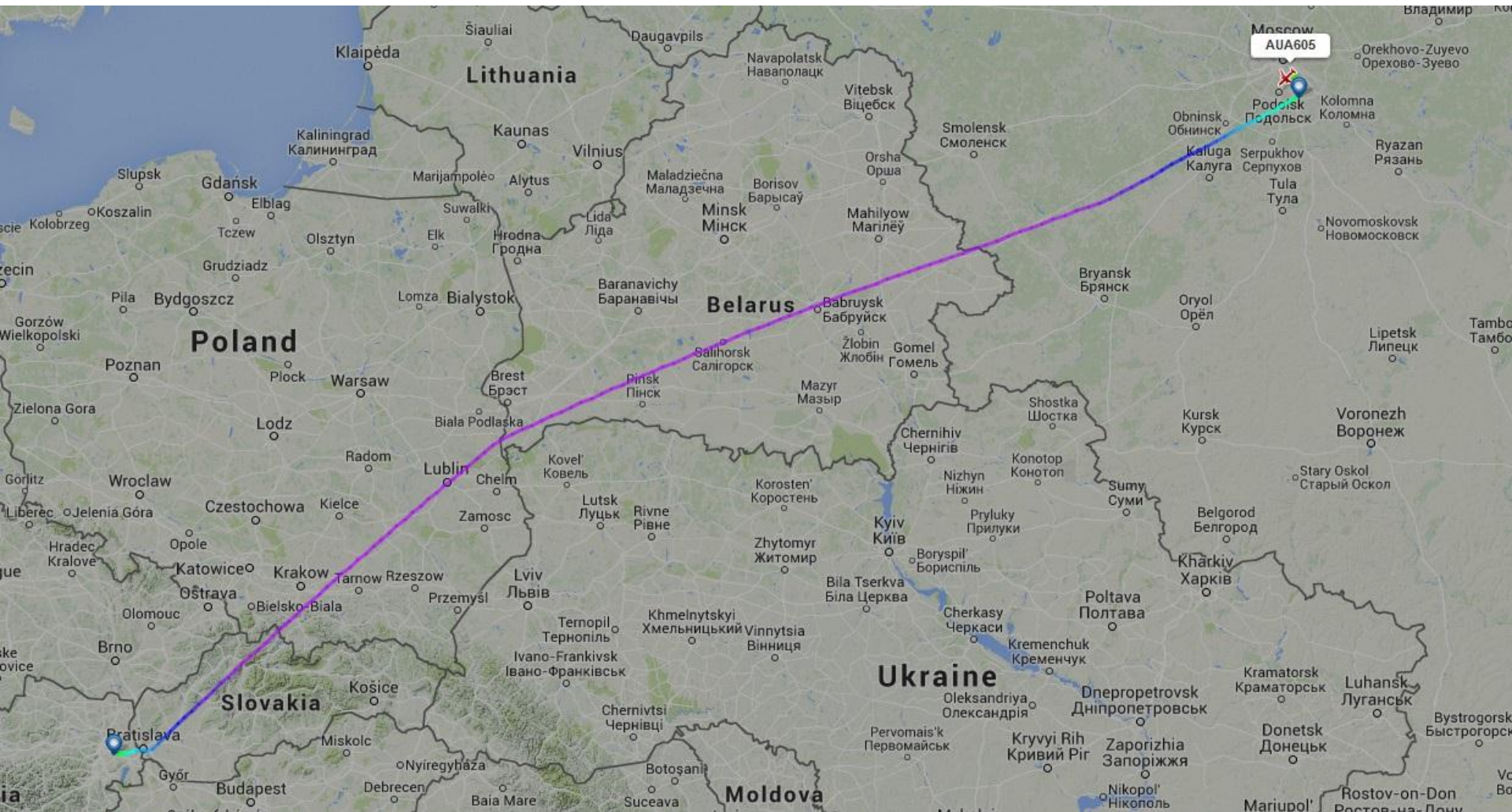
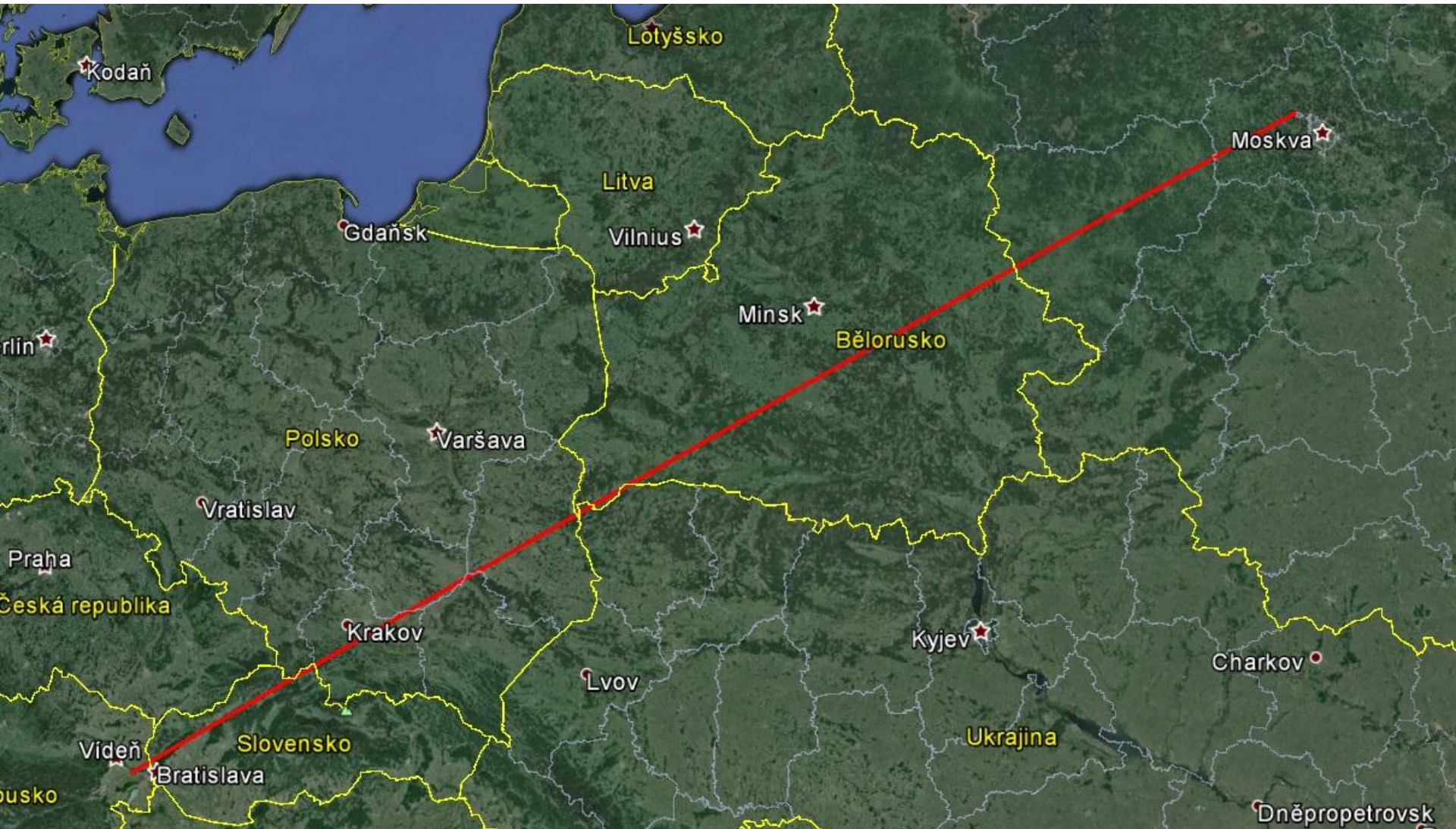


# Usual Questions Unusual Answers

# Globe versus Map – Map View



# Globe versus Map – Globe View



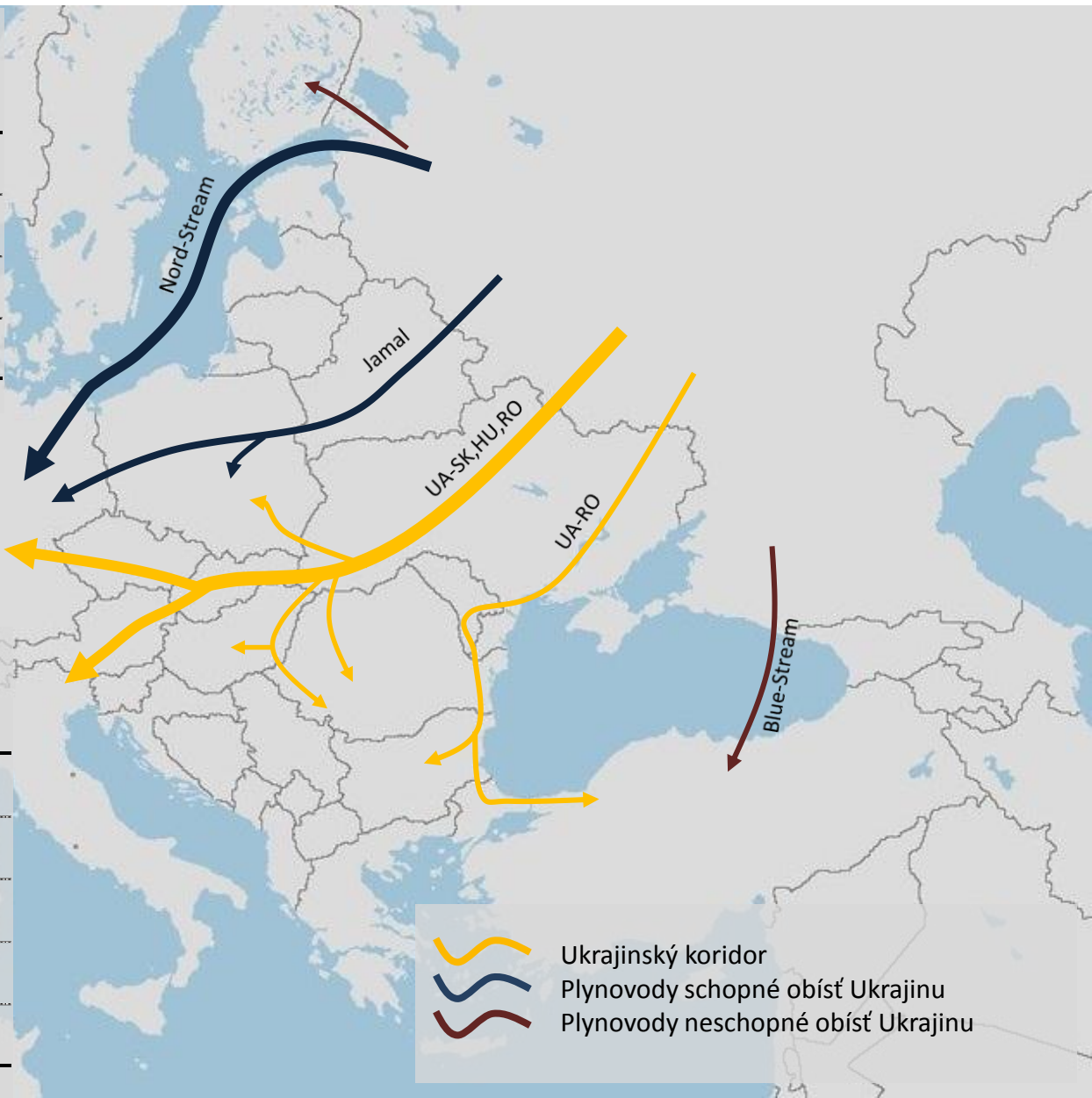
# Globe versus Map - Conclusion

- ✓ Globe projections much more precise/accurate than maps
  
- ✓ When considering East-West routes (airlines or gas pipelines):
  - ✓ Northern routes appear on maps longer than they are in reality
  - ✓ Southern routes appear on maps shorter than they are in reality
  
- ✓ Airlines (unlike some gas pipelines) have to follow strictly economic logic because of fierce competition in the industry

# Highways for Russian Gas to Europe

Pipeline (bln. m <sup>3</sup> /year)	Capacity	Transmission in 2013	UA (and SK, RO, MO) bypass scenario
Ukraine	>140	89.1	0
NS + Yamal	88	53.8	88
Others (Finland, Blue-Stream)	24.2	18.6	18.6
<b>Undelivered volume</b>	-	<b>0</b>	<b>54.9</b>
<b>Russian export</b>	-	<b>161.5</b>	<b>161.5</b>

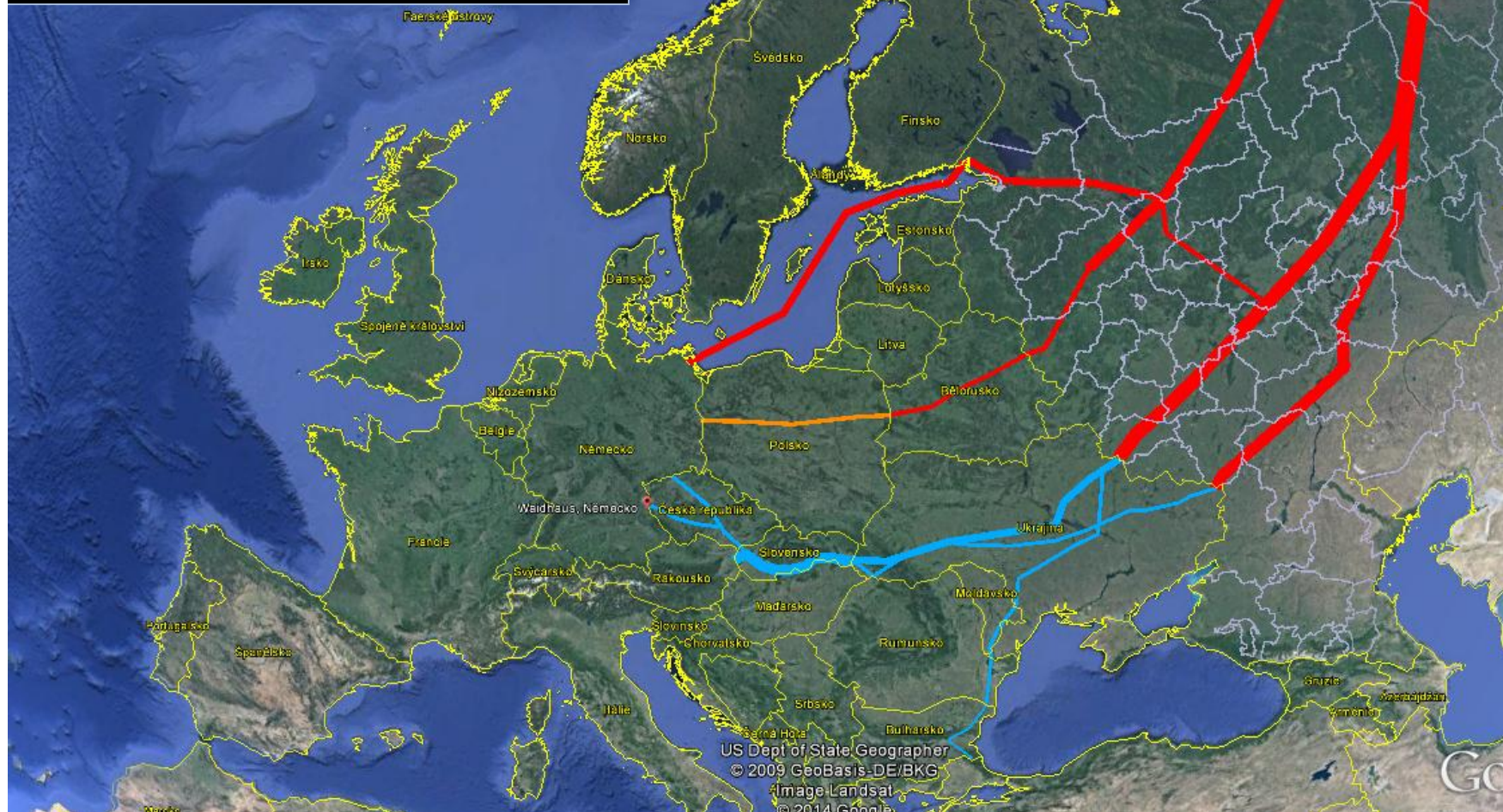
Pipeline (bln. m <sup>3</sup> /year)	Capacity	Transmission in 2013	UA (and SK, RO, MO) bypass scenario
Ukraine	>140	89.1	0
NS + Yamal	88	53.8	88
Others (Finland, Blue-Stream)	24.2	18.6	18.6
<b>South-Stream</b>	<b>63</b>	<b>0</b>	<b>54.9</b>
<b>Undelivered volume</b>	-	<b>0</b>	<b>0</b>
<b>Russian export</b>	-	<b>161.5</b>	<b>161.5</b>



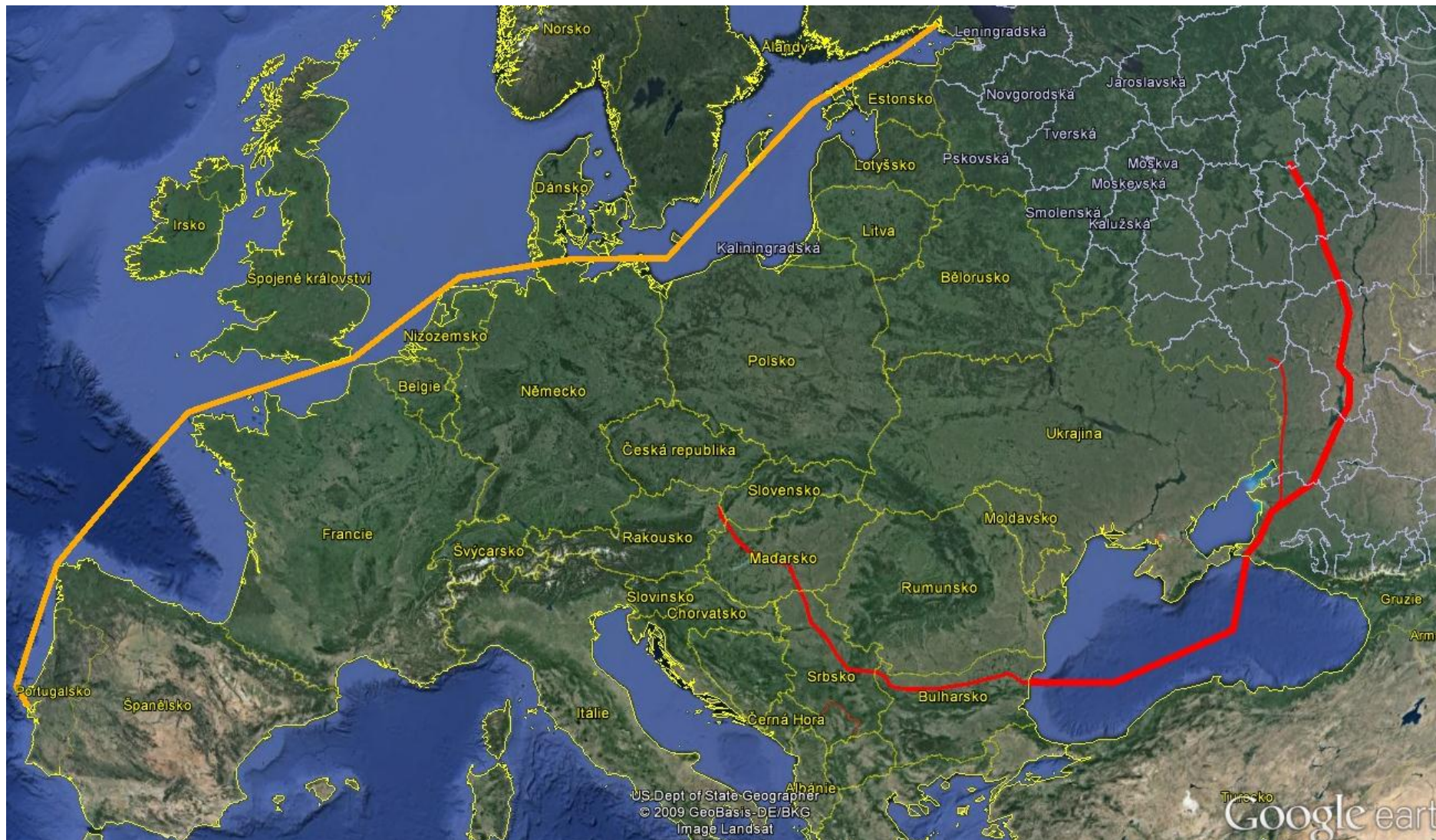
- Ukrajinský koridor
- Plynovody schopné obísť Ukrajinu
- Plynovody neschopné obísť Ukrajinu

# Highways for Russian Gas to Europe – Field to Hub

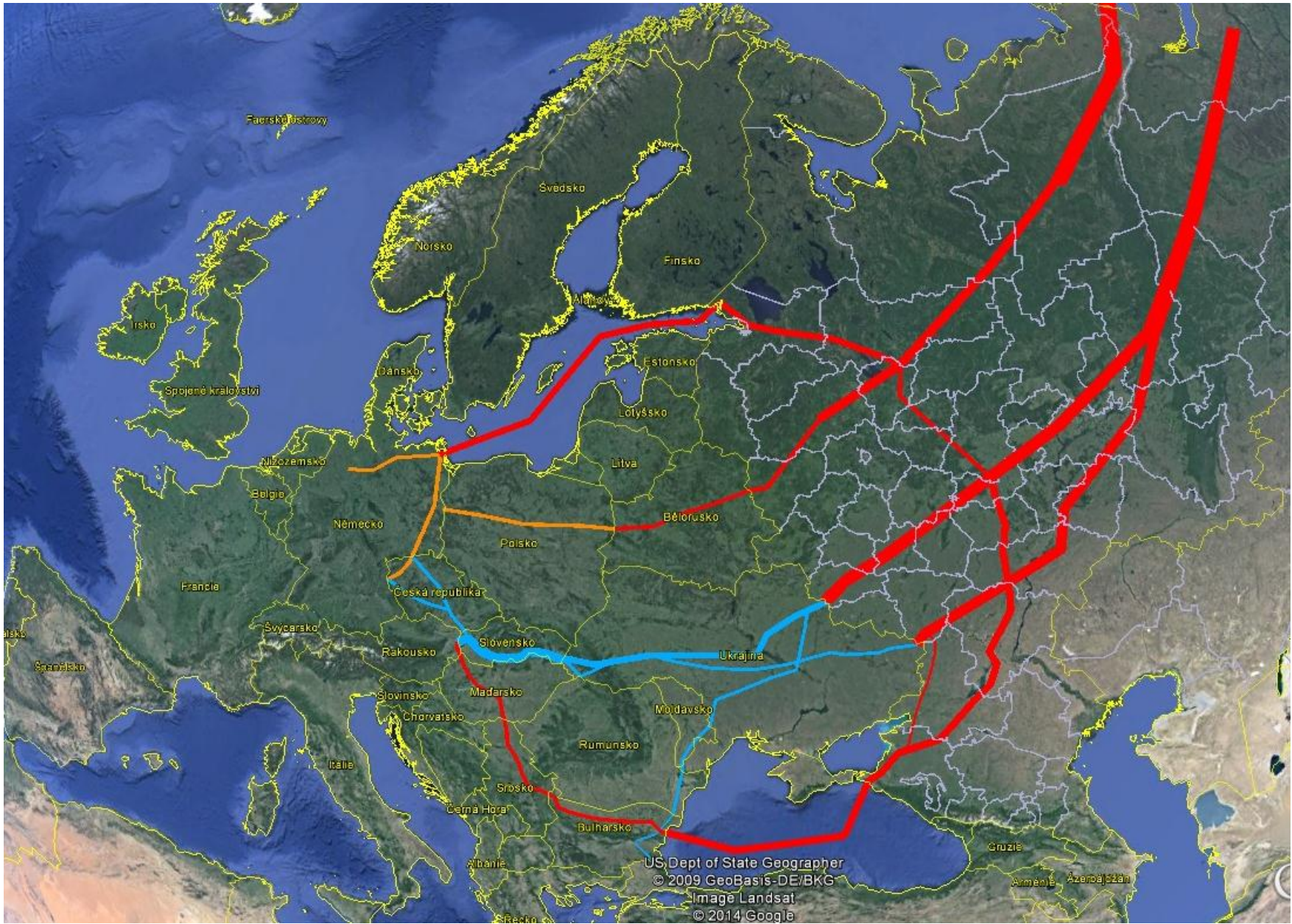
Pipeline	Distance (field to hub)	Under Gazprom control
Nord-Stream route	4,240 km	100%
Yamal route	4,060 km	83%
Ukrainian route	4,700 km	66%
Potential South-Stream route	6,700 km	100%



# South-Stream Including New Built in Russia (3650km)



# Diversification of Supply?





# South-Stream and Its Consequences for Region of CEE and SEE

## PROS:

- + Diversification of transmission routes

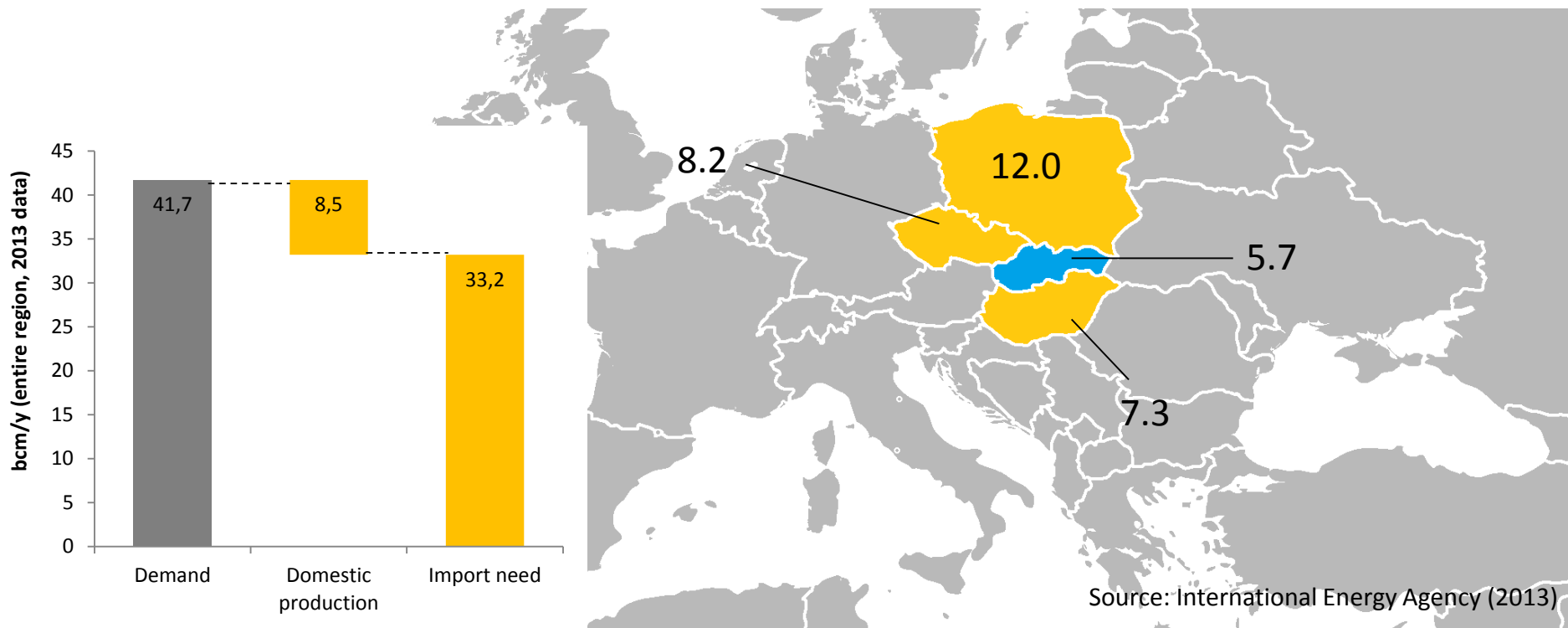
## CONS:

- Non-compliance with 3rd Energy Package
- No diversification of natural gas sources
- No additional liquidity (no competition, no price convergence, selective pricing)
- Cementing of dominant position of existing supplier along South-Stream route
- Significant underutilization of existing infrastructure assets in North-Eastern direction of South-Stream (Ukraine, Slovakia, Romania, Moldova)
- Significant risk of congesting of existing infrastructure assets in South-Western direction of South-Stream (congesting Bulgaria transit pipes further to South, congesting TAG and WAG in Austria and already unofficially communicated reduction of entry capacity from Slovakia to Baumgarten)
- Risk of reduced ability to supply Ukraine via reverse flow

# Gas Balance V4 (CZ, SK, PL, HU)

Country [bcm/y]	Demand	Domestic production	Import need
Hungary	9.2	1.9	7.3
Slovakia	5.8	0.1	5.7
Czech republic	8.5	0.3	8.2
Poland	18.2	6.2	12.0
Total	41.7	8.5	33.2

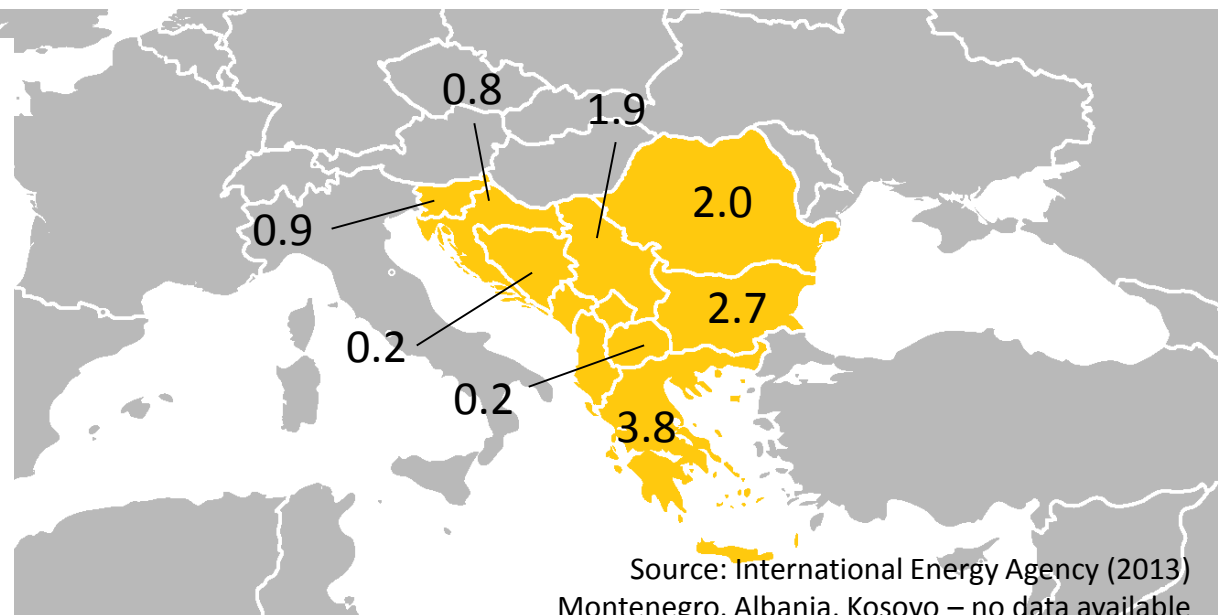
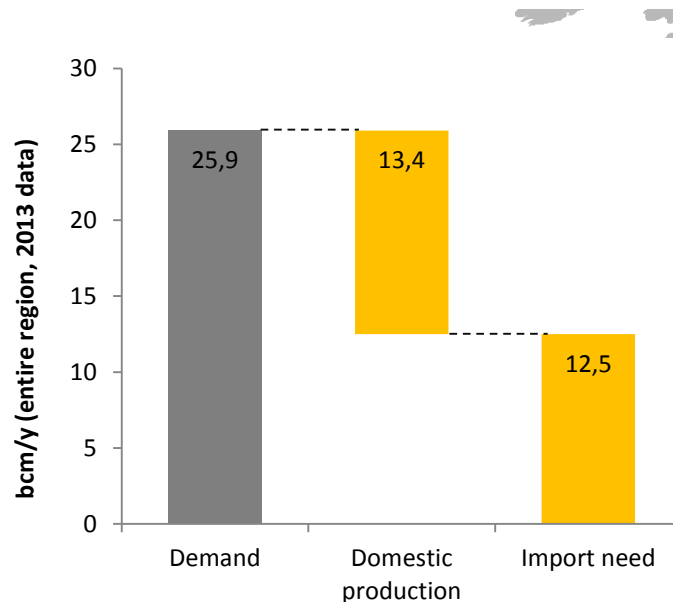
Import need (in bcm/y)



# Gas Balance Balkan and Romania

Country [bcm/y]	Demand	Domestic production	Import need
Romania	12.6	10.6	2.0
Bulgaria	3.0	0.3	2.7
Greece	3.8	0.0	3.8
Serbia	2.5	0.6	1.9
Croatia	2.7	1.9	0.8
Slovenia	0.9	0.0	0.9
FYROM	0.2	0.0	0.2
Bosna and Herzegovina	0.2	0.0	0.2
Montenegro	n.a.	n.a.	n.a.
Albania	n.a.	n.a.	n.a.
Kosovo	n.a.	n.a.	n.a.
<b>Total</b>	<b>25.9</b>	<b>13.4</b>	<b>12.5</b>

Import need (in bcm/y)



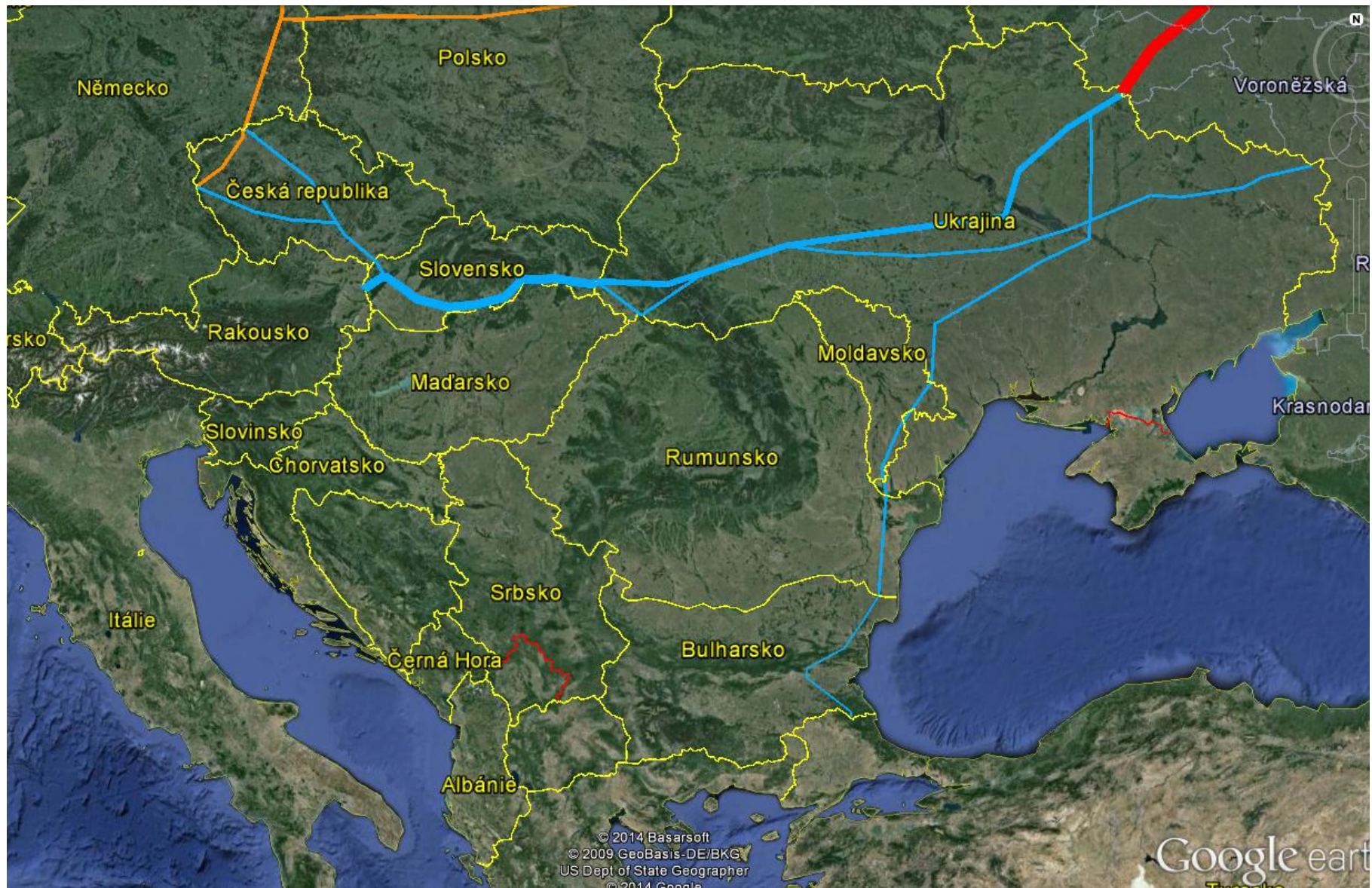
# Common Goals for CE and SE Europe

- ✓ Security of supply
- ✓ Diversification of gas routes
- ✓ Diversification of physical sources of gas
- ✓ Flexibility during winter
- ✓ Maximal utilisation of existing infrastructure assets
- ✓ Keeping flexibility for future scenarios

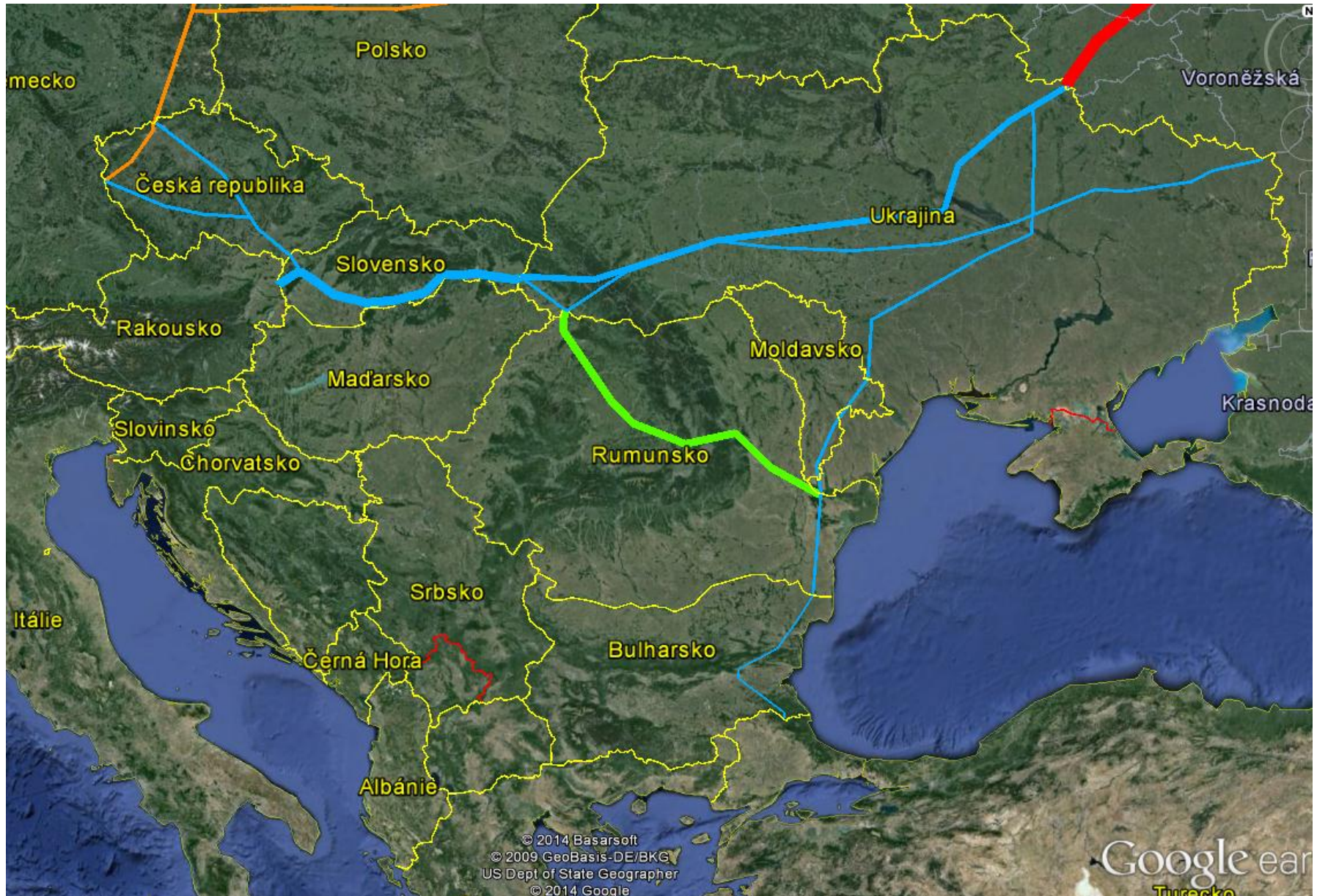
# How to Solve Our Problems with Our Assets (+1 new short pipe)

- ✓ Physical alternative for providing 100% of all Balkan countries' consumption
- ✓ Providing security of supply for 100% of all Balkan countries' consumption
- ✓ Additional utilization for CZ, SK, PL, UA, RO, BG transit and storage assets
- ✓ Providing Western shippers with possibility to supply Balkan countries and even Turkey from NCG/Gaspool/Baumgarten
- ✓ Utilizing Ukrainian system if partially thanks to this solution South-Stream is not built
- ✓ Providing corridor for exporting Romanian gas from new deposits (offshore, shale) + utilization of Romanian transit pipelines (contracts expiring 2015/2016)
- ✓ Corridor ready for future gas imports to Europe from alternative sources – AGRI, Caspian, Iran, Iraq, Egypt, Israel, Cyprus. Most of them from perspective Turkish natural gas hub/border Turkey/BG.
- ✓ Ready for TANAP expansion.
- ✓ Full compliance with all EU rules

# Close Up View of Major Existing Transit Infrastructure in CEE and SEE



# Unexpected Solution – Eastring/E-string/Ease-string



# Proposed Eastring - Specifications

- ✓ DN 1200 pipeline PN 75/98 bar, no new compressor station needed (phase 1)
- ✓ Capacity: 12,5 bcm/year (phase 1), 20bcm/year + (phase 2)
- ✓ Length:
  - ✓ 570 km new pipeline (only territory of Romania – from Tekovo/Mediesu Aurit to Isaccea). Connecting to existing Romanian transit pipes (UA/RO – RO/BG)
  - ✓ Utilizing 1420mm pipeline Soyuz in reverse mode from Slovakia to UA/RO border (cca 85km)
  - ✓ Utilizing existing compressor station in Velké Kapušany
- ✓ Bidirectional
- ✓ Fully compliant with 3rd Energy package
- ✓ Phase 2 includes cost effective solution of reversing (virtual/physical) of Bulgarian and Romanian transit pipelines in the future, combined with proposed 5bcm ITB project.
- ✓ New route for Europe with 20bcm+ capacity
- ✓ CAPEX: 750mil EUR (1/3 of Capex of South Stream in Serbia only...)



# Adam Smith versus John Nash dilemma

## **Adam Smith (Scottish moral philosopher and economist)**

- ✓ „In competition individual ambition serves the common good“

## **John Forbes Nash (American mathematician)**

- ✓ „Best result for the group will come when everyone from the group is doing what is best for himself and the group at the same time. Awarded Nobel Price in 1994 for so called „Nash equilibrium“<sup>““\*“</sup>
- ✓ Which way will Bulgaria, Serbia and espically Hungary choose? Middle ages or Nobel price solution from 1994?

\* Foundations of John Nash´s theory was laid down by John von Neumann. He was born in Hungary...

Thank you for your  
attention