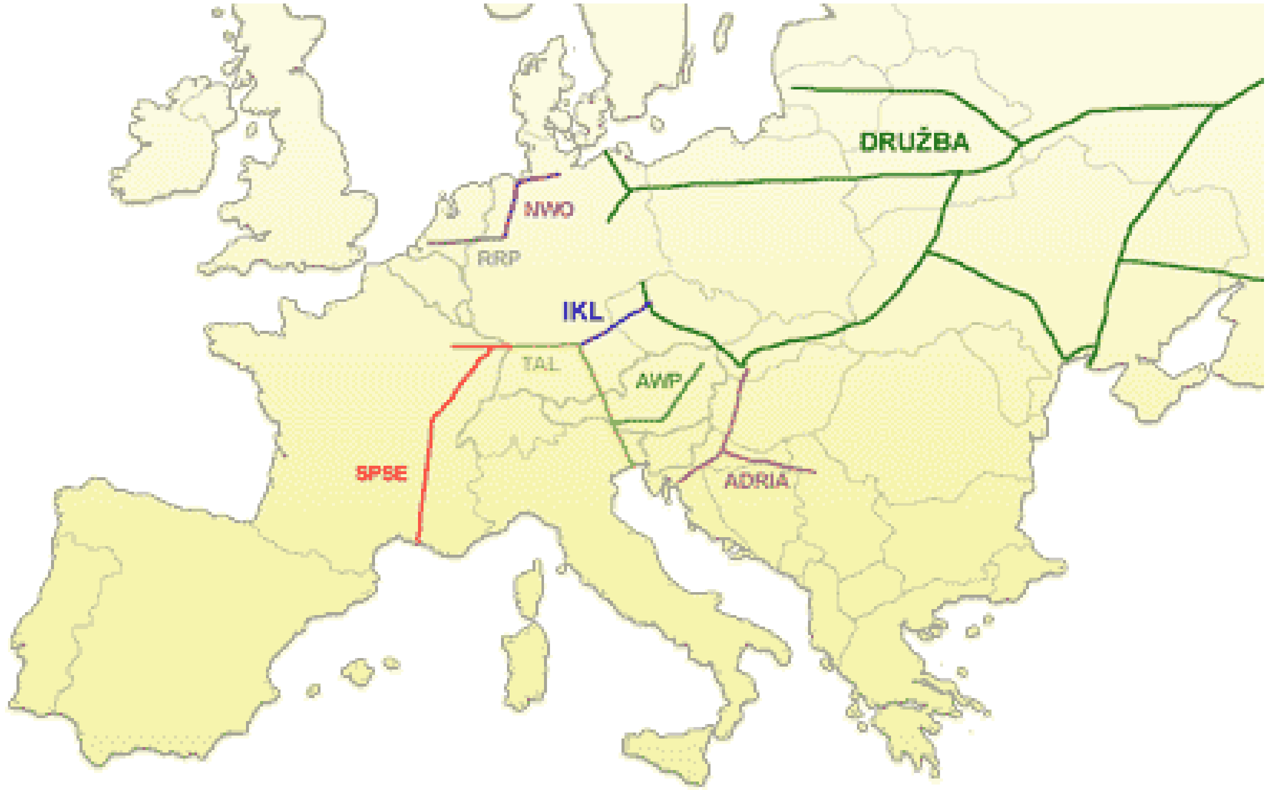
Case Study: Crude Oil in Central Europe



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Department of International Relations

and European Studies

EVROPSKÁ UNIE

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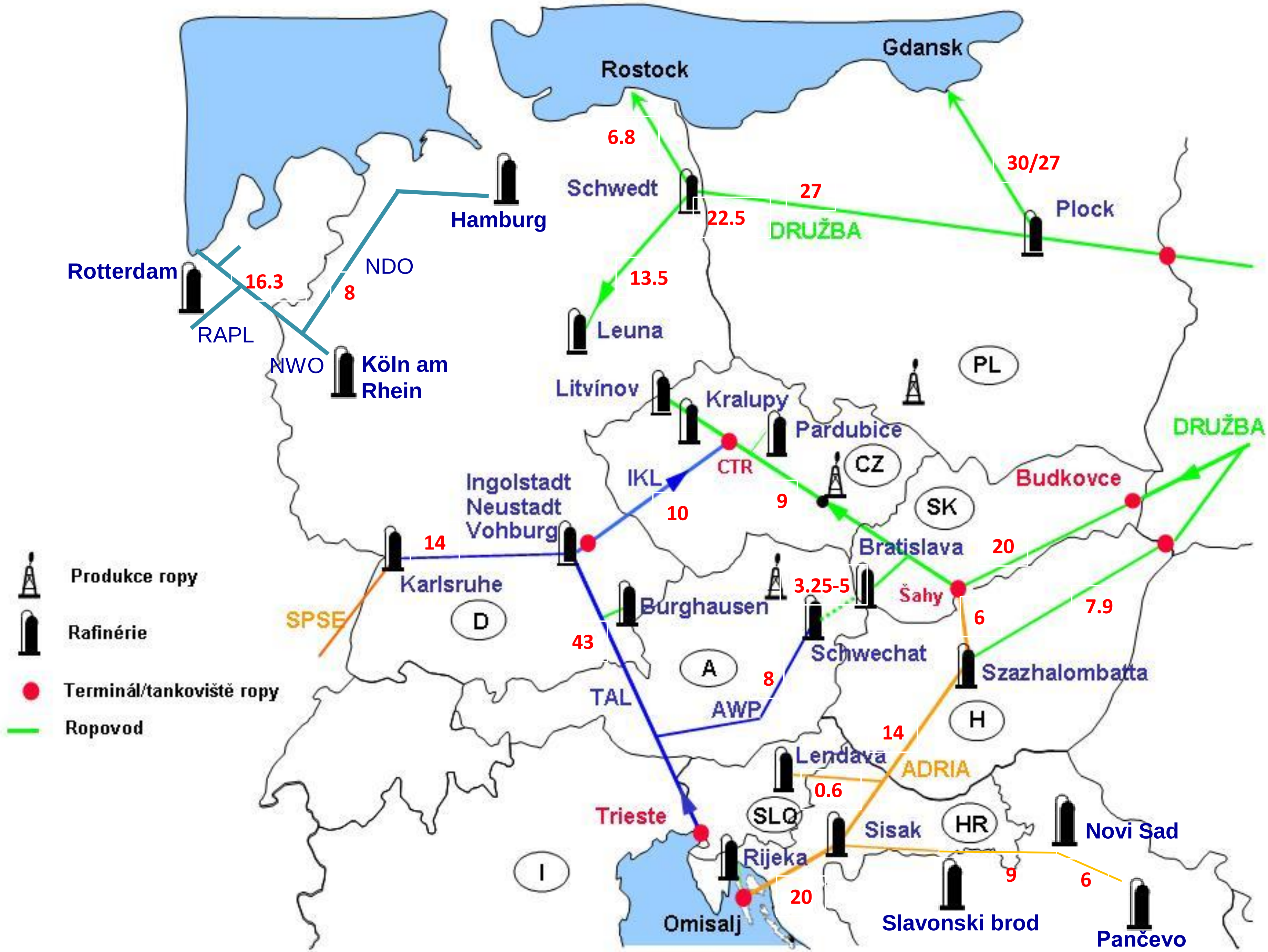
MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY

OP Vzdělávání pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ



Rostock
Gdansk
Schwedt
Plock
Hamburg
Rotterdam
NDO
RAPL
NWO
Köln am Rhein
Leuna
Litvínov
Kralupy
Pardubice
CTR
IKL
DRUŽBA
PL
CZ
SK
Budkovce
Bratislava
Šahy
Ingolstadt Neustadt Vohburg
Karlsruhe
SPSE
D
Burghausen
Schwechat
A
TAL
AWP
Szazhalombatta
H
Lendava
ADRIA
SLO
Trieste
Rijeka
Omisalj
Sisak
HR
Novi Sad
Slavonski brod
Pančevo
I
6.8
30/27
27
22.5
13.5
16.3
8
10
9
14
20
3.25-5
6
7.9
43
8
14
0.6
20
9
6
Produkce ropy
Rafinérie
Terminál/tankoviště ropy
Ropovod

Crude Oil in Central Europe

- Ingolstadt-Kralupy-Litvínov (IKL)
- Adria
- Bratislava-Schwechat-Pipelie (BSP) and Adria–Wien Pipeline (AWP)
- Odessa-Brody-Adamowo-Plock-Gdansk
- Spergau-Litvínov

Druzhba pipeline

- Oil was historically imported from various countries; but since 1955 exclusively from the USSR.
- It was transported exclusively by rail.
- In 1962, then first deliveries of oil came through the southern branch of the longest pipeline in the world – Druzhba (3,840 km). Druzhba pipeline was the first oil pipeline on the Czech territory (357 km).
- In 1962 it was constructed to Bratislava and in 1965 extended to Záluží (today Litvínov).
- Until 1989, Czechoslovakia imported annually up to 18 million tons of oil from the former USSR exclusively through this pipeline.

Druzhba pipeline

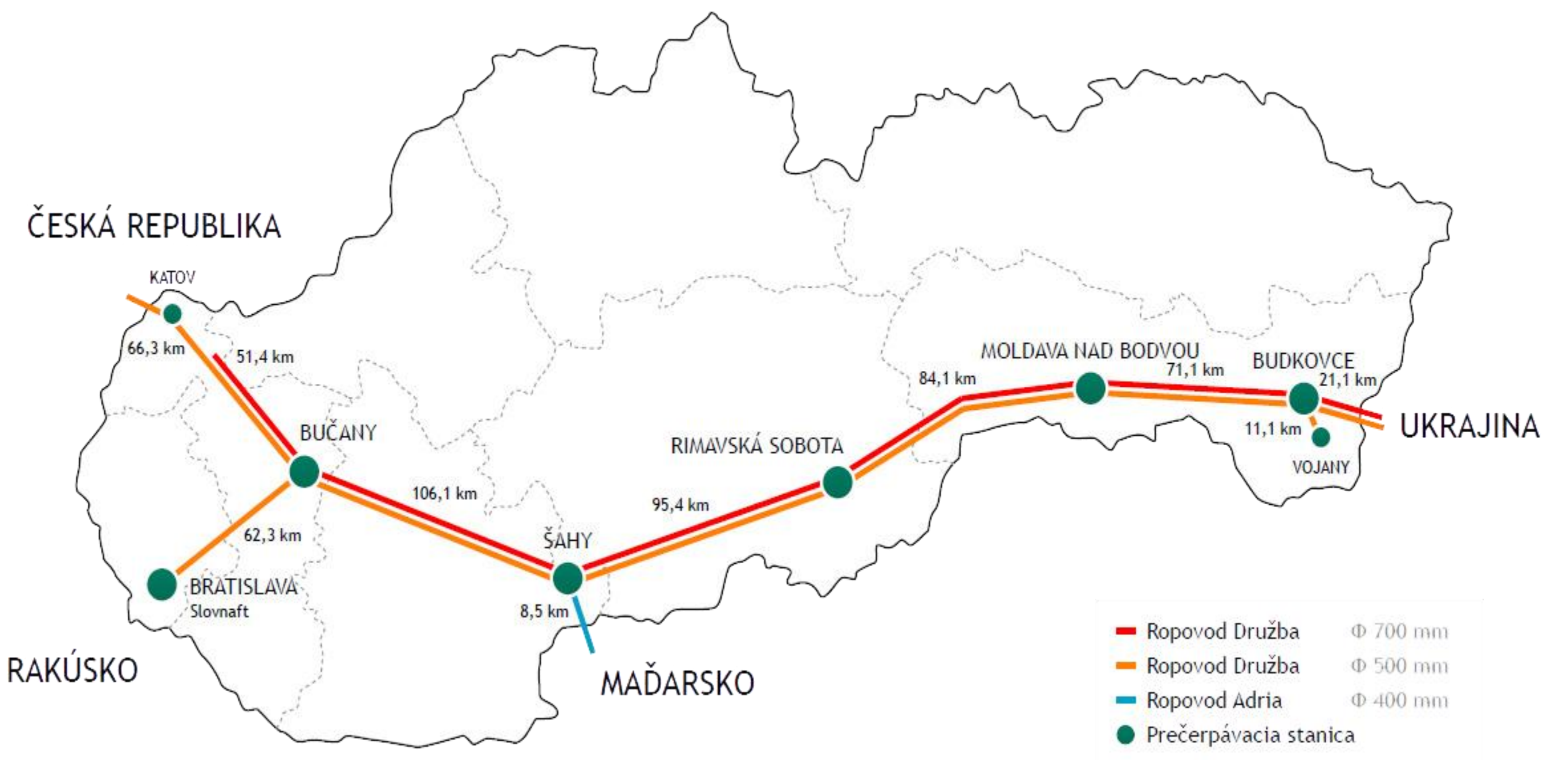
- The Russian Federation diversifies its customers, but it turns out that it cannot supply all transport routes
- It seems Russians prefer certain routes at the expense of other routes
- Historical problems in supplies to European customers are overwhelmingly not related to Russian one-sided politically motivated decision, but rather with transit countries
- Efforts to transfer oil exports to tanker traffic, as well as the transition from oil exports to export petroleum products are actually real aspects of Russian energy strategy

Baltic Pipeline System (zdroj: Oil & Gas Journal)

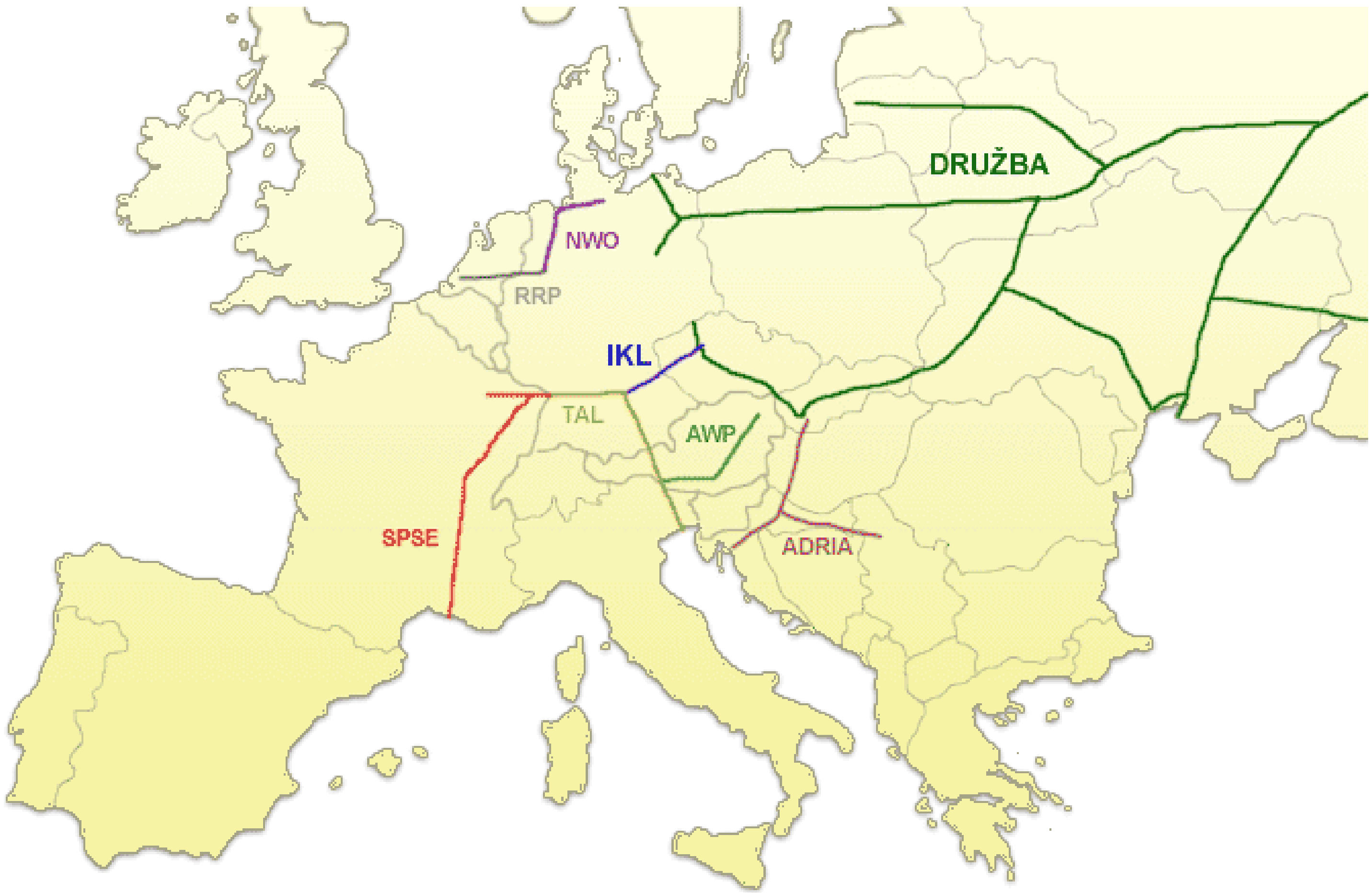
Interruption in Supplies of Oil in the CR	
Year	**Reason for Interruption**
1990	Internal issues in the Soviet Union
1991	Disagreements between Russia and Ukraine over oil transport fees. Interruption covered by supplies via the IKL Pipeline.
1994	Supplies halted due to license issuance difficulties.
1995	Disagreements between Russia and Ukraine over oil transport fees.
1996	Disagreements between Russia and Ukraine over oil transport fees.
2007	Disagreements between Belarus and Russia over oil transport fees. Russia introduced an export duty on oil bound for Belarus, which introduced retaliatory measures leading to a further outage.
2008	Russia reduced oil supplies for the CR to approximately 50% of the negotiated volume. Probable relation to the signature of the CR-USA contract to locate a radar base in Brdy. The interruption was covered by supplies brought by the IKL Pipeline. According to Kostiugova, the reason for the reduction was the non-existence of a long-term contract between Czech consumers and Russian suppliers, along with Ukraine's intention to supply oil in the direction of Odesa-Brody.
2009	The electricity outage in western Ukraine halted supplies of Russian oil in Europe. Threatened outage due to disagreements between Russia and Ukraine over oil transport fees.
2012	Reduction in planned supplies by approximately 80% in the second quarter of the year. Reason: completion of the BTS-2 system and surplus non-export capacity. Russian companies, especially Transneft, gave preference to supplies for destinations more advantageous in terms of price.

Czech pipeline network

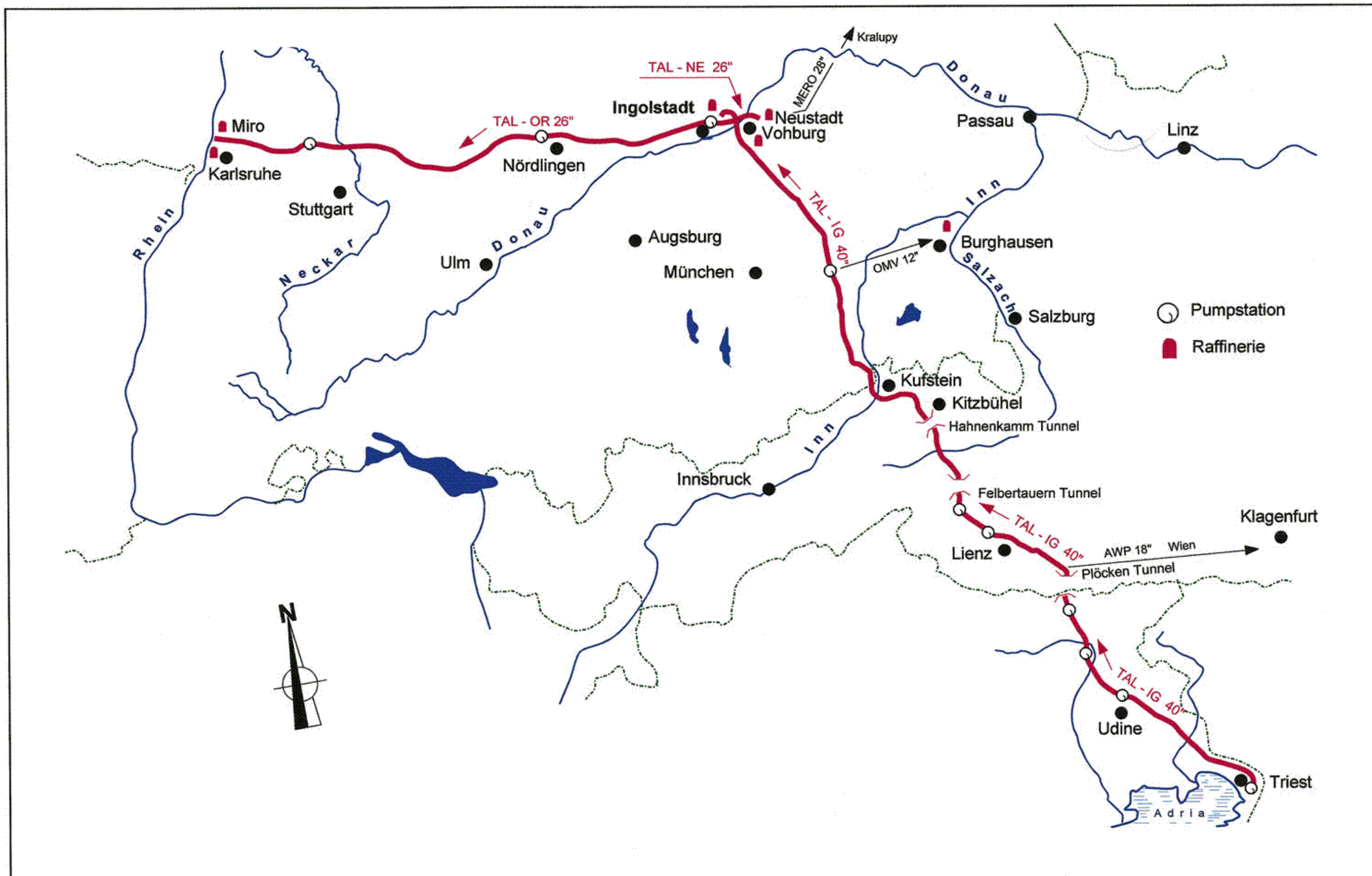
Slovak pipeline network



European pipeline network



IKL


Kralupy
TAL - NE 26"
MERO 28"
Ingolstadt
Neustadt
Vohburg
Donau
Passau
Linz
Miro
Karlsruhe
TAL - OR 26"
Nördlingen
Stuttgart
Rhein
Neckar
Ulm
Donau
Augsburg
München
TAL - IG 40"
OMV 12"
Inn
Burghausen
Salzach
Salzburg
Pumpstation
Raffinerie
Kufstein
Kitzbühel
Hahnenkamm Tunnel
Inn
Innsbruck
Felbertauern Tunnel
TAL - IG 40"
Klagenfurt
Lienz
AWP 18"
Wien
Plöcken Tunnel
TAL - IG 40"
Udine
Triest
Adria
N

IKL

- Capacity 10 MTA
- Continuation of TAL with the capacity of 43 MTA (upgradeable to 50) and then of TAL-NE with the capacity of 14 MTA
- Key alternative route for the Czech Republic
- Problem with the capacity at TAL, in 2013 transported 41.3 MTA, ie. 96% of capacity
- Nominations availability 18 months in advance
- Shareholders´ needs preference - MERO thus sought to purchase 2% of shares

IKL

- Success on September 25, 2012 - Contract for the purchase of a 5% stake from Shell Deutschland Oil GmbH

- TAL is currently owned by 10 shareholders:
  - OMV AG (25 %),
  - Royal Dutch Shell plc (19 %),
  - Ruhr Oel GmbH (11 %),
  - C-Blue Limited (dcera skupiny Gunvor Group Ltd.; 10 %),
  - Eni S.p.A. (10 %),
  - BP p.l.c. (9 %),
  - Exxon Mobil Corporation (6 %),
  - MERO ČR, a.s. (5 %),
  - JET Tankstellen Deutschland GmbH (daughter of Phillips 66; 3 %),
  - Total S.A. (2 %).

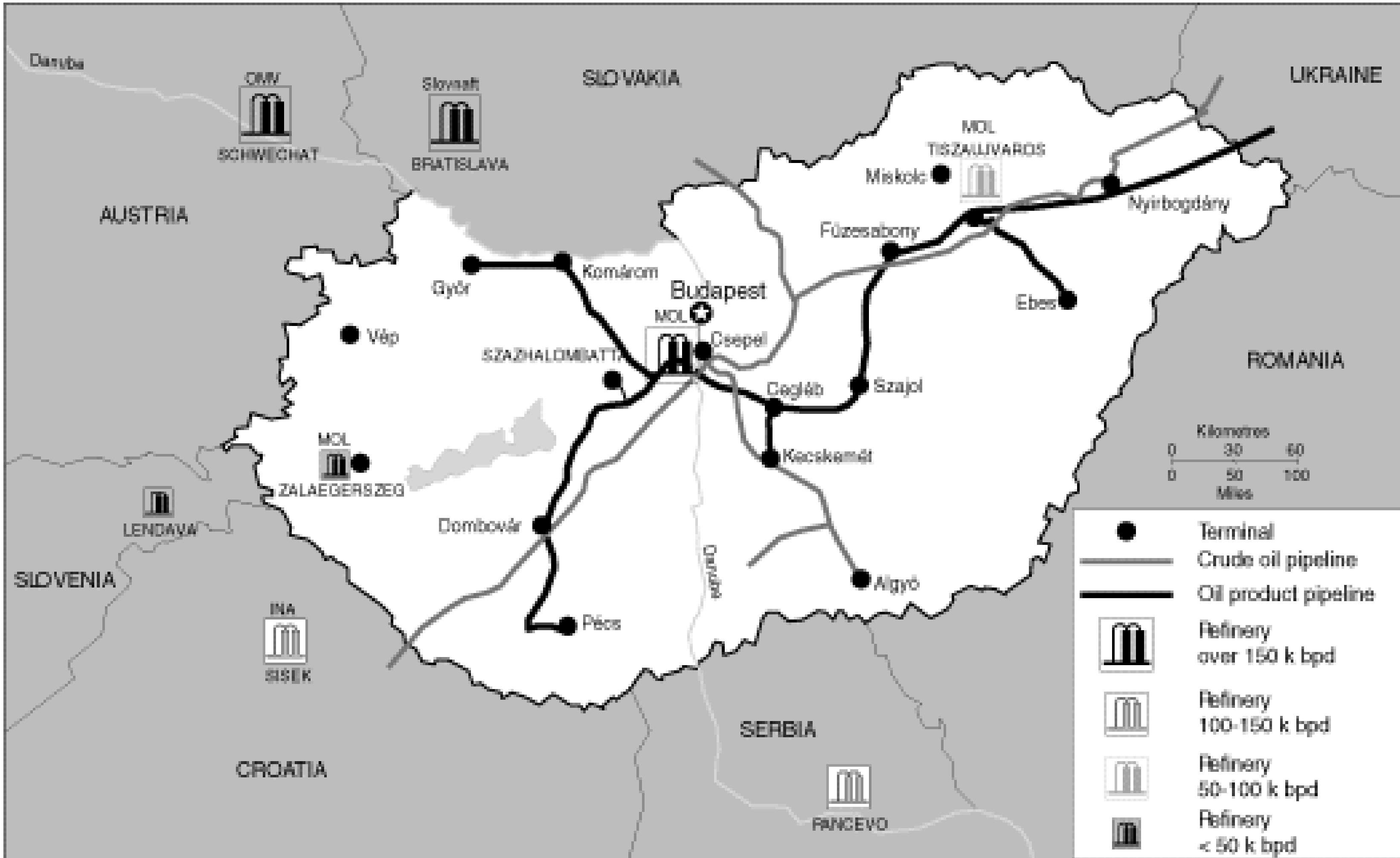
IKL

- Before being a shareholder in TAL, MERO was in a position of a third party; shareholders´ requirements are prefered in expense of third parties
- Currently, MERO has officially preferential right to free capacity TAL in volume according to ownership. Five percent of capacity TAL is 2.15 million tons of oil annually.
- Ownership entry among the shareholders has another positive dimension. Everyone pays the same pipeline transit fare, but the shareholders of the pipeline at the end of the reporting period divides profit from transportation. This means their transport tariff is modified by the commercial profit from the operation of the pipeline.
- Prior to the purchase of IKL could replace (at standard average supply) 30% of the volume of deliveries via the Druzhba pipeline
- After the purchase it is up to 80%

Adria

SLOVAKIA
VIENNA
BRATISLAVA
Fuzesabony
Nyirbogdany
BUDAPEST
AUSTRIA
Csepel
HUNGARY
Cegled
Zalaegerszeg
Petrosub
Lendava
Dombovar
LJUBLJANA
SLOVENIA
ROMA
Virje
Gola
ZAGREB
Sisak
Slavonski Brod
Rijeka
Novi Sad
Pančevo
Bosanski Brod
CROATIA
BEOGRAD
BIH
SARAJEVO

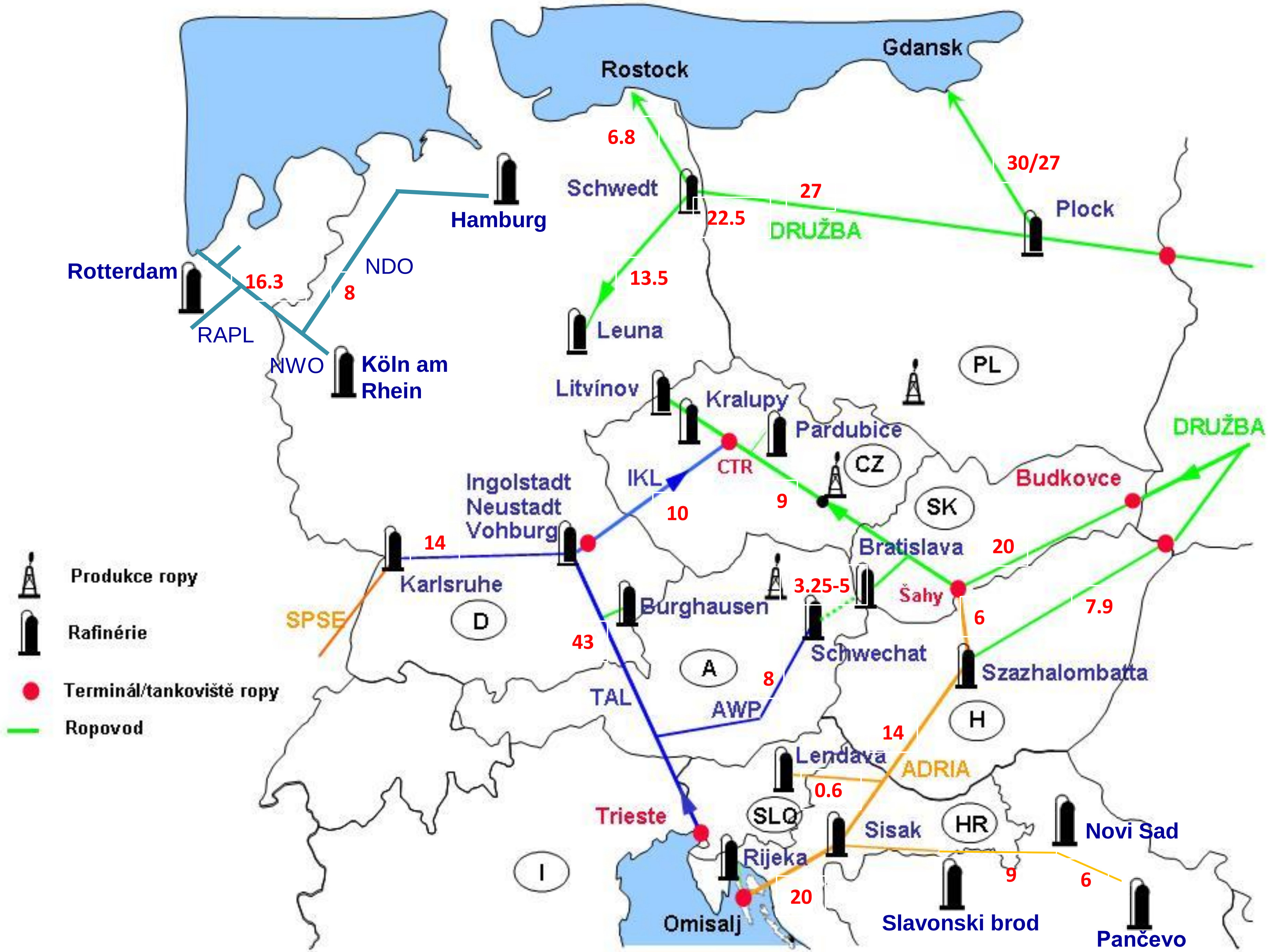
Adria



Danube
OMV
SCHWECHAT
Slovnaft
BRATISLAVA
SLOVAKIA
UKRAINE
MOL
TISZAUJVAROS
Miskolc
AUSTRIA
Füzesabony
Nyirbogdány
Győr
Komárom
Budapest
MOL
Ebes
Vép
SZAZHALOMBATTA
Csepel
ROMANIA
Cegléd
Szajol
MOL
ZALAEGERSZEG
Kecskemét
Kilometres
0 30 60
0 50 100
Miles
LENDAVA
Dombovár
Terminal
Crude oil pipeline
Oil product pipeline
SLOVENIA
Algyő
INA
SISEK
Pécs
Refinery over 150 k bpd
Refinery 100-150 k bpd
Refinery 50-100 k bpd
Refinery < 50 k bpd
SERBIA
CROATIA
PANCEVO

Adria

Capacity of individual sections in relation to the ADRIA pipeline (MTA)				
Omišalj – Gola	Gola - Százhalombatta	Százhalombatta – Šahy	Šahy - Bratislava	Katov - Litvínov
20	6,9 – 14	3,8 (4,5) – 7,6	20	9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Schwedt
27
Plock
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DRUŽBA
Hamburg
NDO
Rotterdam
16.3
8
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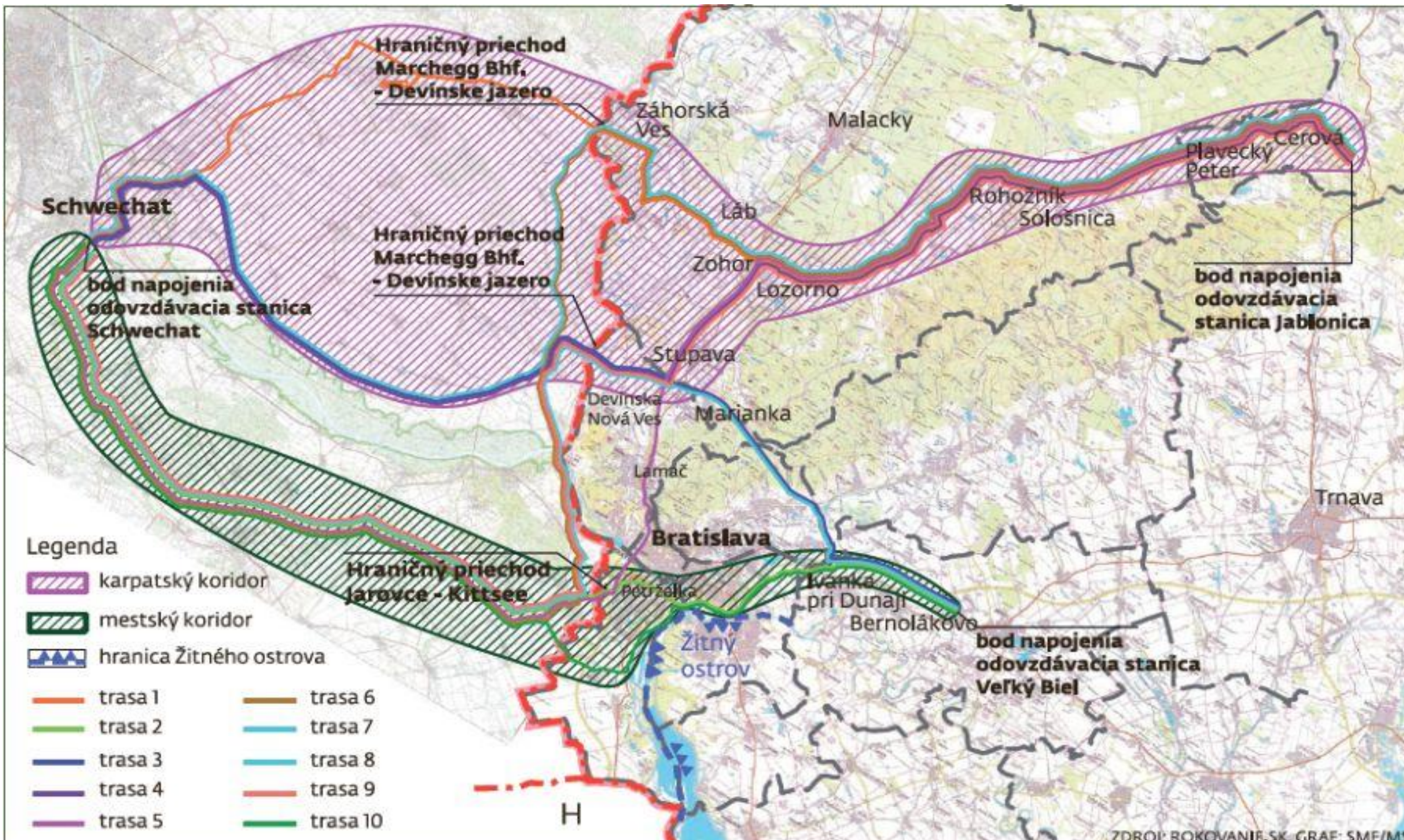
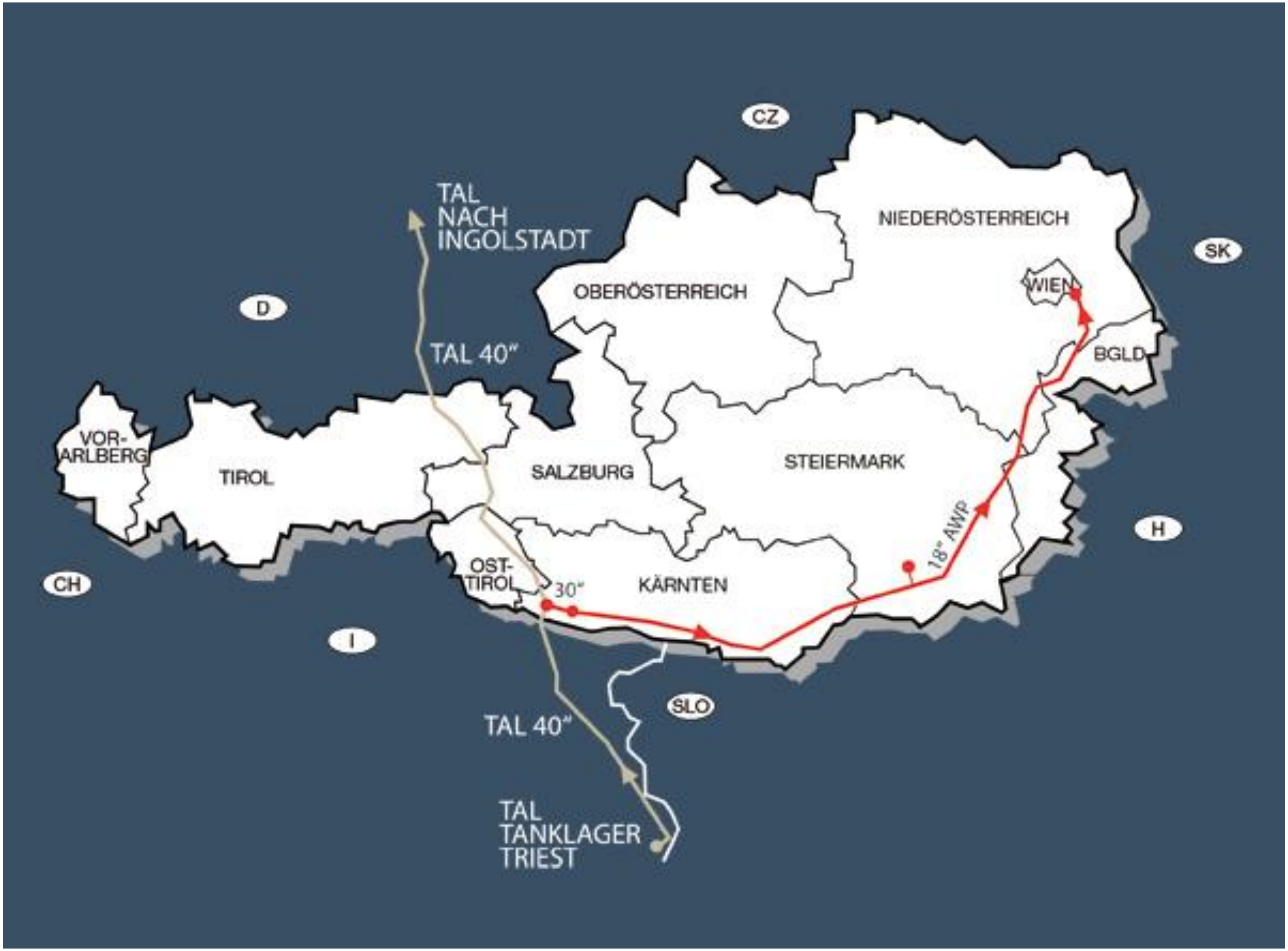
RAPL
Leuna
NWO
Köln am Rhein
PL
Litvínov
Kralupy
Pardubice
DRUŽBA
CTR
CZ
IKL
Budkovce
Ingolstadt Neustadt Vohburg
10
9
SK
Bratislava
20
14
Karlsruhe
3.25-5
Šahy
Burghausen
7.9
SPSE
D
43
6
Schwechat
Szazhalombatta
A
8
TAL
AWP
H
14
Lendava
ADRIA
0.6
Trieste
SLO
Sisak
HR
Novi Sad
Rijeka
9
6
I
20
Omisalj
Slavonski brod
Pančevo
Produkce ropy
Rafinérie
Terminál/tankoviště ropy
Ropovod

BSP and AWP

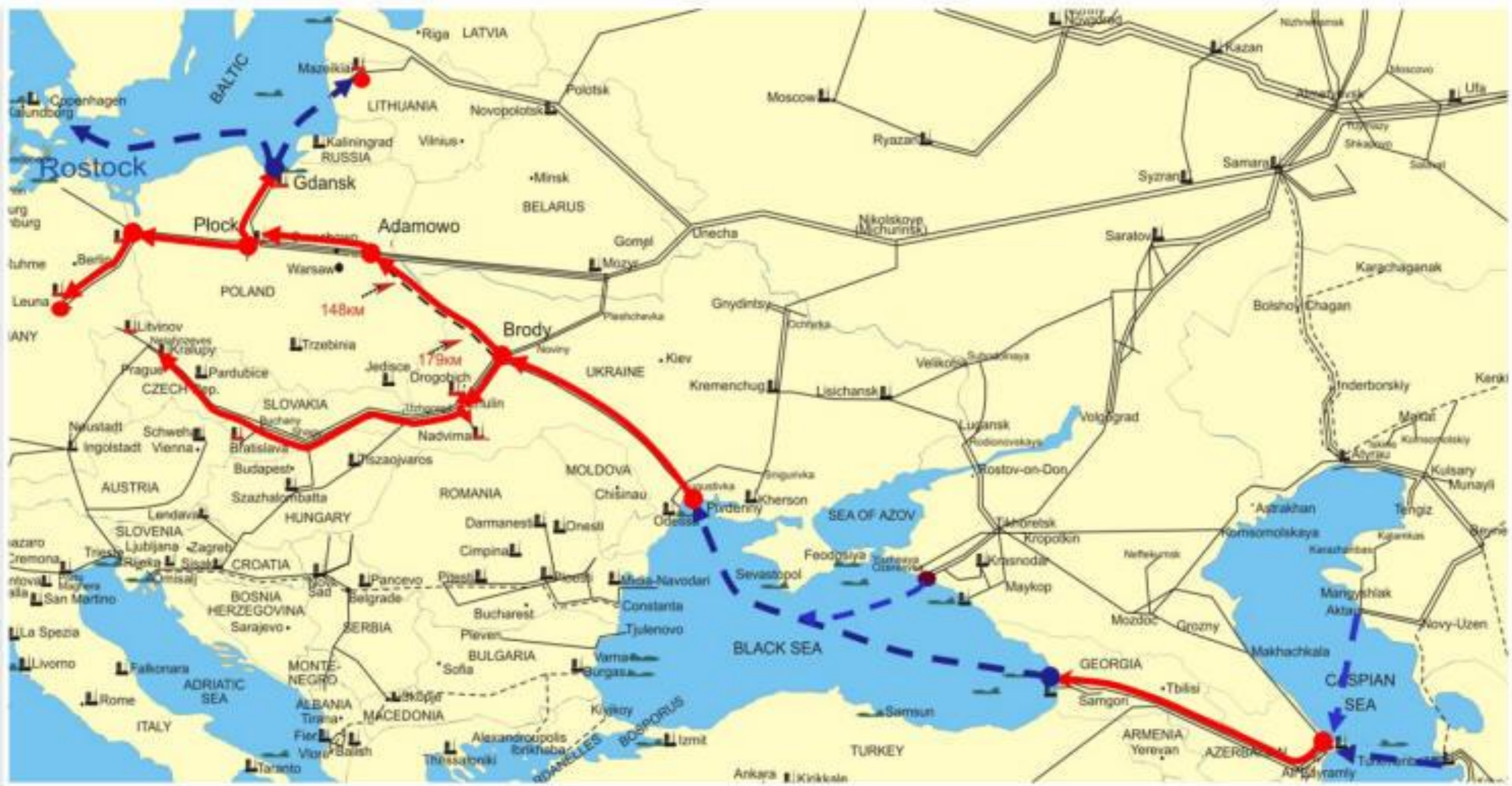


Hraničný priechod
Marchegg Bhf.
- Devínske jazero
Záhorská Ves
Malacky
Schwechat
Láb
Plavecký Peter
Cerová
Rohožník
Sološnica
Hraničný priechod
Marchegg Bhf.
- Devínske jazero
Zohor
Lozorno
bod napojenia
odovzdávacia stanica
Schwechat
bod napojenia
odovzdávacia
stanica Jablonica
Stupava
Devínska Nová Ves
Marianka
Lamač
Trnava
Legenda
karpatský koridor
mestský koridor
hranica Žitného ostrova
Bratislava
Hraničný priechod
Jarovce - Kittsee
Petržalka
Ivanka pri Dunaji
Bernolákovo
Žitný ostrov
bod napojenia
odovzdávacia stanica
Veľký Biel
trasa 1
trasa 2
trasa 3
trasa 4
trasa 5
trasa 6
trasa 7
trasa 8
trasa 9
trasa 10
H
ZDROJ: ROKOVANIE.SK, GRAF: SME/MS

BSP and AWP


CZ
TAL
NACH
INGOLSTADT
NIEDERÖSTERREICH
SK
WIEN
OBERÖSTERREICH
D
TAL 40"
BGLD
VOR-
ARLBERG
TIROL
SALZBURG
STEIERMARK
18" AWP
H
OST-
TIROL
30"
KÄRNTEN
CH
I
SLO
TAL 40"
TAL
TANKLAGER
TRIEST

Odessa-Brody-Adamowo- Płock-Gdansk



Spergau-Litvinov

Spergau-Litvinov

Capacity of individual sections in relation to the Litvínov-Spergau pipeline				
Gdańsk – Płock	Płock – Lunow	Lunow – Schwedt	Schwedt – Spergau	Rostock – Schwedt
30	27	22,5	13,5	6,8

The existing capacity on sections from Gdansk to German refineries is sufficient to supply the Polish and partially German refineries. In the case of building the route Litvinov-Spergau and the emergence of new demand from the Czech Republic and Slovakia the capacity is not sufficient and the piping between Gdansk and Plock should be doubled. This would be compatible with the development project of the Odessa-Brody-Płock.