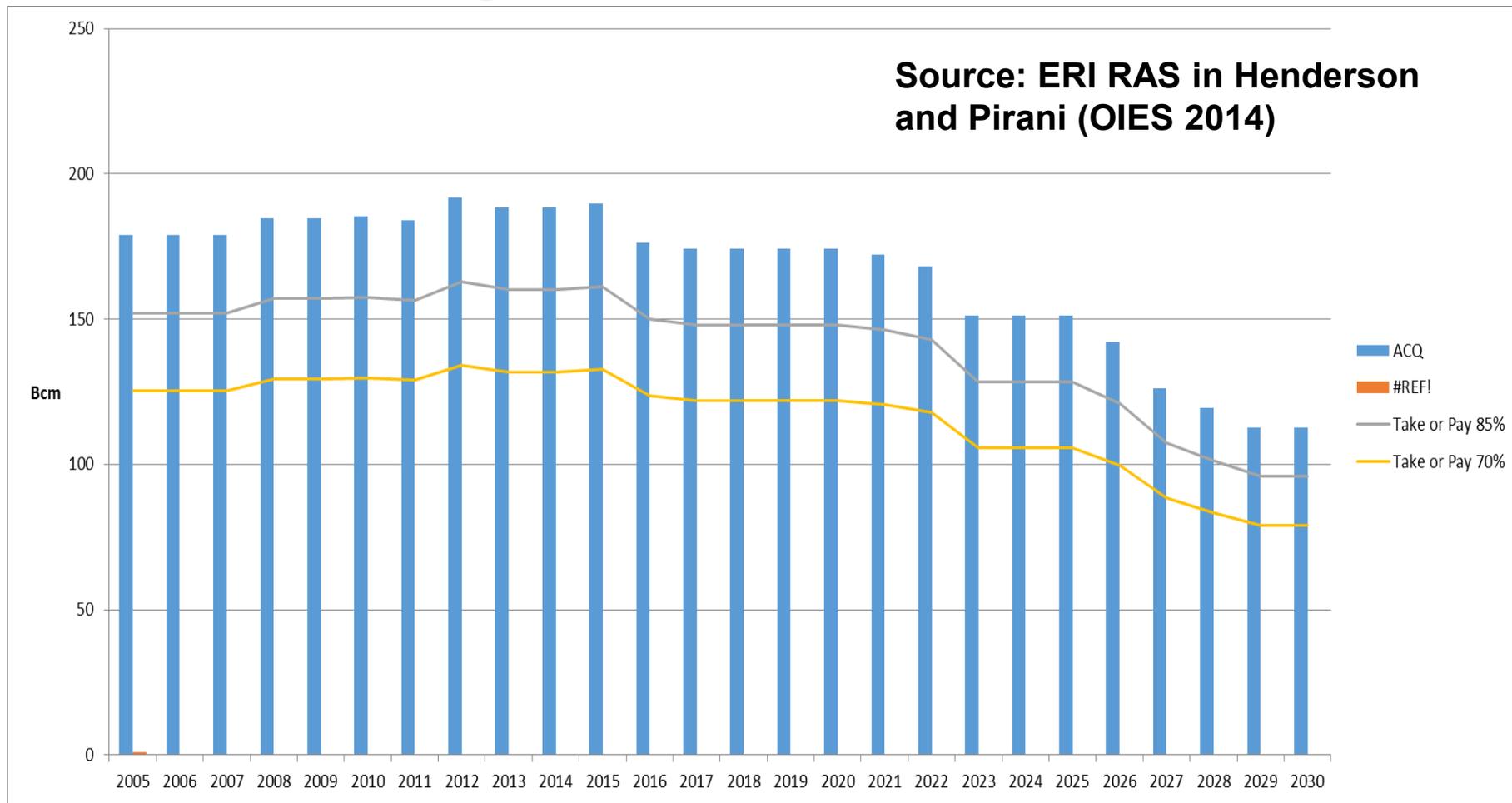
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Exports to Europe

Gazprom's long term take or pay contracts with European customers to 2030



Even at 70% ToP, Gazprom's average annual sales exceed 100 Bcm/year until the mid-2020s

Gazprom Long Term Contract Exports to Europe (Bcm)

	2009	2010	2011	2012	2013	2014*
Western Europe	109.8	103.6	115.9	111.4	133.6	
Eastern*** Europe	38.5	44.5	40.7	39.6	40.8	
Baltic States	4.4	3.9	5.1	4.8	4.2	
Total LTC**	142.8	138.6	150.3	139.9	166.0	147.2
Total (Group)	152.7	152.0	161.7	155.8	178.6	

*preliminary **volumes exported to Europe under long term contracts, excluding Baltic states

***Includes "other countries"

Sources: Gazprom in Figures 2009-2013, p.67. Gazprom Export Press Conference June 2014.

2013 recovery mainly due to three countries: Italy, Germany, UK; 2014 sales fall back

The August-December 2014 Delivery Shortfalls (within contractual limits)

Purpose was to:

- **Restrict reverse flow to Ukraine**
- **Support hub prices and eliminate gaming by buyers**

Strategy abandoned due to:

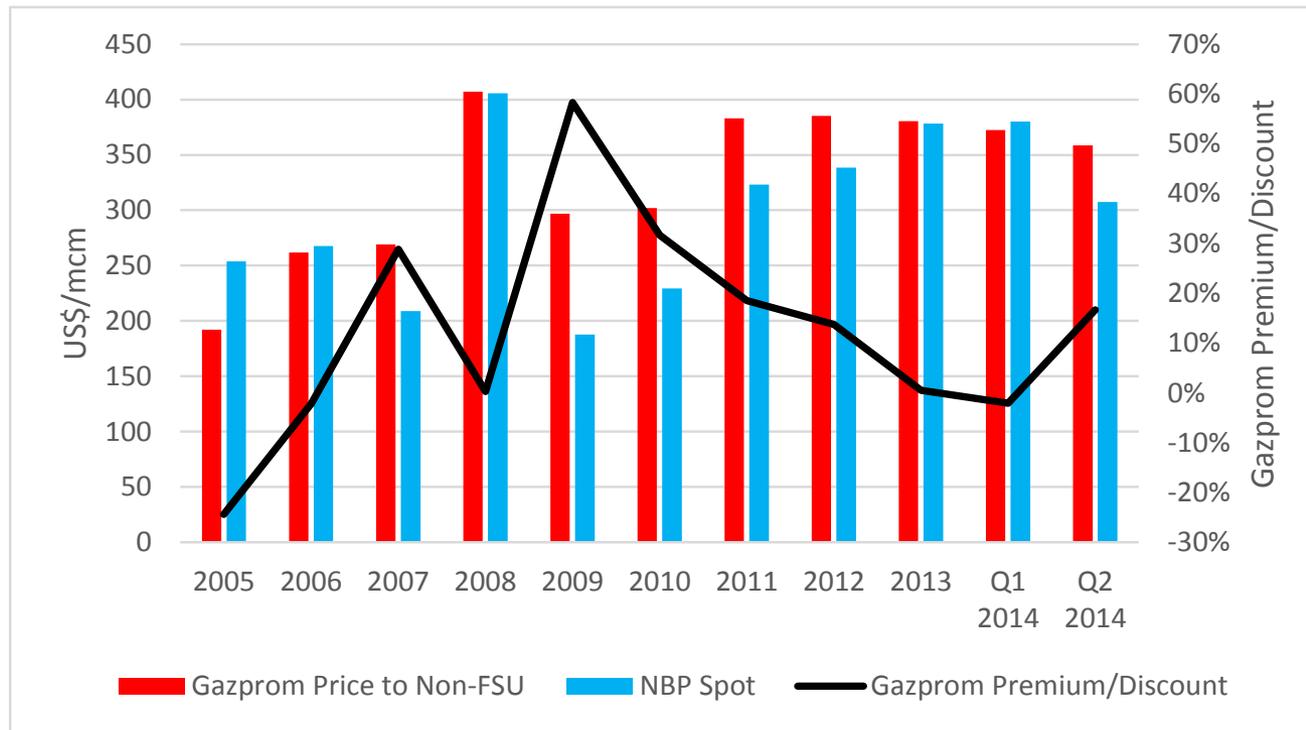
- **Gazprom penalties for not meeting nominations doubling in 2014**
- **Failure to stop either reverse flow or gaming by buyers**

Gazprom's Long Term Contract Renegotiations, Arbitrations and the EU Competition Case

- **2012-14 renegotiations:**
 - **base price reduction combined with rebate mechanism whereby if the contract price exceeds the hub price by 5-15%(?), Gazprom refunds the difference at end of period**
- **Ongoing arbitrations: E.ON (most important); Lithuania, DONG**
- **DG COMP case (running since 2012 due to report very soon) may find that oil-linked pricing is anti-competitive**

Fall in crude oil prices will bring long term contract prices much closer to hub prices but not until Q3 2015

Russian Export Prices Relative to NBP



Source: Henderson/OIES (based on Gazprom financials)

By 4Q/13, Gazprom prices were within 5% of NBP, this is the major reason why Gazprom sales increased in 2013. After reaching parity in Q1 2014, Gazprom prices were 17% above NBP in Q2 following collapse in European prices.

Gazprom/BASF Asset Swap

Gazprom/BASF asset swap:

- Four years in the making
- Would have given Gazprom 100% control of Wingas (downstream sales and marketing) in exchange for upstream assets
- Abandoned in December 2014 possibly due to:
 - political pressure from the German government)
 - Russian fears of expropriation of EU assets

Impression is that Gazprom is that withdrawing from European involvement and focussing just on sales

The Nord Stream Pipelines



Nord Stream 1 commissioned – November 2011; Nord Stream 2– October 2012; no further expansion likely

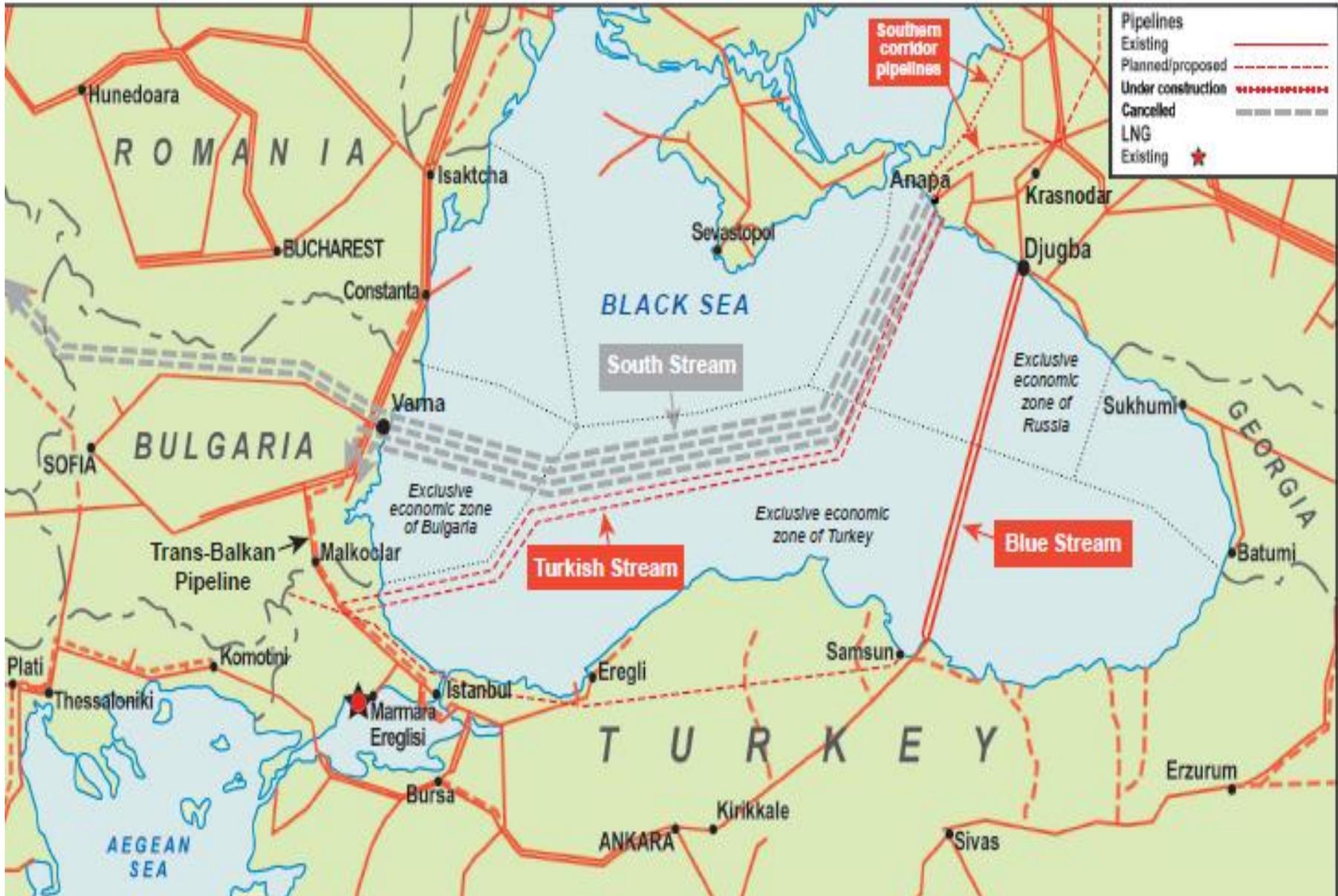
Nord Stream 1 & 2 and onshore extensions

- **NEL (20 bcm): full capacity by 1 Nov 2013, no exemption**
- **OPAL (36 bcm):**
 - **German 100% exemption capped at 50% by the EC;**
 - **the EC and Gazprom reached an agreement (after 2 years of talks) allowing Gazprom to use 100% unless wanted by a third party (to be determined via auction) but the approval has been repeatedly delayed due to politics;**
 - **100% exemption agreement expired in December 2014 and was not prolonged by Gazprom which left the 50% exemption in force**

Gazprom cannot use more than 50% of OPAL (but it is assumed that the EC would lift the restrictions in the event of transit crisis)



“Turkish Stream” Replaces South Stream





Turkish Stream

WHAT GAZPROM HAS ANNOUNCED:

4 lines totalling 63 Bcm: 1 to Turkey, 3 to a hub on the Greek border to be built by 2020 (eliminating transit through Ukraine)

WHAT HAS BEEN AGREED:

First line to Thrace (near Istanbul) with a capacity of 15.75 Bcm to start deliveries (all to Turkey) end 2016, full capacity by 2017

WHAT SEEMS LIKELY: 2 lines connecting with the trans-Balkan pipeline at least initially (prior to 2020); and POSSIBLE: line 3 to feed TAP; line 4 ??



But what if Gazprom is serious about vacating the Ukrainian corridor post-2019?

There will be legal consequences for Gazprom in relation to the delivery points in long term contracts but what are the options:

- EU buyers prefer to take delivery on the Russian/Ukraine border than on the Greek border**
- EU buyers opt to reduce delivery obligations and buy spot gas when available**
- EU Southern Corridor (starting with TAP) becomes the main route for Russian gas to southern Europe**

Long term Russian contracts with some EU buyers under threat

Some Key Unresolved Questions

- **How quickly can Gazprom agree and build how much Turkish Stream capacity?**
- **Can Turkish Stream gas “reverse flow” to South East Europe?**
- **A “hub” on the Turkey/Greece border: nobody in Greece knows about this; is Gazprom willing to abandon long term contract obligations to deliver to European customers?**
- **Is phasing out Ukraine transit by 2020 realistic?**

How much of the new European and Asian pipeline infrastructure can Gazprom finance with the current sanctions in place?

The New Policy is Much Better for Gazprom

- **Focus on pipelines (where Gazprom has experience) instead of LNG (where it doesn't)**
- **Focus on Asia (especially China) where gas demand is increasing instead of Europe where demand is falling, and EU regulation and politics is blocking new pipeline initiatives**

WHAT ARE THE LIKELY PROBLEMS/RISKS:

- **Altai pipeline contract may not be signed soon**
- **Low oil/gas prices threaten viability of new projects (especially in Asia)**
- **Continued sanctions and low oil/gas prices threaten Gazprom's ability to finance projects**

But are three large pipeline projects before 2020 affordable?

SUMMARY – in 2015, a new (and more logical) Russian gas export policy emerged

In December 2014 Gazprom abandoned:

- **100% capacity in the OPAL pipeline**
- **100% ownership in Wingas**
- **strategy to supply European customers directly**
- **strategic energy partnership with Europe, now it's "just business"**
- **Turkish Stream would allow Gazprom to:**
 - **Focus on its second most important (and only major expansion) market in Europe**
 - **Avoid most (but not all) of its 3rd package problems**
 - **Reduce (but we think not eliminate) Ukraine transit**
- **(Re)Focus on China/Asia as the most important expansion markets for Russian exports and...**
- **focus on pipeline exports rather than LNG: Yamal LNG is the only new LNG project likely to happen**

THANK YOU!

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