

The post South Stream environment and alternative plans for delivering Russian gas to Europe

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Russian Exports to Europe: existing and potential supply routes



Russian-European relations after the annexation of Crimea and the Ukraine crisis

- Crisis in Russian relations with Europe
- Sanctions and counter-sanctions resemble a 'trade war'
- Very difficult to conduct "normal commercial" gas relations in this environment or even to arrange meetings to discuss: DG COMP inquiry, OPAL, South Stream, general regulatory issues
- Hard to see relations "getting back to normal" even if Ukraine political situation settles down
- Threat of supply interruption remains even after October 2014 agreement due to: Ukrainian winter requirements; payment reluctance; state of political relationships/ deterioration of military situation in the east
- Glimpse of hope that the relations will improve, subject to lasting ceasefire and military de-escalation

European dependence on Russian gas to 2030

- For as long as existing Long Term Contracts remain in operation, Russian sales to Europe of at least 100 Bcm are secure at least up to the mid-2020s
- Even if the Long Term Contracts disappear, there are limited options – even by 2030 – to reduce Russian gas below 100 Bcm/year, unless the global LNG market expands very rapidly and Asian demand does not take an increasing share of the expansion
- Overall European dependence on Russian gas will not decline substantially but it would be possible for individual, highly dependent countries to reduce (and perhaps even eliminate) their dependence on Russian gas, if somebody pays

*Source: OIES 2014



Russian gas to Europe: supply dimension (N-1 standard and SCI dependence methodologies)

- EU countries which did not meet the N-1 standard in 2013: **Bulgaria, Greece, Lithuania, Estonia, Slovenia, Sweden, Ireland, Luxembourg and Portugal**
- The Supplier Concentration Index (SCI):
 - ❖ EU countries with a concentration >30 in 2012: **Austria, Bulgaria, Czech Republic, Estonia, Finland, Greece, Hungary, Lithuania, Latvia, Poland, Portugal, Slovakia**
 - ❖ Non-EU countries with a concentration >30 in 2013: **FYROM, Bosnia & Herzegovina, Serbia, Turkey**

*Source: OIES 2014

Baltic region, Central Europe, South East Europe are highly dependent on Russian gas, therefore particular attention should be devoted to these countries

European countries' differing views on dependence on Russian gas

- **Divisions within Europe on geopolitical acceptability of dependence on Russian gas**
 - ❖ **Baltic countries and Poland appear to hold the view that such dependence is unacceptable**
 - **Supply security**
 - ❖ **South East European countries have a different view**
 - **Transit security**
- **An important test will be whether these countries renew long term contracts with Gazprom, and if not what the alternative and cost will be**

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	117.9
Eastern*** Europe	38.5	44.5	40.7	39.6	40.8	28.7
Baltic States	4.4	3.9	5.1	4.8	4.2	3.9
Total LTC**	142.8	138.6	150.3	139.9	166.0	150.5
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

Russian gas to Europe: Ukraine/Moldova and Belarus transit pipelines



Source: OIES

Ukraine transited 40% of Russian gas exports to Europe in 2014. If Gazprom were to fully use all alternative routes, Ukraine would still have to transit 30-50 bcm (20-30% of the total); even if Turkish Stream is built, it might not be possible to phase out Ukrainian transit completely. Possible expansion of the Yamal system.

Major transit security incidents in the western CIS in the 2000s

TRANSIT AND/OR SUPPLY INTERRUPTIONS TO CIS

- the 1990s – all three west CIS
- **February 2004, June 2010** – Belarus
- **January 2006, March 2008, January 2009, June 2014**– Ukraine
- January 2006 – Moldova

SUPPLY INTERRUPTIONS TO EUROPE

- February 2004 (< 2 days), January 2006 (3 days), January 2009 (2 weeks), June 2010 (1 day)
 - **The January 2009 gas transit crisis: the most serious security incident in the history of the European gas industry** – no Russian gas flowing to Europe across Ukraine for 2 weeks



Russian gas to Europe: the Nord Stream Pipelines



Source: OIES

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

Russian gas exports to Europe: "Turkish Stream" Replaces South Stream



Source: OIES

In December 2014, Russian president Putin announced that Gazprom could not proceed with South Stream “under current conditions” and announced its replacement by Turkish Stream

Turkish Stream Pipelines

- **WHAT GAZPROM HAS SAID:**

4 lines totalling 63 Bcm: 1 to Turkey, 3 to a hub on the Greek border to be built by 2020

- **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 (thus fully eliminating Ukrainian transit in respect of exports to Turkey)

- **WHAT WE THINK IS LIKELY PRIOR TO 2020**

2 lines connecting with the trans-Balkan pipeline at least initially: Turkish Stream (1) & Turkish Stream (2)

WHAT COULD HAPPEN POST 2020?

- Turkish Stream (3) connecting to and utilising TAP capacity



Source: OIES

- or reversal to South Stream (once the EU regulatory framework for new capacity is in place and if EU-Russia relations improve?)



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

All long term Russian contracts with EU buyers under threat signalling end of a commercial era



Regulatory Issues

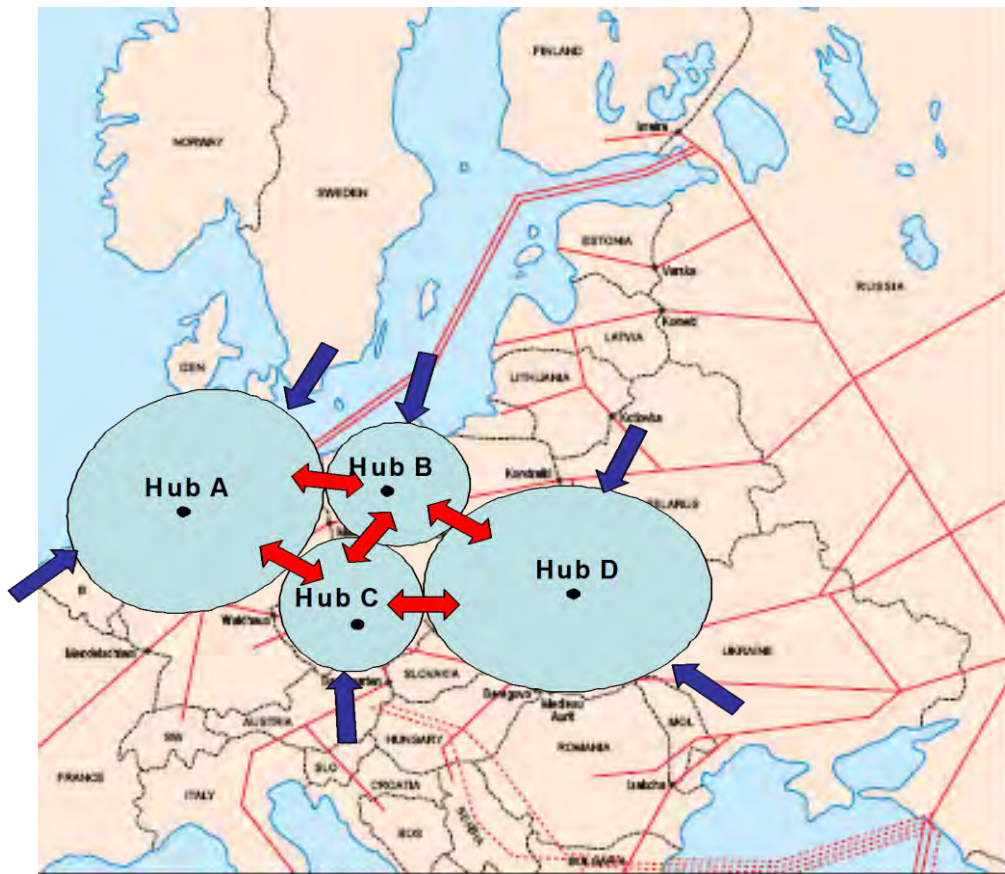
The Third Energy Package (TEP)

- EU political objective: single liberalised EU gas market by 2014
- Unbundling of transmission networks (OU, ISO, ITO)
- Entry-Exit transportation tariffs
- Regulated third party access
- Development of legally binding pan-European network codes (NCs) for cross-border issues
 - ❖ *CAM (currently being amended), Balancing, Tariffs (under development), Interoperability, Congestion Management Procedures (Reg)*

The TEP will change the architecture of the EU gas market: implementation is likely to take the rest of the 2010s but the trend is unstoppable!



Gazprom's export model: "border-to-border" vs "hub-to-hub"



Number of borders crossed to reach a delivery point	Volumes, bcm/y
1	26
2	30
3	43
4	9

Source: Yafimava 2013

Gazprom's huge volumes need to cross multiple borders/jurisdictions before they reach delivery points - not comparable to any other supplier!



Russian/Gazprom concerns with the 3rd Package/GTM

- Potential loss of capacity under existing Capacity Contracts as a result of implementation of EE regime, with resulting capacity holdings potentially lower (and potentially more expensive) and hence insufficient for delivery under existing LTSCs
- Challenge of booking additional transportation capacity across a number of EU (and non-EU) borders for delivery under existing & new supply contracts:
- Questionable ability to develop & fully utilize new multi-border long-distance pipeline capacity on the EU territory (e.g. South Stream)

**Subjects of discussion/negotiation with the EU prior to
Ukraine crisis**

CAM NC Amendment on incremental capacity (1)

- **Incremental Capacity: definitions**
 - ❖ a possible future increase in technical capacity that may be offered based on investment or long-term capacity optimisation and subsequently allocated subject to the positive outcome of an economic test, in the following cases:
 - at existing interconnection points,
 - by establishing a new interconnection point,
 - as physical reverse flow capacity at an interconnection point, which has not been offered before

**Incremental capacity will be allocated via
Auctions and Open Seasons**



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**
 - ❖ **the 50% exemption has remained 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)



South Stream: regulatory issues (1)

- **Commission:** South Stream can operate in the EU only if it is compliant with the TEP; its IGAs are not compatible with the TEP and must be renegotiated/renounced; encouraged to apply for a TEP exemption but refused a PCI status
- **Russia/Gazprom:** IGAs prevail over, and are compatible with, the TEP; TEP is discriminatory (requested consultations under WTO); no exemption application but a “bespoke” procedure for South Stream or suitable rules for new capacity need to be added to TEP

South Stream incompatibility with the TEP was the main regulatory hurdle, which ultimately led to South Stream cancellation



South Stream: regulatory issues (2)

- The EC TEP (in)compatibility argument was somewhat flawed as the TEP *in its current form* does not contain any rules for construction and utilisation of *new* (as opposed to existing) pipeline capacity
- The set of rules for new capacity is under development (CAM Network Code amendment) and is only expected to become applicable in 2017-18
- A compromise regulatory solution on South Stream could have been achieved by means of simultaneous addition of rules for new capacity to the TEP and renegotiation of IGAs in line with the “updated” TEP

Prior to the Ukraine crisis a compromise was possible, albeit very difficult, to achieve

Turkish Stream: regulatory issues (1)

- **Reverse flow on the Trans-Balkan pipeline**
 - ❖ compatible with the TEP, as Gazprom would be using the same amount of capacity as booked under its existing capacity contracts for ‘forward’ capacity but...
 - ❖ this is only true to the extent that usage of pipeline capacity in ‘reverse’ mode does not necessitate the changes in existing capacity contracts sufficient to be considered a termination or extension under the TEP which would require bringing them in line with the CAM NC (ie entry/exit tariffs, deliveries at hubs and auctions/OS for capacity)

CAM NC amendment defining reverse flow capacity where it was not offered as ‘incremental’ capacity might be construed as necessitating the conclusion of new contracts

Turkish Stream: regulatory issues (2)

- **Possible use of TAP pipeline (intended to transport Shah Deniz 2 gas from the Greek-Turkish border across Greece and Albania to Italy)**
 - ❖ **TAP exemption decision granted May 2013 for 25 years from the following provisions:**
 - **TPA – for the initial capacity (10 bcm)**
 - **Tariffs – for both the initial (10 bcm) and expansion (\leq 10 bcm)**
 - **Unbundling – for the entire project**
 - ❖ **Gazprom could participate in the Open Season to expand TAP's capacity (beyond the exempted initial capacity of 10 bcm) to transport the gas delivered via Turkish Stream (3) to Italy**



Infrastructure Issues in respect of Alternative (non-Russian) gas supplies to Europe



Individual European Countries Highly Dependent on Russian Gas Have Diversification Options

BALTIC COUNTRIES and POLAND:

- Polish and Lithuanian LNG terminals
- Poland could receive gas from NW Europe

SOUTH EAST EUROPE:

- Bulgaria and Greece have contracted 1 Bcm of Azeri gas from 2019
- For many former Yugoslav countries even 0.2-0.5 Bcm/yr of non-Russian gas would be significant diversification – therefore small (floating) LNG terminals are a real possibility

CENTRAL EUROPE:

- Volumes are much larger than other dependent regions
- Will depend on “reverse flow” of LNG from the west

**Major questions: how much does this cost, who pays?
Is this part of Europe’s new “Energy Union”?**

Infrastructure Issues:

whether and how non-Russian gas supplies can be brought to most vulnerable Europe's regions

- **Very little pipeline and LNG infrastructure in CE and SE Europe and the Baltics enabling to source non-Russian gas – this only started to change in the mid 2010s**
- **The ability to flow LNG eastwards from NW and South Europe LNG terminals in the network, designed for predominantly westward and southward flows, is limited due infrastructure bottlenecks (esp during crisis)**
- **New infrastructure would require significant investment**



EU Legal/Regulatory Infrastructure Initiatives

- **EEPR, 2009: €1.36bn (gas)**
 - Reverse flow on existing IPs & construction of new IPs
- **“Security Regulation” + CEF €9.1bn (gas)**
 - Binding infrastructure standard N-1 (3 Dec 2014)
 - Reverse flows on all (intra-EU) IPs (3 Dec 2013)
 - Minimum supply standards
- **“Infrastructure Regulation”**: Projects of Common Interest
- **Rules for new pipeline capacity**: CAM NC Amendment
- **Optimization of existing capacity usage**: CAM NC + CMP

Significant investment in European gas infrastructure is envisaged but cost is a problem as market signals might not be sufficient

South Stream cancellation: potential impact on SE Europe gas security

- **As long as the security of the Ukrainian transit corridor remains compromised, SE Europe security of supply will remain at risk**
 - at best until 2020 i.e. when and if an alternative Turkish Stream pipelines might be built
 - at worst until the early to mid 2020s when floating LNG terminals and/or additional interconnections might be built
- **South Stream would have improved SE Europe supply situation sooner i.e. 2015-16 had a compromise solution on regulatory issues been found between the EC and the Russian government**



Thank you!

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