Import and transit of gas to Europe

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Europe’s gas infrastructure - to build or not?

Europe’s infrastructure ensure ample level of market integration in many parts of Europe

Pipeline import capacity – 450 bcm
LNG regas: 212 bcm
Storage: 113 bcm

New infra – construction on-going
100 bcm (25 bn euro)

New infra planned – 40 bcm
Import/transit infrastructure under construction

Source: Snam
Existing/planned import pipeline and LNG points

**Table 5.1: Existing import routes of gas**

Source: ENTSOG
Projects of common interest II

Source: ENTSOG
Case study: Ukraine

22 160 km ‘transit’ pipelines
16 390 km national pipelines

Transmission capacity:
Input 288 Bcm / output 142,1 Bcm

12 UGSs with total capacity 31 Bcm*

Production 20,5 Bcm* (82% by Naftogaz)

Households, district heating > 50% of consumption

* Without Crimea
Ukraine’s transit

Transit of Russian gas via UA GTS

bcm

160
140
120
100
80
60
40
20
0


134 142 135 124 124 121 129 137 136 129 115 120 96 99 104 84 86 62 67 82 94
UA transit flows (bcm/y)

Total Transit from Ukraine (Exit UA Physical Flow)
2015: 68.98 bcm
2016: 79.28 bcm
2017: 91.00 bcm

Total Transit to SR & BiH (Exit HU Physical Flow)
2015: 1.89 bcm
2016: 1.97 bcm
2017: 2.37 bcm

Source and Note:
ENTSOG Transparency Platform – Physical Flows*
For bcm estimation: 1.000 KWh = 94.72 m³
RO includes All Entries, including Trans-Balkan thus reaching (RO/BG/FYR of Macedonia/GR)
# Nord Stream II Facts and figures

<table>
<thead>
<tr>
<th>Country</th>
<th>Length [km]</th>
<th>Regulation</th>
<th>Permitting Status</th>
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</table>
| Russia    | 114         | - Federal laws about Internal Sea Water, Territorial Sea, Continental Shelf  
             | - Decree of the government                     | ✓ 14 August 2018        |
| Finland   | 374         | - Water Act                                     | ✓ 12 April 2018         |
|           |             | - Finnish Act on the EEZ                       | ✓ 5 April 2018          |
| Sweden    | 511         | - Act on the Continental Shelf                  | ✓ 7 June 2018           |
| Denmark   | ~140        | - Act on the Continental Shelf                  | Two routes ready to permit |
| Germany   | 85          | - Energy Industry Act                            | ✓ 31 January 2018       |
|           |             | - Federal Mining Act                            | ✓ 27 March 2018         |
| **Total** | **8 permits** |                                                 | **7 out of 8**           |

Source:  
[https://www.nord-stream2.com/](https://www.nord-stream2.com/)
Case study - Turkish stream – 2 strings = 31,5bcm
Ukraine and new transit routes

Ukraine vs other transit routes

- Ukraine (historical)
- Nord Stream I
- Turksih Stream
- expected transit if NS II and TS run at full capacity
- Nord Stream II
- other routes
Nord Stream II and Turk Stream substitute almost all Ukraine transit

In a very simplified way:
- Assuming that NSII and Turk Stream would substitute Russian transit via Ukraine 1-on-1 and
- Their load factor is ~91% (50bcm/y + 29bcm/y) in the long term and that
- All NS II quantity goes to Western Europe (including AT/CZ/DE) and that Turk Stream I is for Turkey and Turk Stream II is for Europe
- Belarus transit remains intact,

The remaining transit via Ukraine could stand at 10 bcm.

This would enable Gazprom to have a) enough spare capacity to increase its supplies to Europe b) stronger negotiation position towards Poland and Ukraine re. transit c) back up transit routes for any scenarios
Gas infrastructure in the Energy Community

Transmission pipelines:
Ukraine – 38800 km
Moldova – 1570 km
Serbia – 2423 km
Georgia – 1968 km
BiH - 234 km
fYR of Macedonia- 181 km

UGS:
Ukraine 31 Bcm
Serbia 0,45 Bcm

LNG: 0
The final PECI/PMI lists for gas
Natural gas projects (2)