

The current state and prospects of the Russian energy sector

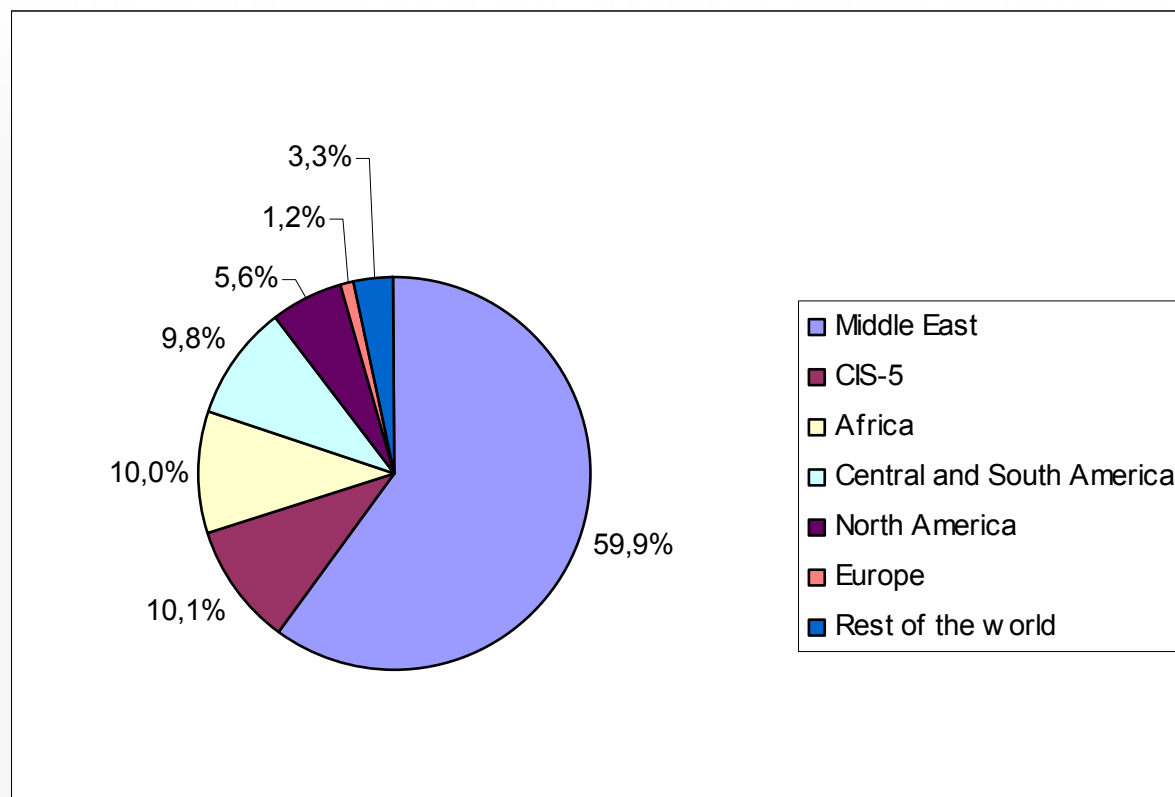
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3 May 2010

The Russian energy sector

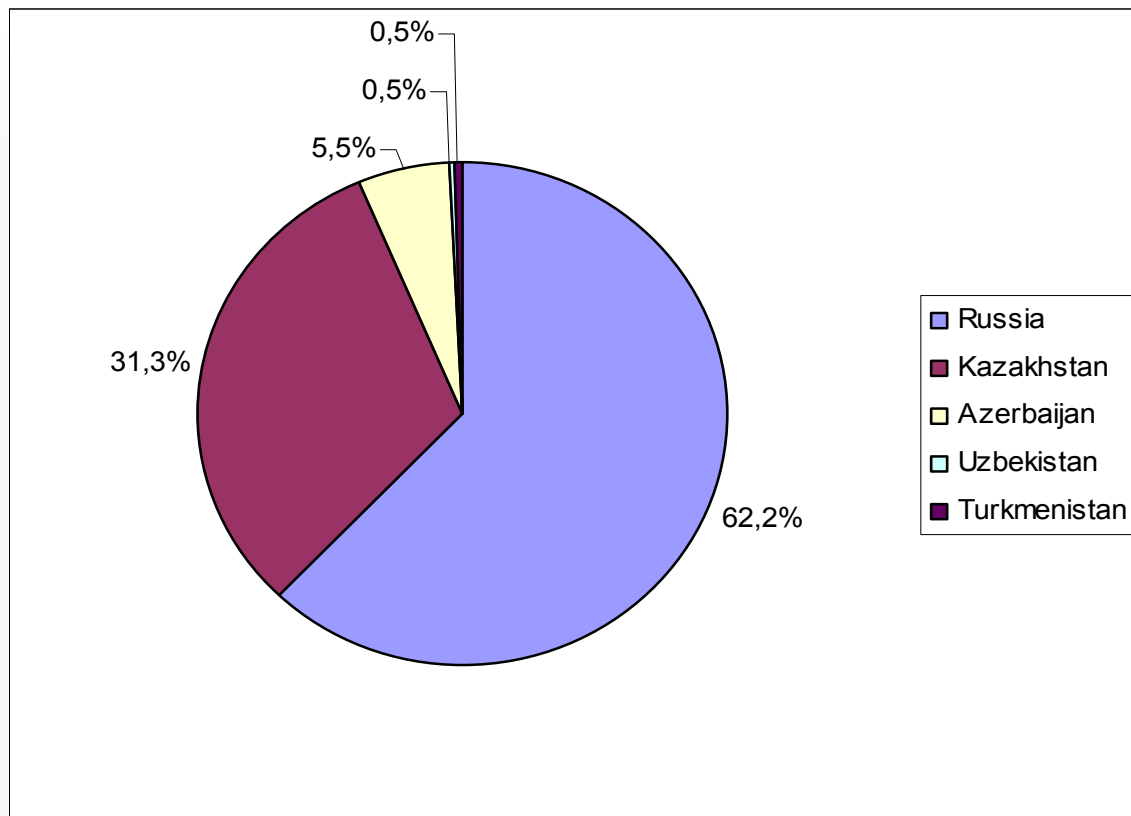
- Reserves potential
- Trends in oil and natural gas production
- Priorities of Russia's „Energy Strategy till 2030“
- Russia-OPEC relations
- Asia as alternative market for Russian energy?

Proven oil reserves by region, end-2008



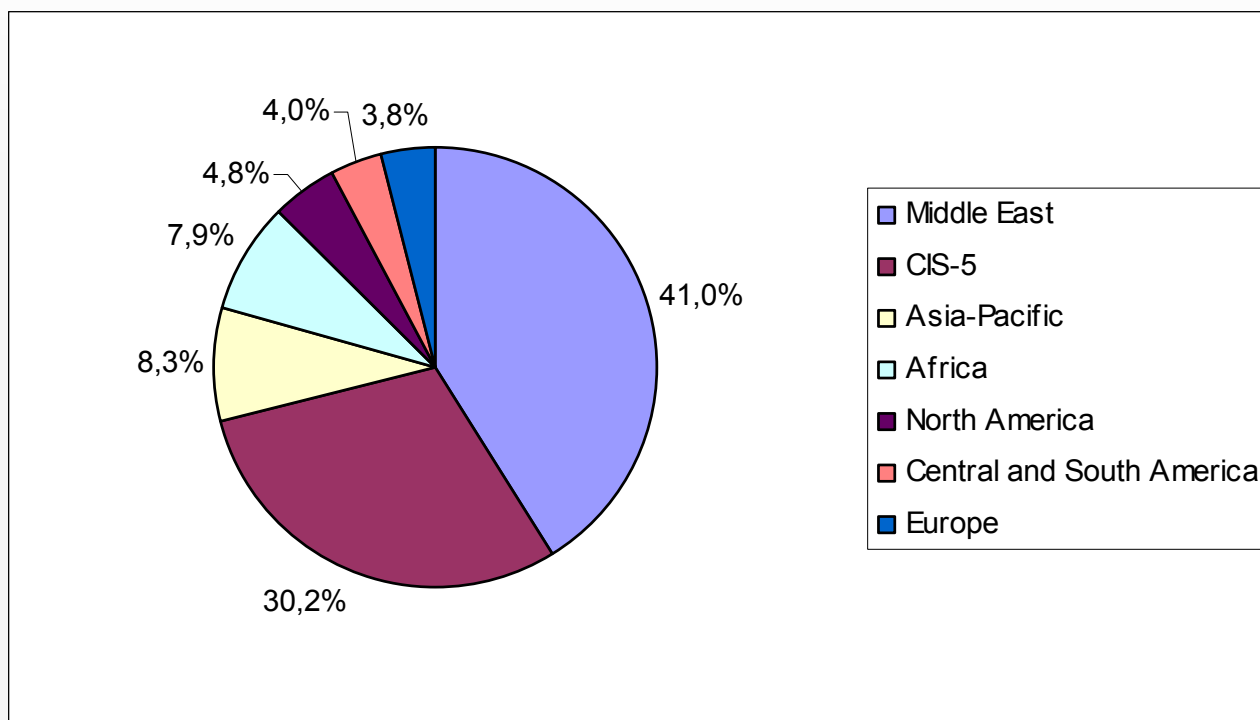
Source: BP Statistical Review of World Energy and own calculations

Proven oil reserves in CIS-5, end-2008



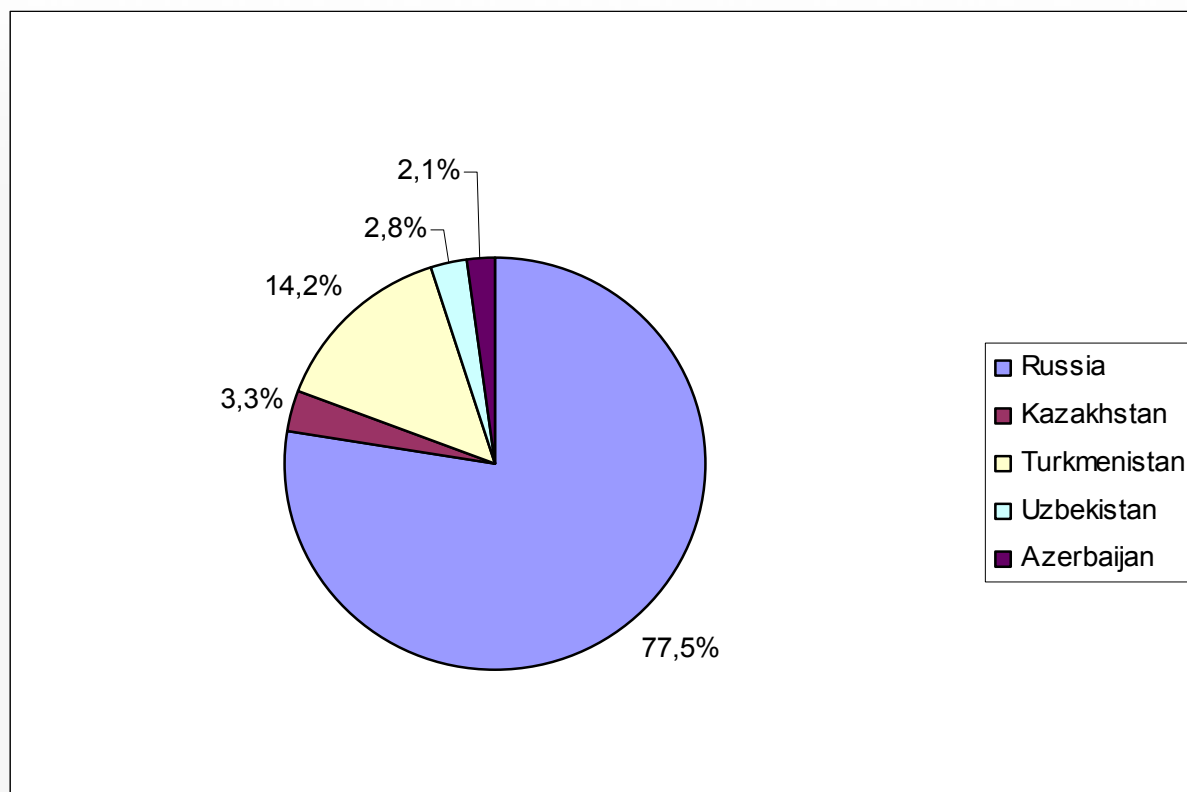
Source: BP Statistical Review of World Energy and own calculations

Proven gas reserves by region, end-2008



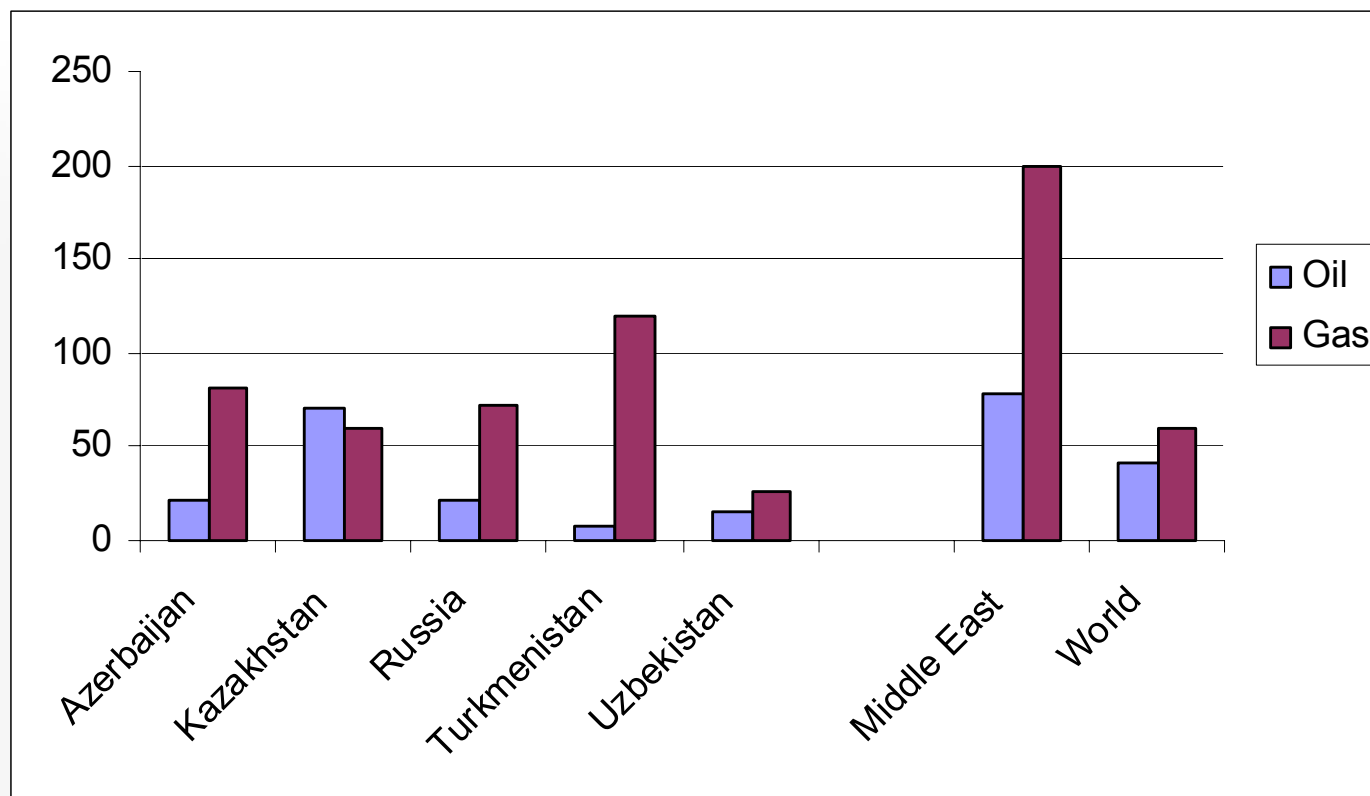
Source: BP Statistical Review of World Energy and own calculations

Proven gas reserves in CIS-5, end-2008



Source: BP Statistical Review of World Energy and own calculations

Years to depletion, as of 2008

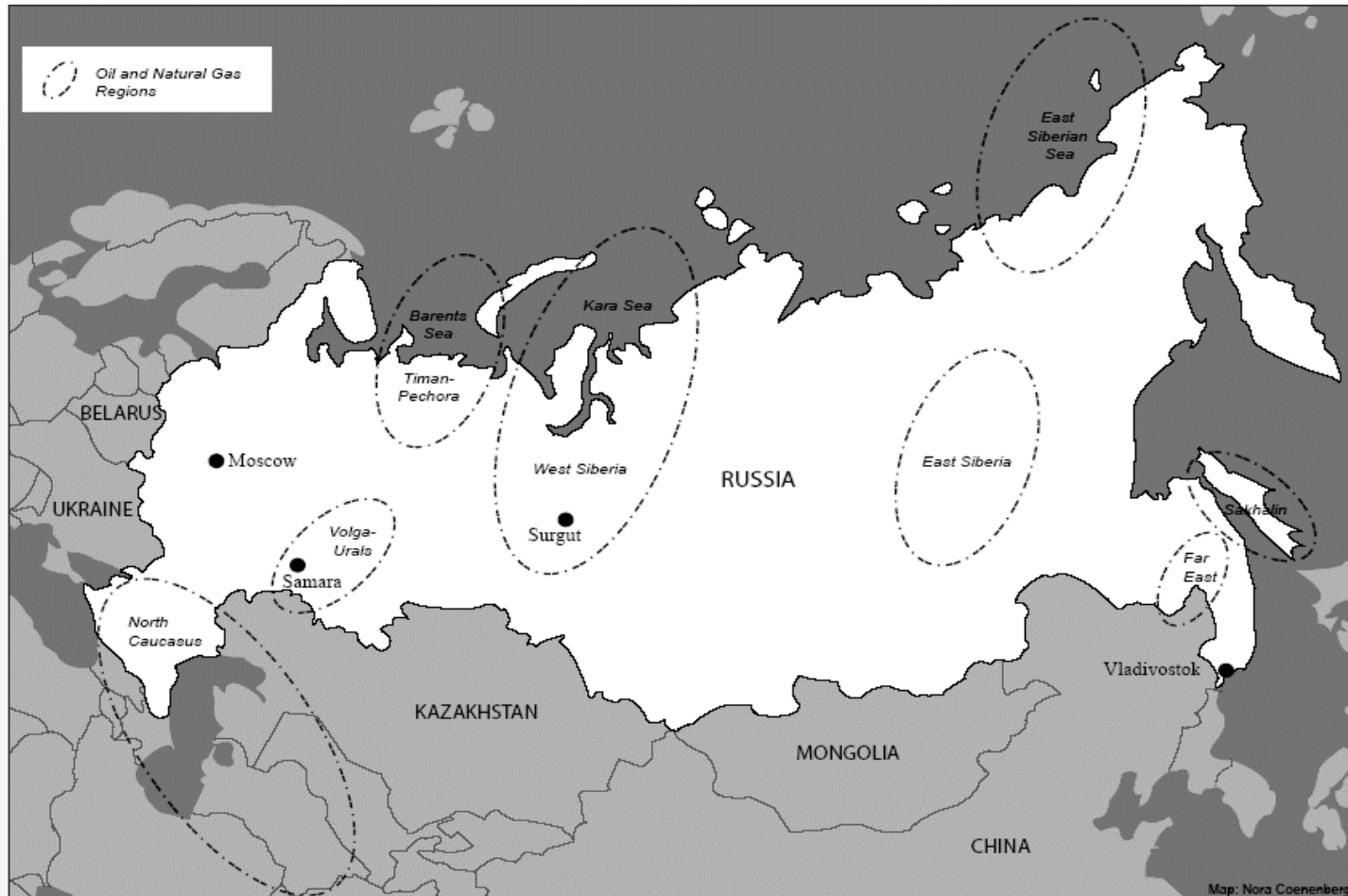


But: 'proven reserves' change with:

- Geological knowledge

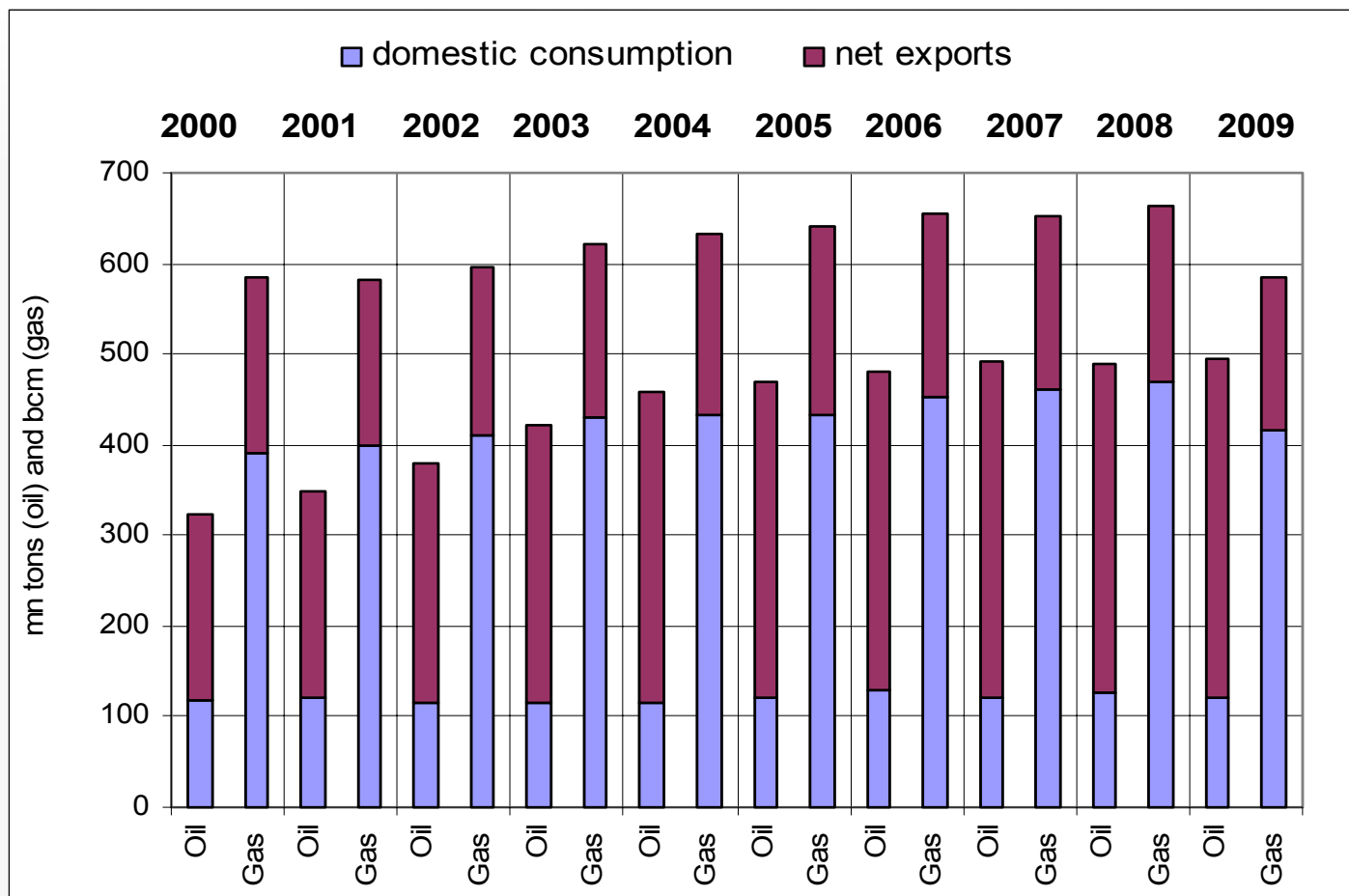
- Available technology
- Price level

Russia's major oil and natural gas basins



Source: Götz (2006)

Russian oil and gas: production, consumption and exports



Trends in Russian oil production

- 2000-2005: rapid expansion
 - mostly channelled to exports

- 2005-2008: slowdown and stagnation
 - technological factors: Western vs. Eastern Siberia
 - rising state involvement: from 14% in 2004 to 52% now
 - fiscal regime: revenue- rather than profit-based

- 2009: a new boost
 - due to enacted tax benefits for new fields

Russian 'Energy Strategy till 2030': oil

	2008	2015	2022	2030
Oil, mn tons				
Increase in reserves	.	1854	5597	5122
Production	487.6	495	525	535
Share of East Siberia and Far East in production, %	3	12	14	19
Domestic consumption (refining)	236	239	260	311
Refining depth, %	72	79	83	90
Crude oil exports	243	244	252	248
Share of eastern direction in exports, %	8	11	15	25

Source: Russian Ministry of Energy

Trends in Russian gas production

- Recently stagnating production: inefficiencies!
- Traditional deposits in West Siberia largely depleted
- New fields: Bovanenkovo from 2012, Shtokman from 2016
- „Supply crunch“ scenario only postponed due to crisis?
- But:
 - readiness to attract more foreign investment
 - gas saving potential: energy intensity, flaring & leakages
 - role of Central Asia

Russian 'Energy Strategy till 2030': gas

	2008	2015	2022	2030
Natural gas, bn cubic meters				
Increase in reserves	.	4100	5400	6500
Production	664	745	837	940
Share of new deposits in production, %	2	14	23	39
of which:				
Yamal	0	6	9	24
East Siberia and Far East	2	8	14	15
Share of 'independent' producers in production, ¹⁾ %	17	20	26	27
Domestic consumption	457	519	564	641
Exports	241	294	341	368
Share of Asia-Pacific in exports, %	0	12	17	20
Share of LNG in exports, %	0	5	11	15

Note: 1) Other than Gazprom.

Source: Russian Ministry of Energy

Russia-OPEC: history of non-cooperation

- Russia a ‚price taker‘ in world oil markets and a ‚free-rider‘
- Co-operation with OPEC potentially problematic:
 - technological challenges of manipulating production volumes in Russia
 - Russia has more interest (stakes) in cooperating with the West
 - Russia leads its own ‚war on terror‘
- ‚Gas OPEC‘ equally problematic
 - fragmentation of global gas market
 - Europe: prevalence of long-term supply contracts

Asia as a market for Russian energy ?

- Share of Asia in Russian exports in 2030 targeted at
 - Up to 25% for oil (from 8% now)
 - 20% for gas (from zero now)

- But:
 - poor infrastructure – enormous costs
 - price disagreement with China over gas

- Role of LNG
 - 15% of gas exports by 2030?
 - huge investment needs and little know-how

Conclusions

- Russia will remain important energy exporter, esp. of gas
- But: prospective deposits in ‚difficult areas‘
- Huge investment needs: \$ 1-3 trillion till 2030
- Good investment climate & cooperation with West needed
- Role of energy saving and Central Asia
- Substantial export diversification towards Asia problematic
 - Europe likely to remain the main destination