

Institute for Energy and Finance



Russian Energy Outlook

Oil & gas case

Alexey GROMOV,
Director on Energy Studies
Institute for Energy and Finance

Beijing
17th October 2013

Russia in the World: a real pantry of power resources

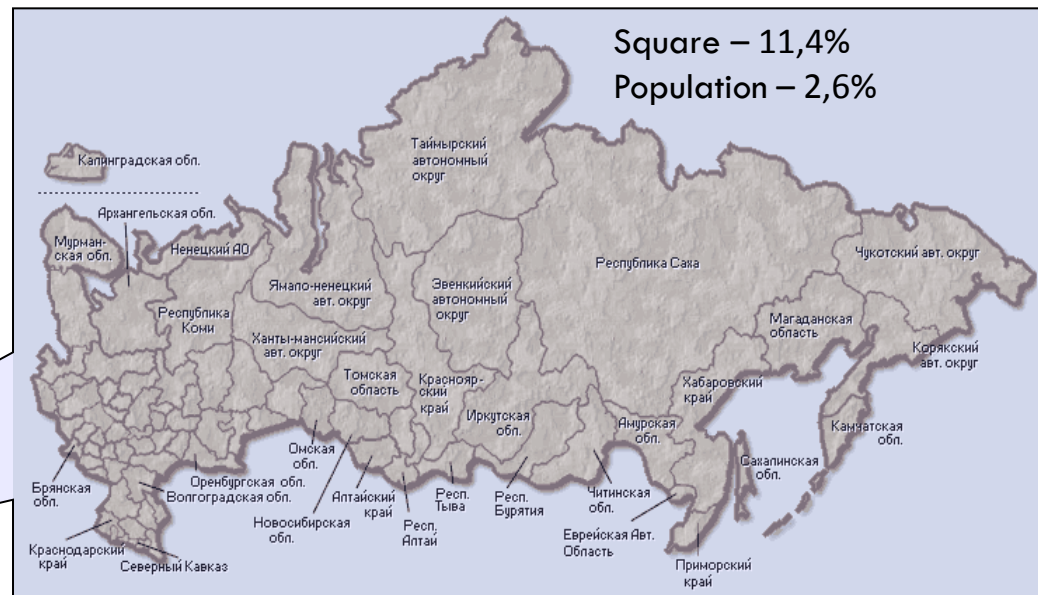
Russian Energy Sector in the world

2st place in gas extraction and gas stock

2st place in oil extraction

1st place in gas export

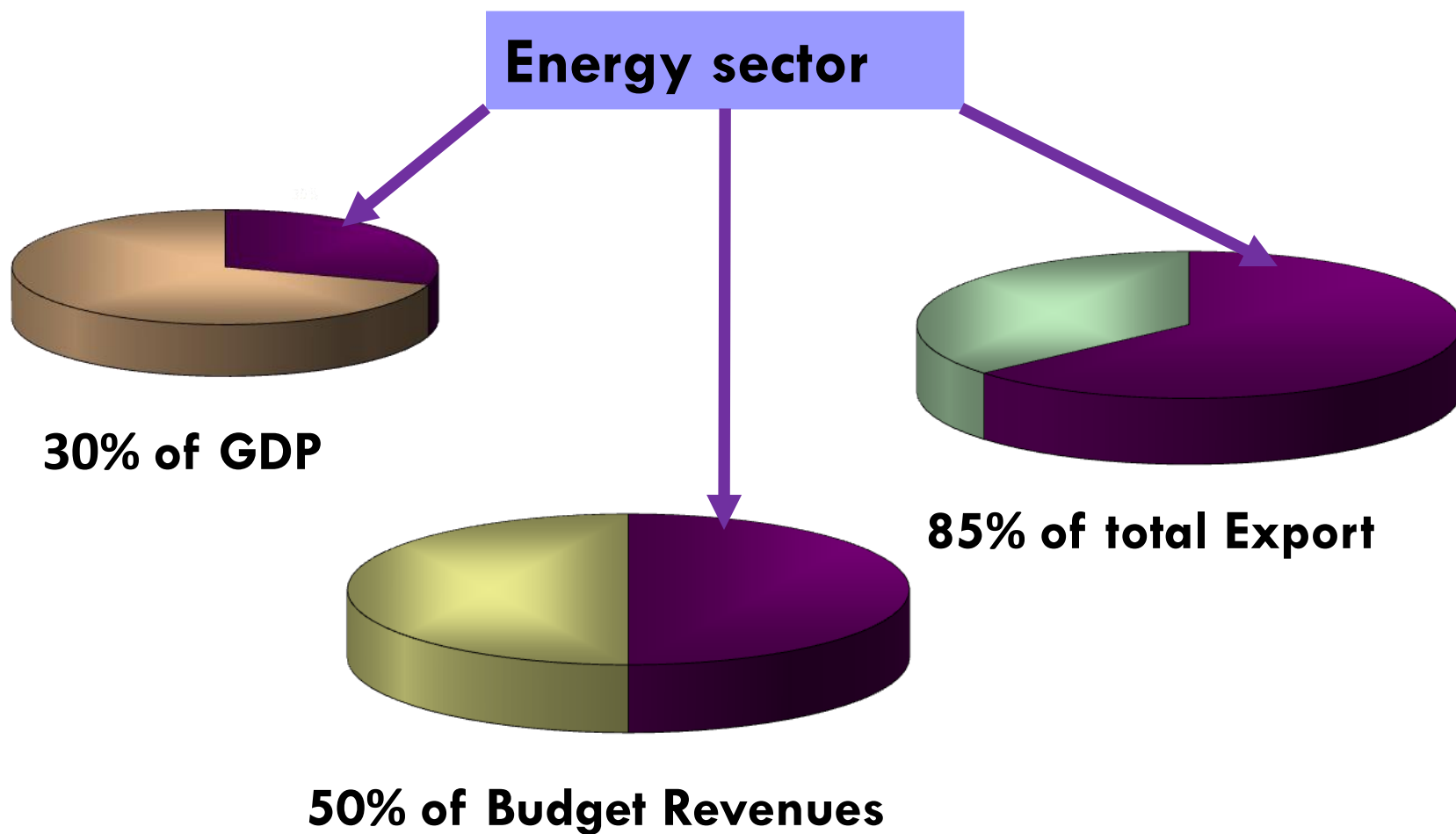
2st place in oil export



Resources	Share in world indicators, %		
	Stock	Extraction	Trade
Oil	12 (6,1*)	12,8	10,6
Gas	45 (26,7*)	21,5	25,0
Coal	24,9	5,1	15,2

* - proved reserves

Energy Sector in Russian Economy: a real basis



Key External Challenges for Russian Energy Policy

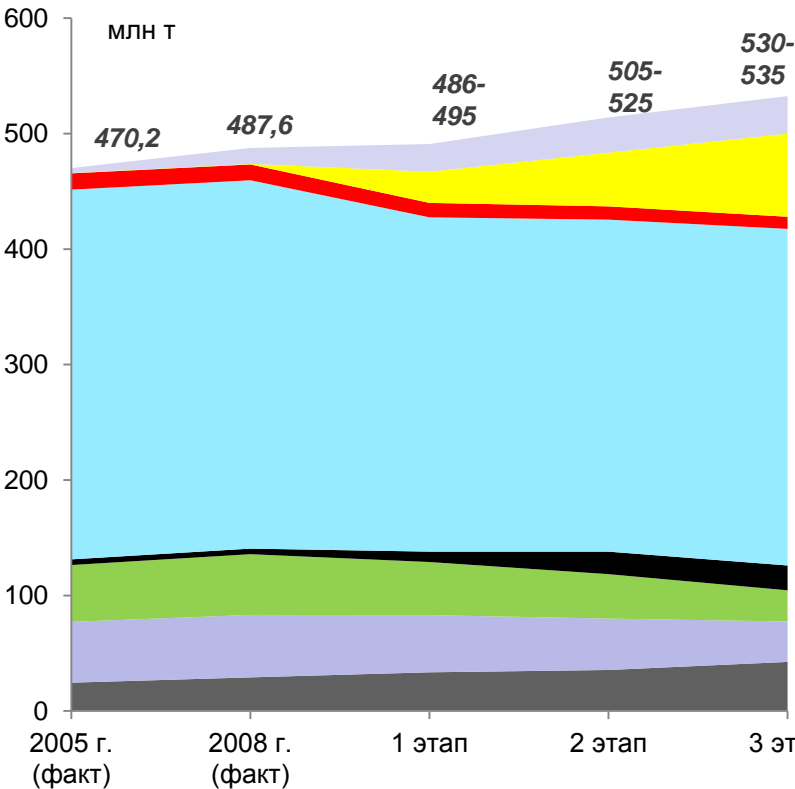
- **New Energy policy in the key areas for Russian energy export** (EU, US, China): shift to the energy independence by means of use RES and non-conventional hydrocarbons
- **Importance growth of non-conventional hydrocarbons** (including shale oil and gas) and hi-tech oil and gas resources (deep-water shelf etc.)
- **Fast development of renewables**
- **Revaluation of global energy supply forecast** due to global long-term crisis consequences
- **New political landscape in the Middle East** and **appearance of new global energy producers** (Australia, New Guinea, Canada, East Africa and East Mediterranean)
- **Global energy efficiency growth**
- **Fast development of smart technologies** in Energy Sector (smart grids etc.)
- **New rules for the global energy markets** (Third Energy Package in EU, new carbon markets etc.)

Key Domestic Challenges for Russian Energy Policy

- **Modernization of key energy assets** (plants, pipelines, refineries, grids etc.)
- **Maintenance of investment activity**
- **Toughening of the state and public control over production costs**
- **Increase of management efficiency for the state assets in Energy Sector**
- **Increase of energy efficiency for Economy and Energy Sector**
- **Application of new technologies for production of nonconventional hydrocarbons** (first of all, for heavy oil)
- **Support of Russian LNG export** by partial liberalization of the Russian export of natural gas
- **Increase of depth and complexity of processing of energy resources, development of their export**

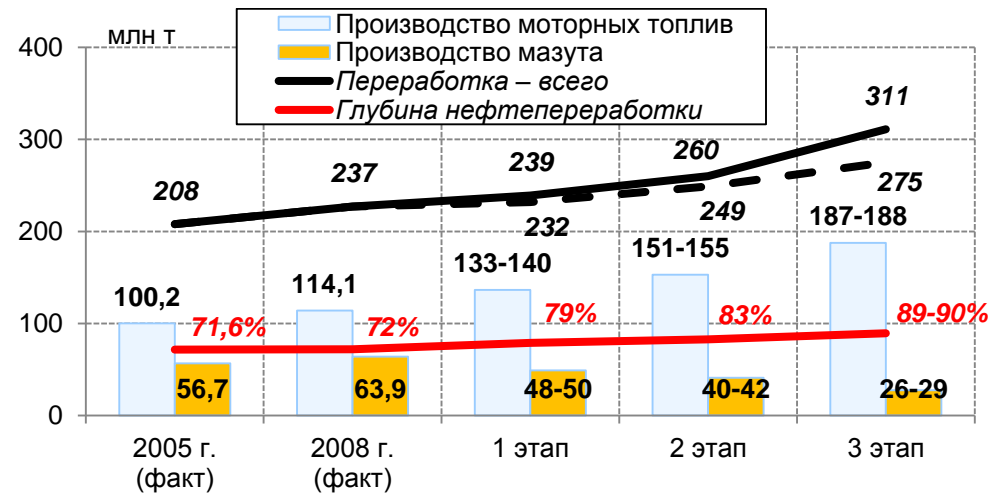
Forecast for Russian Oil Industry Development up to 2030

Oil production (upstream)

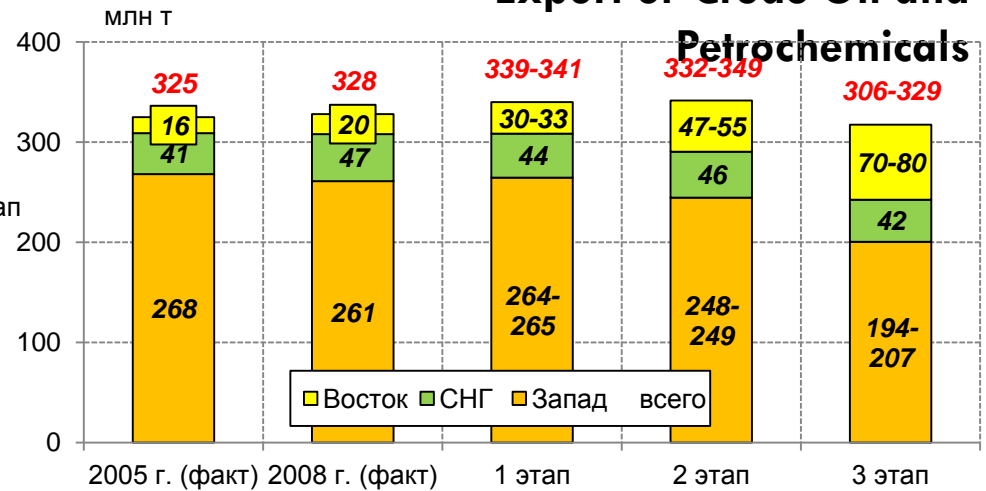


- North region
- Ural region
- Tyumen region
- Eastern Siberia
- Volga region
- Caspian region
- Tomsk region
- Far East

Oil refining (downstream)



Export of Crude Oil and Petrochemicals



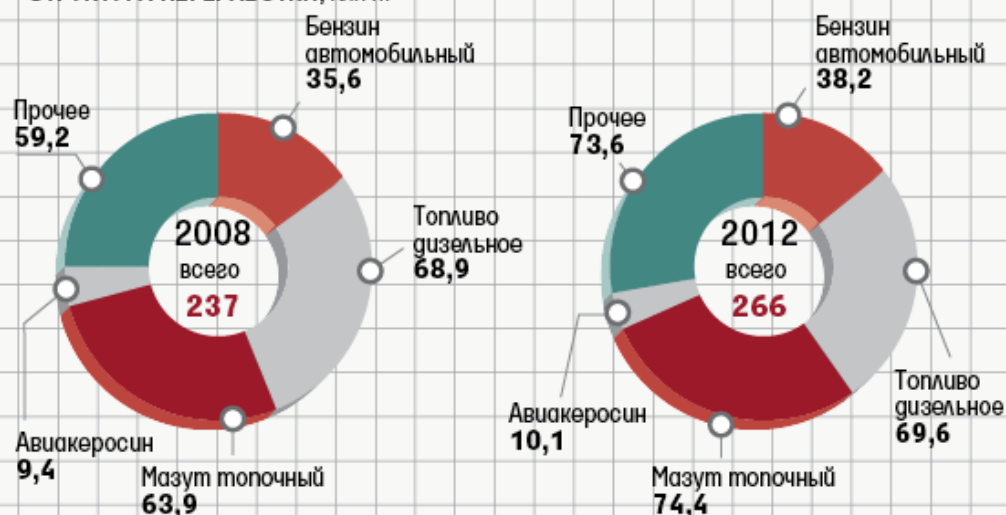
Russian Oil Industry Overview, 2008-2012

ДОБЫЧА, ПРОИЗВОДСТВО И ЭКСПОРТ НЕФТИ И НЕФТЕПРОДУКТОВ, МЛН Т



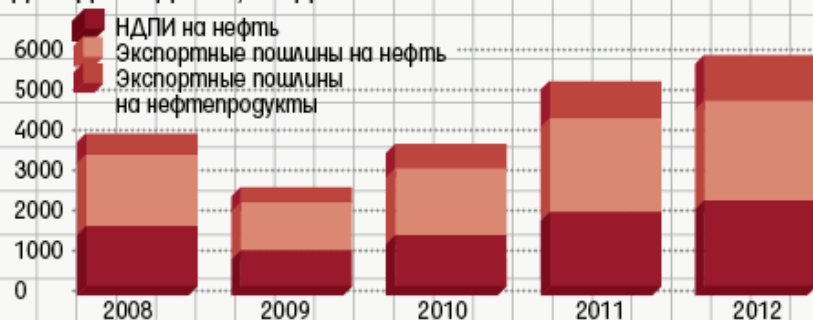
ИСТОЧНИКИ: РОССТАТ, МИНЭНЕРГО, ФТС

СТРУКТУРА ПЕРЕРАБОТКИ, МЛН Т



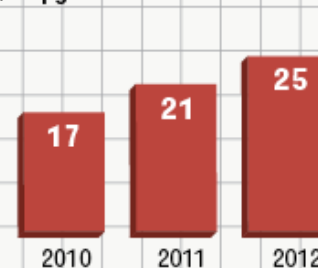
ИСТОЧНИКИ: РОССТАТ, МИНЭНЕРГО (ДАННЫЕ ЗА 2012 Г.), ИАЦ «ЮРТЕС» (АВИАКЕРОСИН В 2008–2009 ГГ.)

ДОХОДЫ БЮДЖЕТА, МЛРД РУБ.



ИСТОЧНИКИ: ФЕДЕРАЛЬНОЕ КАЗНАЧЕЙСТВО, МИНЭКОНОМРАЗВИТИЯ, ОСНОВНЫЕ НАПРАВЛЕНИЯ ТАМОЖЕННО-ТАРИФНОЙ ПОЛИТИКИ

КАК ВЫРОСЛИ КАПИТАЛЬНЫЕ ЗАТРАТЫ НА РАЗВЕДКУ И ДОБЫЧУ, \$ млрд*



КАК ВЫРОСЛИ КАПИТАЛЬНЫЕ ЗАТРАТЫ НА ПЕРЕРАБОТКУ, \$ млрд*



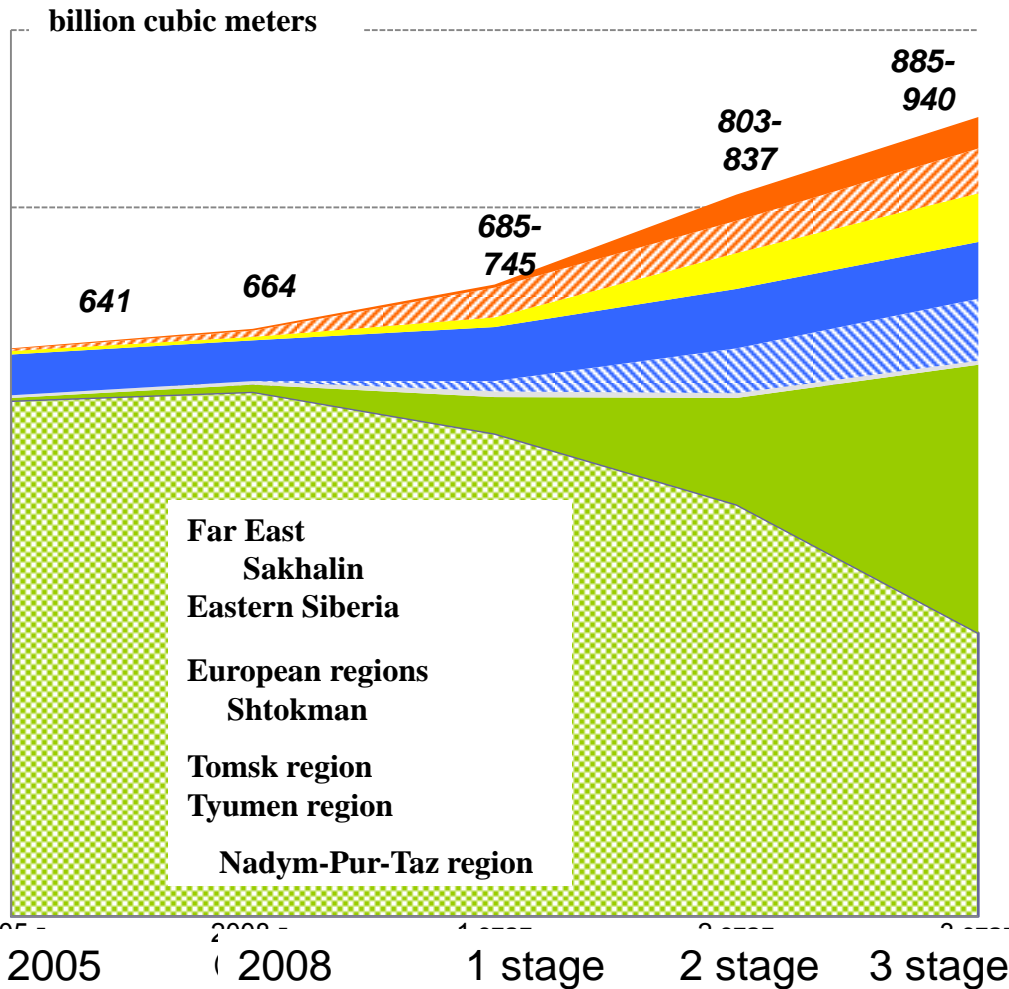
* Затраты «Роснефти», «Лукойла», ТНК-ВР, «Газпром нефти», «Татнефти», «Башнефти»

Key reference marks for Russian Oil Industry's Development up to 2030

Reference Marks/Directions	2008	1 STAGE	2 STAGE	3 STAGE
Subsurface Use Efficiency				
Producible Oil Index (POI)	30	30-32	32-35	35-37
OIL Production				
Share of Eastern Siberia and Far East in total volume of extraction, %	3	10-12	12-14	18-19
OIL Transport				
Growth of length of the main export oil pipelines, % to 2005	2	36-52	61-67	65-70
OIL Refining				
Oil Processing Depth, %	72	79	82-83	89-90
Light Cycle Oil Yield, %	57	64	67-68	72-73
Nelson Index (units)	4,3	6,0	6,5	8,5
Oil consumption, tons per capita	0,5	1,0	1,1-1,3	1,3-1,6
OIL Export				
Share of Asia-Pacific Region in total volume of export, %	8	10-11	14-15	22-25

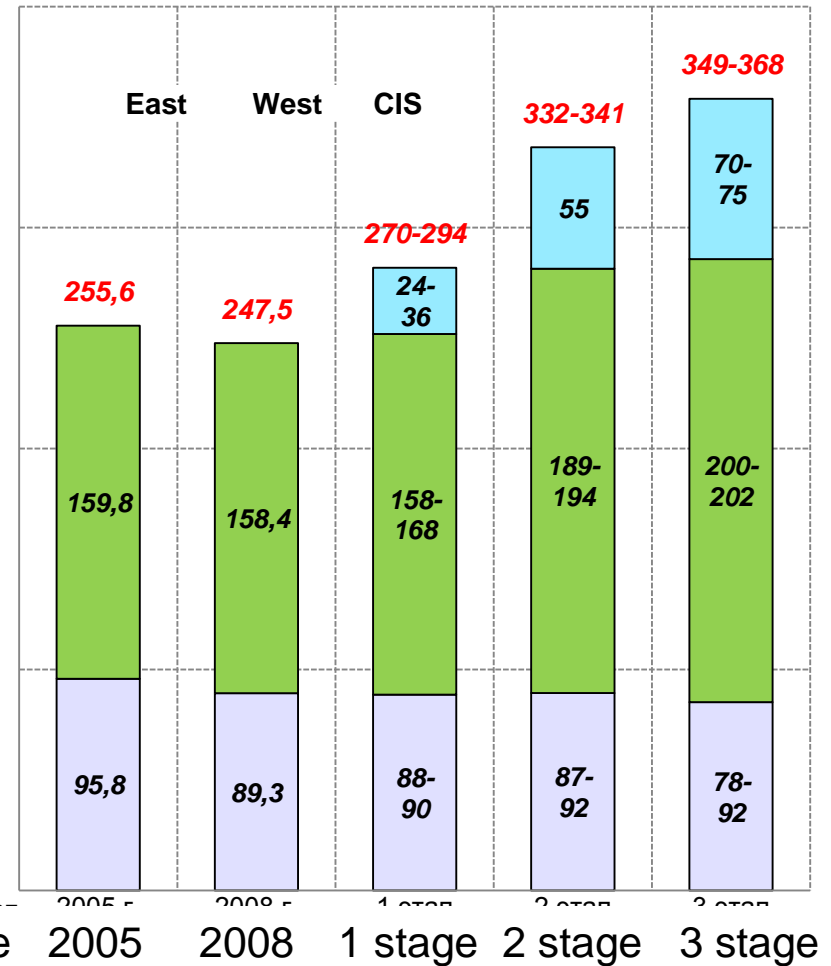
Forecast for Russian Gas Industry Development up to 2030

Gas Production



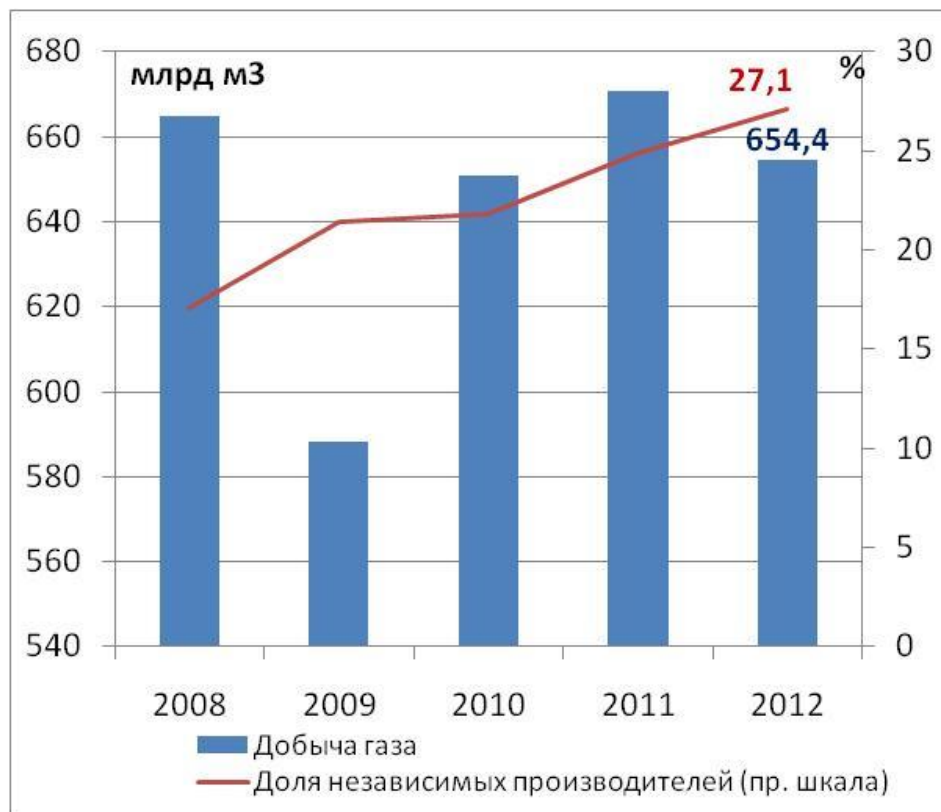
Gas Export

billion cubic meters

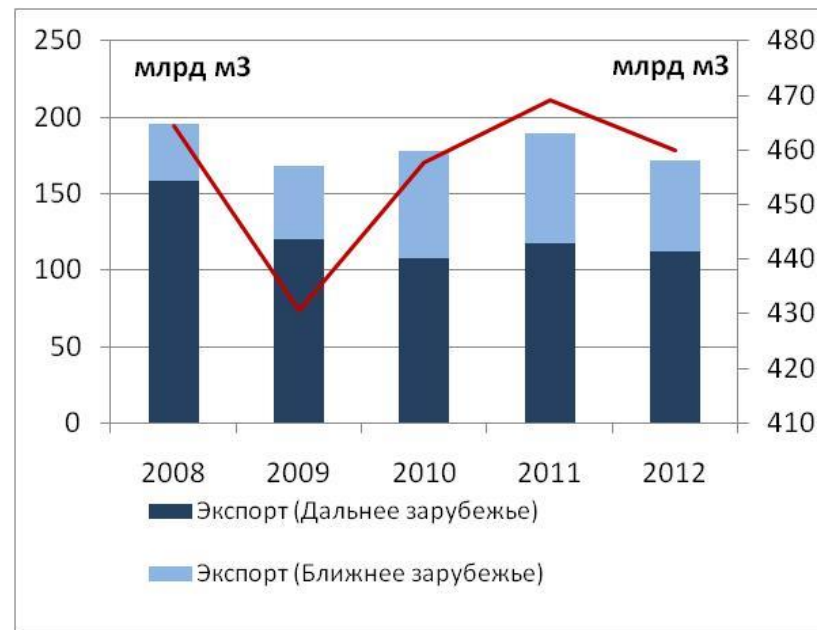


Russian Gas Industry Overview, 2008-2012

Gas production



Gas domestic consumption and export



Key reference marks for Russian Gas Industry's Development up to 2030

Reference Marks/Directions	2008	1 STAGE	2 STAGE	3 STAGE
GAS Production (extraction)				
Share of new areas in total volume of extraction, %	3	13-14	21-23	38-39
Yamal	0	6	9	23-24
Eastern Siberia and Far East	2	7-8	12-14	15
Share of Independent Gas Producers in total volume of extraction, %	17	16	25-26	27
GAS Transport				
Growth of length of the main gas pipelines, % to 2005	3	8-10	13-15	20-23
Share of the reconstructed working gas pipelines, % from the general length of gas transmission system	4	10-11	12-13	25-26
GAS Export				
Share of Asia-Pacific Region in total volume of export, %	0	11-12	16-17	18-19
Share of LNG in total volume of export, %	0	4-5	10-11	14-15

Eastern vector of Russian Energy policy



task №19 «Increase in the share of the Asia-Pacific countries in the structure of the Russian energy export to 16–17%»

task №10 «Implementation of a complex of program measures for petrochemistry and gas-chemistry development in the Eastern Siberia and Far East»

task № 17 «Extended reproduction and attraction of human resources for development of new areas of the Eastern Siberia and Far East»

Key initiatives in the Russian energy sector:

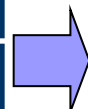
Energy infrastructure: development and diversification

Development of oil and gas complexes in Eastern regions of Russia

Exploitation of the oil and gas potential of the Northern regions of Russia and Arctic shelf

Non-fuel energy

Energy saving



Eastern vector

ESPO pipeline, Eastern Gas Program, petro- and gas-chemistry development

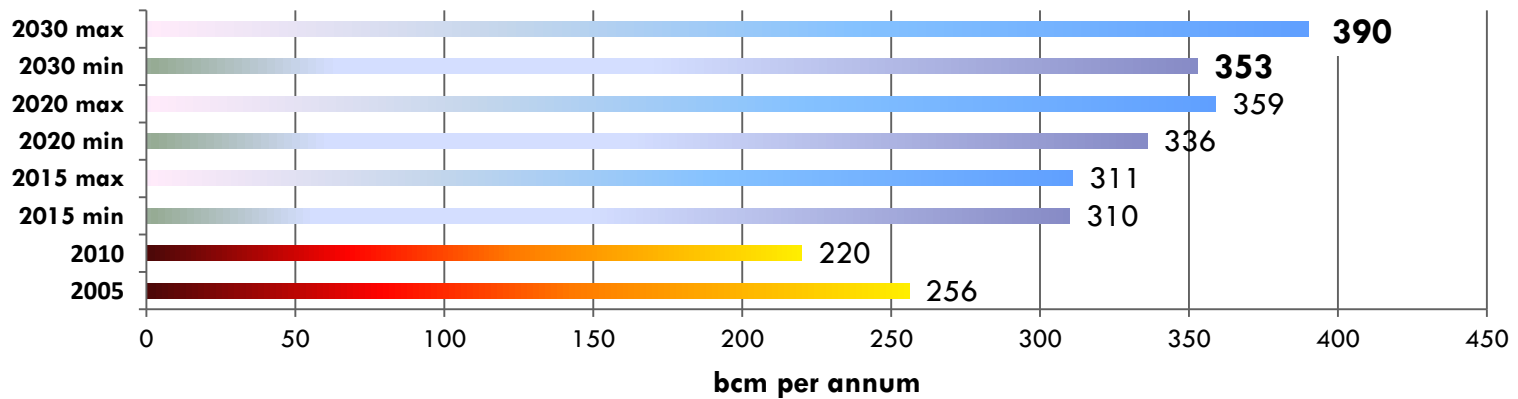
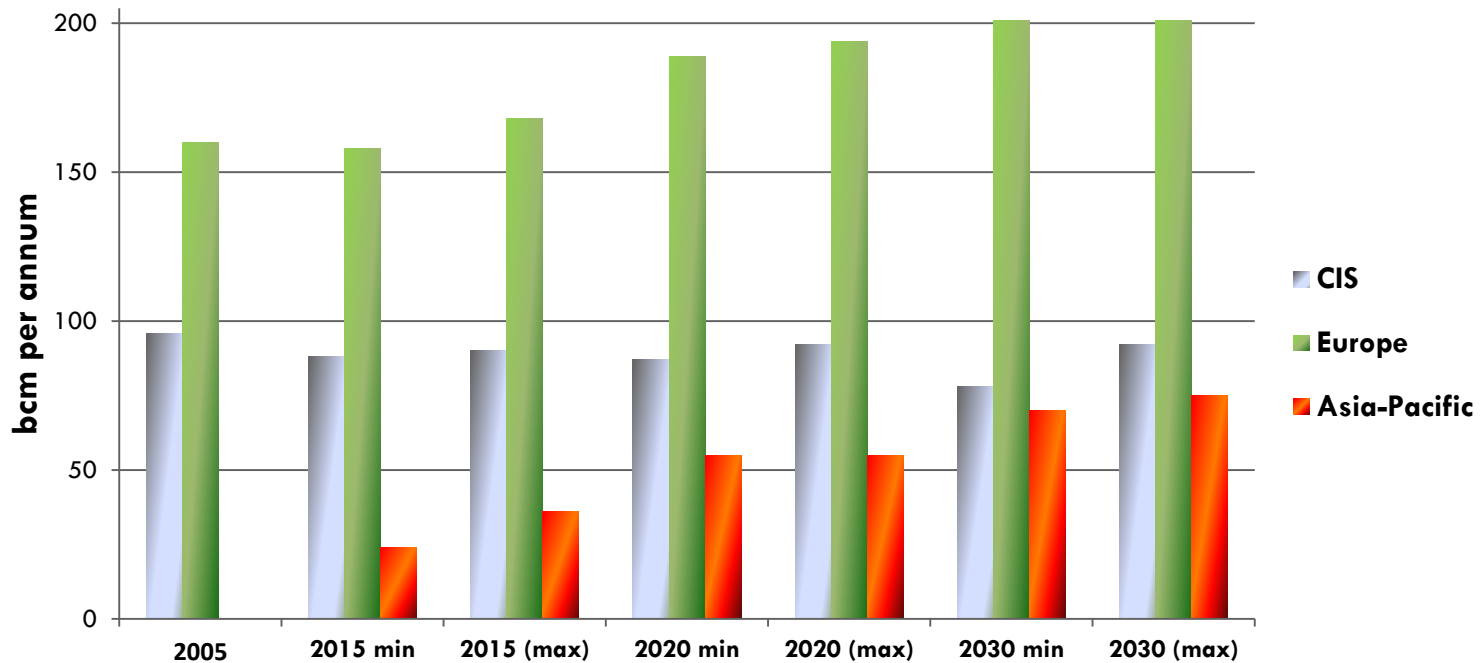
Sakalin, Yakutia, Magadan, Irkutsk and Krasnoyarsk regions

Shelf of the East Arctic, reanimation of the Northern Sea Way

Large-scale development of hydro energy and renewables

Modernization of electric power and heat supply systems in the Region

Targets of gas export: shift to the East



LNG is a Key Priority of Russian Gas Export to the EAST

RUSSIAN LNG PROJECTS

- LNG projects
- LNG plants

