



MINISTRY OF ENERGY
OF THE RUSSIAN FEDERATION

ENERGY BRIDGE «RUSSIA–ASIA PACIFIC»

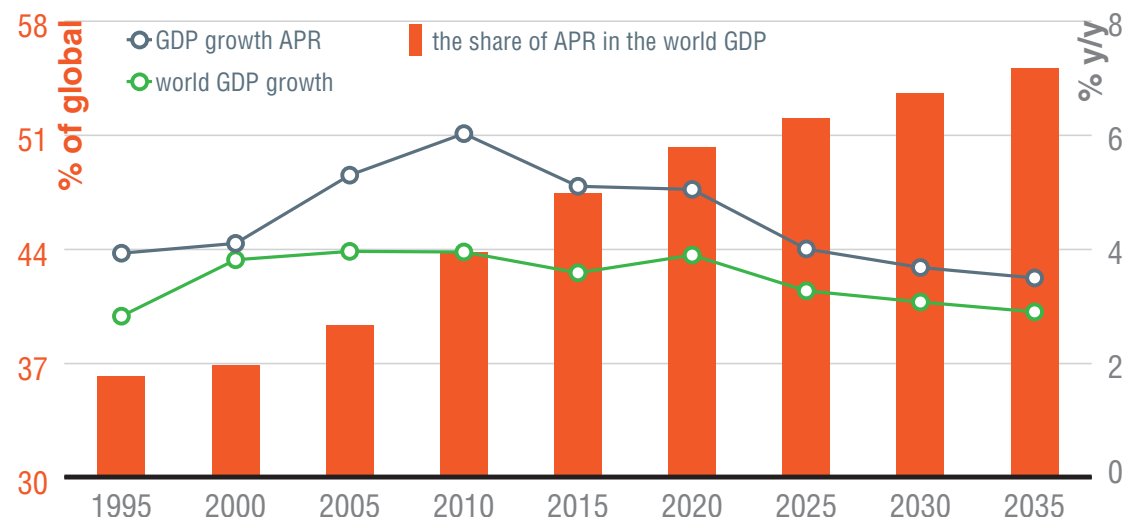
Deputy Minister of Energy
of the Russian Federation
K.V. Molodtsov

Qatar
2015

The background of the slide features abstract, overlapping geometric shapes in various shades of blue, ranging from a deep navy blue to a very light, almost white blue. These shapes create a sense of depth and movement, primarily concentrated on the left side of the frame.

THE ROLE OF ASIA-PACIFIC COUNTRIES IN THE WORLD ECONOMY

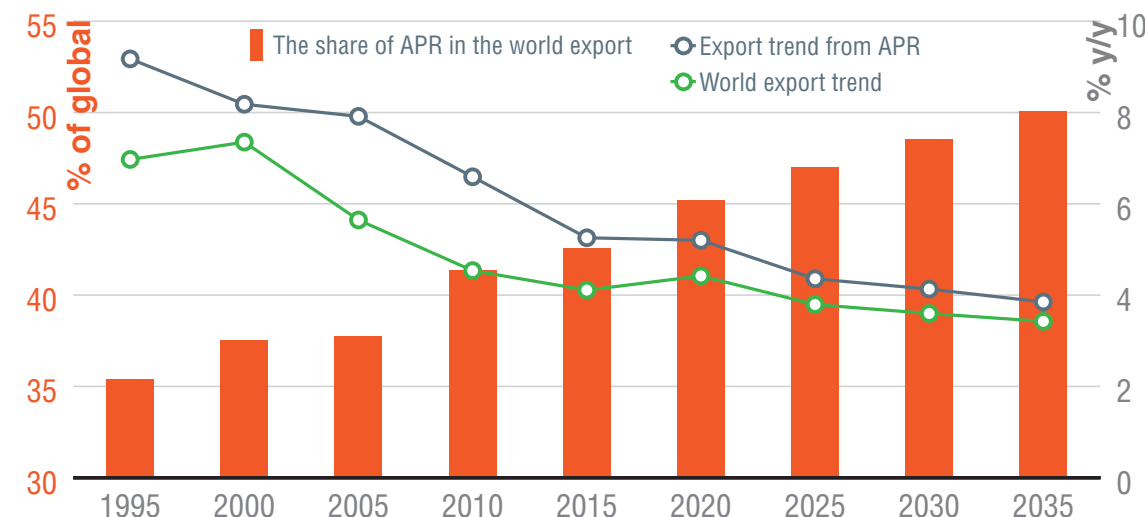
The share of APR countries in the world GDP, 1995-2035



Source: World Bank, IEF estimates

- APR countries (incl. India) accounts for more than 46% of the global GDP, including the 2nd and 3rd economies of the world – China and Japan..
- Recent years GDP growth rate in APR countries was about 5-6% y/y and was remarkably higher than economic growth in the world (+1-2 percentage point) and in other large regions.
- By 2035 the share of APR countries in the world economy will be higher than 55%.

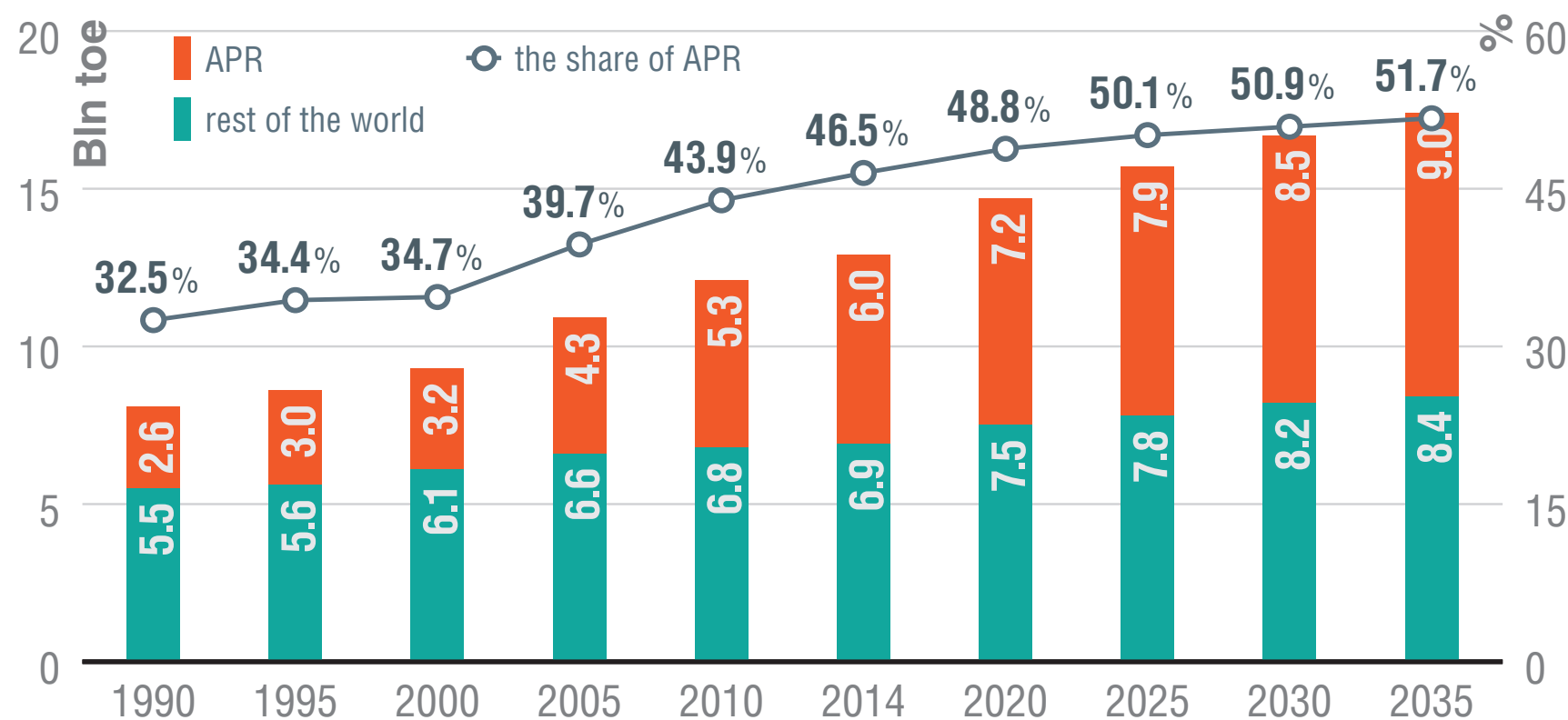
The share of APR countries in the world trade, 1995-2035



Source: World Bank, IEF estimates

- GDP growth was connected to the global trade growth (incl. inter-country trade in APR) – in 2014 APR countries provide about 41% of the world export.
- The rates of growth of the APR countries international trade was remarkably higher than global dynamics – in 2008-2015 it grew up by 1,4, whereas the other regions export increased only by 10%.
- By 2035 APR countries will account for a half of the world trade.

Primary Energy Consumption in APR countries



Source: IEF based on BP Statistical Review 2015, BP Energy Outlook 2035

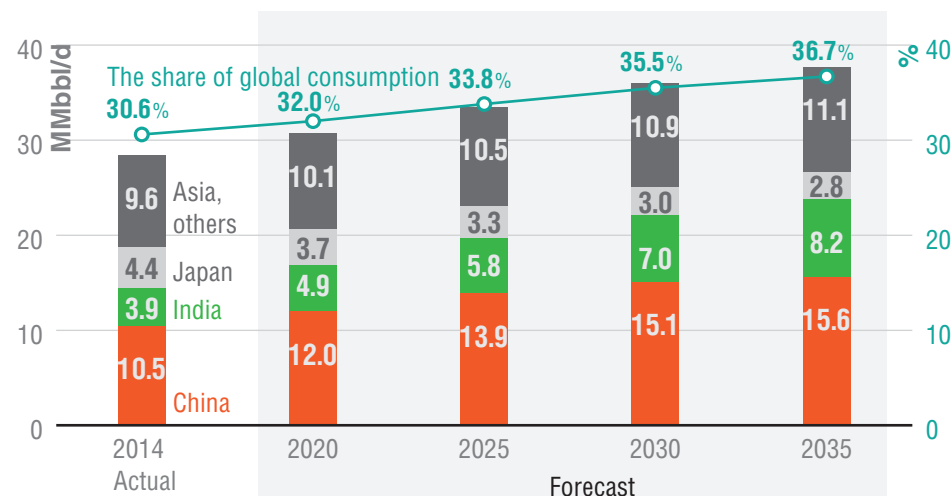
- The share of APR countries in the global primary energy consumption is gradually increasing, and by 2014 it reached 46%.
- In the longer term APR countries will provide major gain in the world energy consumption.
- Up to 2035 APR will provide about 64% (!) of the world energy demand growth.
- The main driver of the energy demand growth up to 2025 will be China, after 2025 – India.

The economic needs of APR countries will play a critical role in the future development of the world hydrocarbons markets.

5

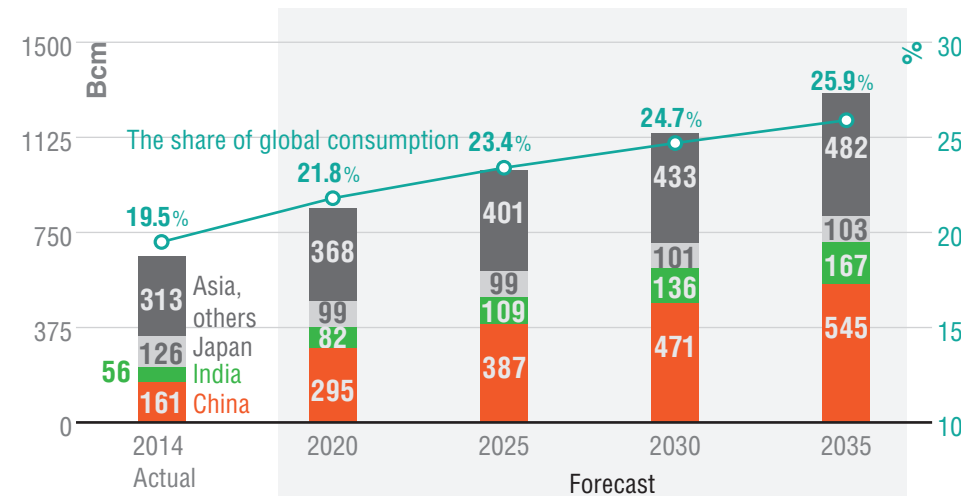
MINISTRY OF ENERGY
OF THE RUSSIAN FEDERATION

Outlook of the consumption of liquid hydrocarbons in APR



Source: IEF based on BP Statistical Review 2015

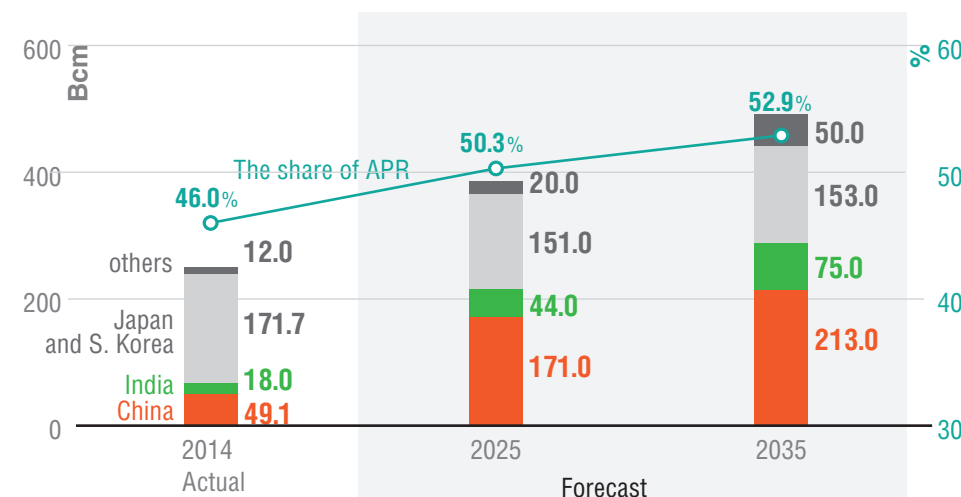
Outlook of the consumption of natural gas in APR



Source: IEF based on World Energy Outlook 2014

- APR countries will be gradually increasing the share in the global consumption of liquid hydrocarbons and natural gas.
- By 2025 about 50% of natural gas export will supply to APR countries, primarily to China, which can increase imports 4 times.

Outlook of the natural gas import by APR



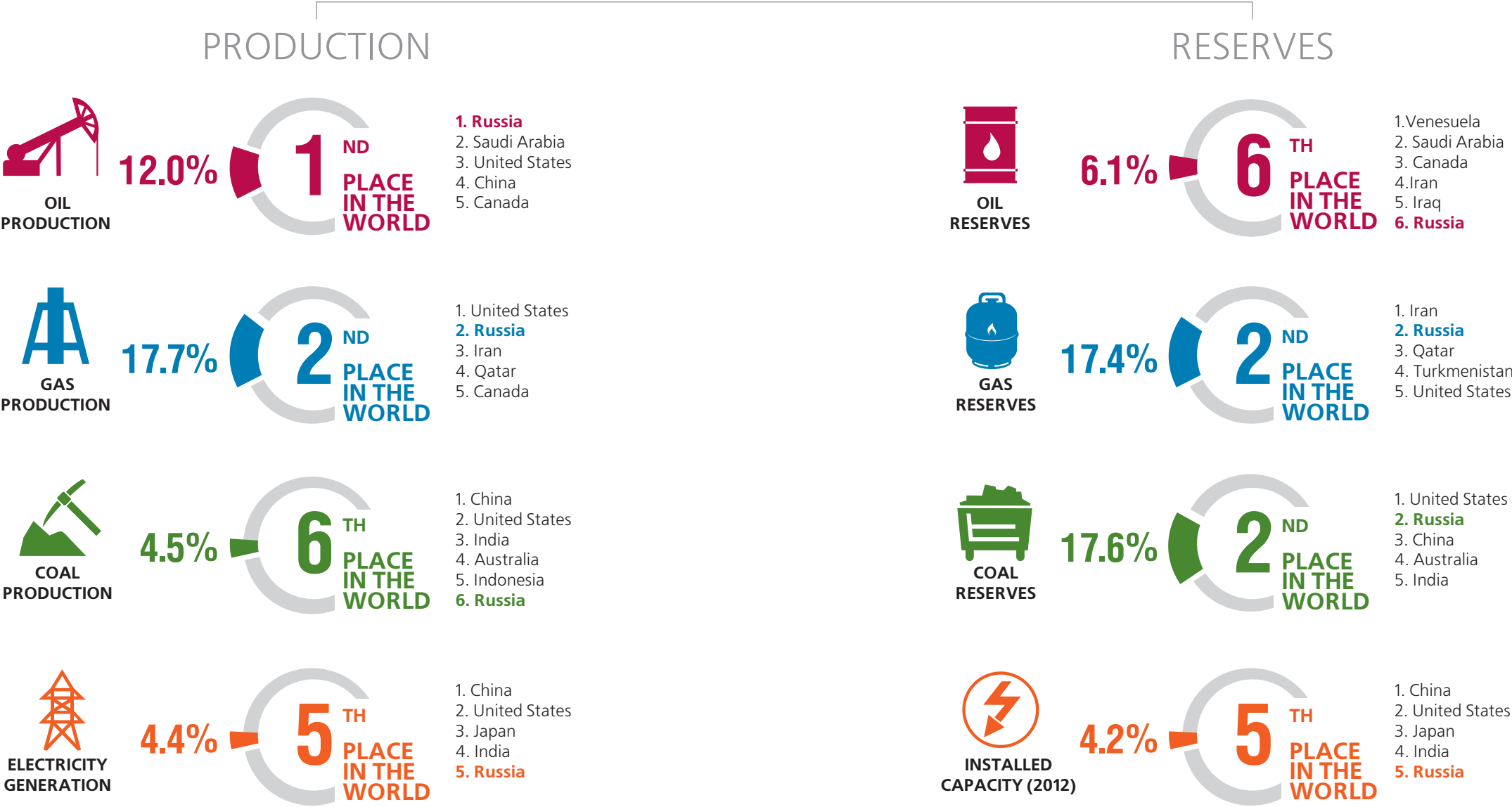
Source: IEF based on World Energy Outlook 2014

The background features a series of overlapping, semi-transparent blue shapes that create a sense of depth and movement. These shapes are primarily triangular and quadrilateral, with some having soft, feathered edges. The colors range from a deep navy blue to a very light, almost white blue. The overall effect is modern and professional.

RUSSIA IS THE KEY PLAYER
ON THE WORLD ENERGY MARKET

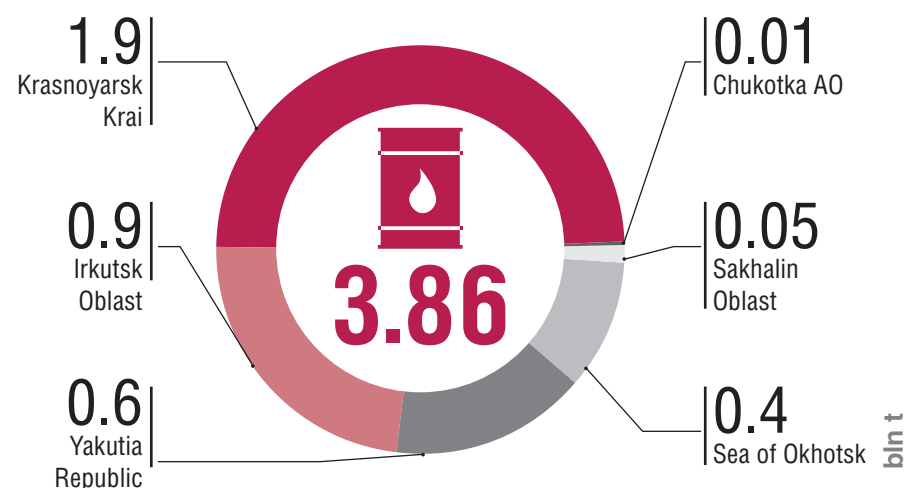
Russia is the largest player in the world energy

The Russian share in 2015



Source: Estimated based on BP Statistical Review 2015, OPEC, EIA, IEA, CDU TEK

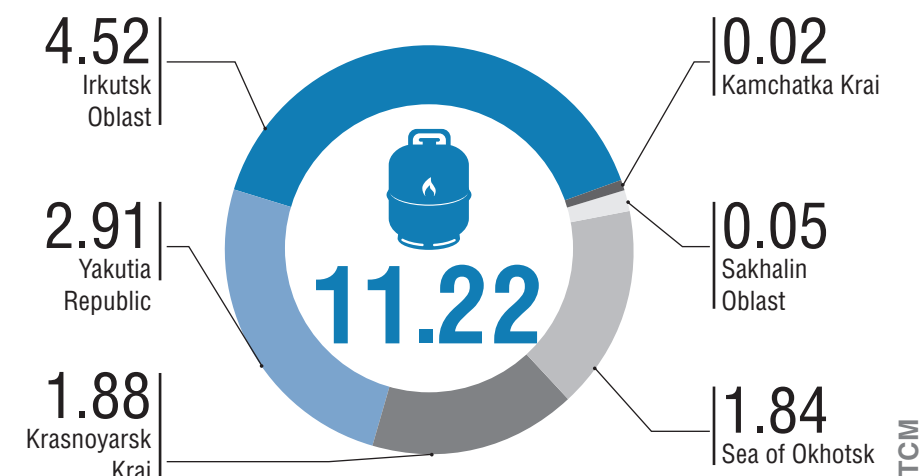
Structure of oil reserves (ABC1+C2) in Eastern Siberia and Far East, 2014, bln t



Source: Ministry of Natural Resources and Environment of the Russian Federation

- 11,7 bln t – prospective and predicted oil resources
- 3,9 bln t – proved, probable and possible reserves (ABC1+C2)
- More than 13% of the Russian reserves (ABC1+C2)

Structure of gas reserves (ABC1+C2) in Eastern Siberia and Far East, 2014, TCM



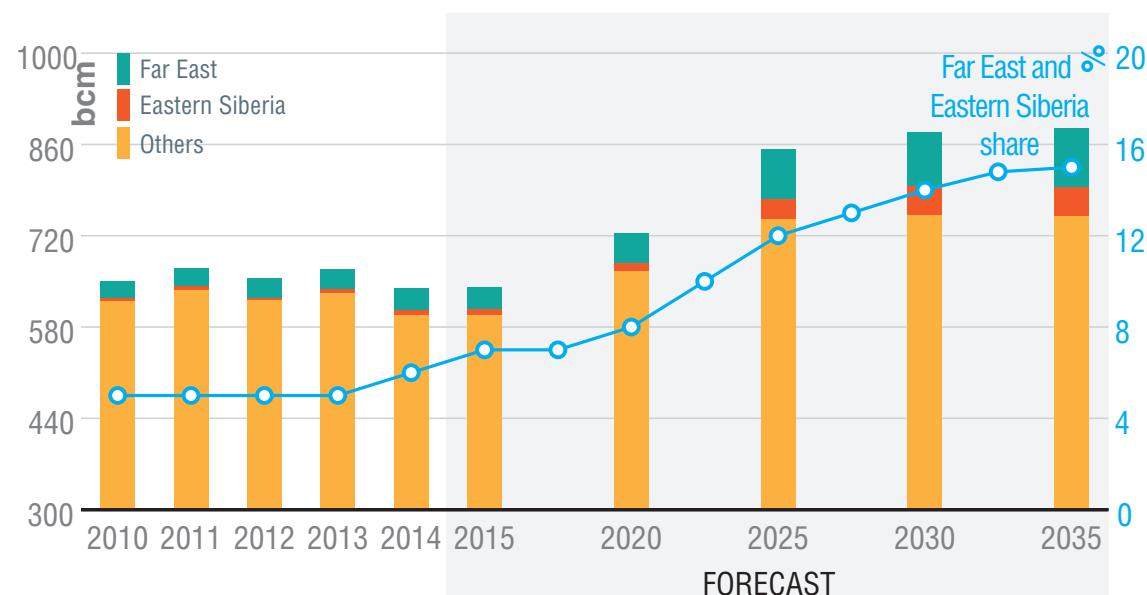
Source: Ministry of Natural Resources and Environment of the Russian Federation

- 41,8 TCM – prospective and predicted gas resources
- 11,2 TCM – proved gas reserves
- 16,2% of the Russian gas reserves (ABC1+C2)



Oil and gas reserves of Eastern Siberia and Far East nowadays are quite sufficient for extensive hydrocarbons production development

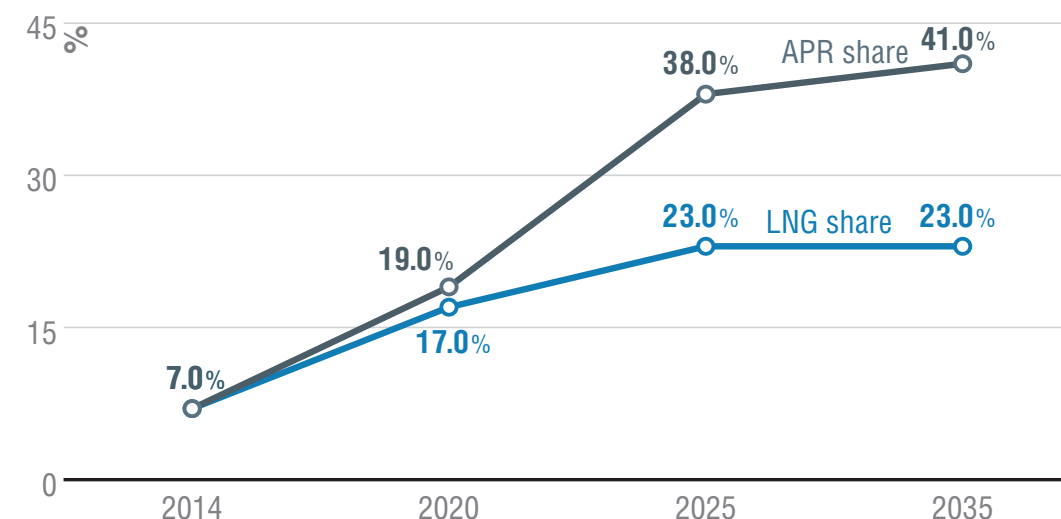
Gas production in Eastern Siberia and Far East will grow



Source: Ministry of Energy of the Russian Federation

- The main growth of gas production in Eastern Siberia and Far East will be observed after 2020.
- It is expected that the share of Eastern Siberia and Far East in total gas production of the Russian Federation will reach 15% by 2035.

The share of APR countries in Russian gas export will rise



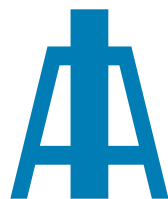
Source: Ministry of Energy of the Russian Federation

- It is estimated that by 2020 the share of APR in Russian gas export will grow up from 7% to 19% followed by an increase to 41% by 2035.
- The share of LNG in gas export is to be raised from 7% to 17% with the subsequent growth till 23% by 2035.

The background features a series of overlapping, semi-transparent blue geometric shapes, primarily triangles and quadrilaterals, creating a dynamic, layered effect. The colors range from a deep navy blue to a very light, almost white blue, with the shapes generally oriented towards the top-left corner.

THE STATE ROLE IN SUPPORTING OF OIL AND GAS PROJECTS IN EASTERN SIBERIA AND FAR EAST

NATURAL GAS

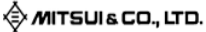


OFFSHORE PROJECTS IN EASTERN ARCTIC AND FAR EAST

TYPE OF FIELDS AND PROJECT	PREFERENCE
Projects on the territory: • of Irkutsk Oblast • of Krasnoyarsk Krai or the Far Eastern Federal District • or in Sea of Okhotsk	Preferential royalty (10% of standard tax rate) on the period from 1 July 2014 till 31 December 2033

TYPE OF FIELDS AND PROJECT	PREFERENCE
50% and more of the area in the Sea of Japan and southern part of the Sea of Okhotsk	Preferential royalty (15% of the mined materials cost) 7 years from the start of production or till 31 March 2032
50% and more of the area in northern part of the Sea of Okhotsk	Preferential royalty (10% of the mined materials cost) 10 years from the start of production or till 31 March 2037
50% and more of the area in the Kara Sea and Eastern Arctic (the Laptev Sea, the East Siberian Sea, the Chukchee Sea, the Bering Sea)	Preferential royalty (5% of the mined materials cost) 15 years from the start of production or till 31 March 2042

Joint projects in Russia

	CNPC	JV «Vostok Energy» with «Rosneft» produce oil in Irkutsk oblast, 20% in Yamal LNG
	Sinopec	Venineft (25,1%) – exploration, Udmurtneft (49%)
	ONGC	Sakhalin-1 (20%) 14 blocks in Tomsk oblast (77, 69, 80, 70-1, 70-1C, 70-2, 70-2 3M, 70-3, 70-3ЮМ, 70-3М, 85-1, 85-1Т, 86, 86-В) – by Imperial Energy
	JAPEX, Marubeni и др.	Sakhalin-1 (30%) – by Sakhalin Oil Development Co. (SODECO)
	Mitsui	Sakhalin-2 (12,5%)
	Mitsubishi	Sakhalin-2 (10%)
	PetroVietnam	Rusvietpetro (49%), Gazpromviet (49%)

Joint projects outside Russia

China		Rosneft	Design and construction of the Tianjin Refinery and Petrochemical complex (capacity - 13 Mt/year).
India		Rosneft	Signed general terms of “Rosneft” participation in equity capital of Vadinar refinery (49%)
Vietnam		Rosneft	35% in PSA on gas-condensate block 06.1, block 05-3/11
		Gazprom	49% in two blocks (05.2 и 05.3) in South China Sea, offshore blocks 112a, 129-132
Vietnam		Zarubezhneft	JV Vietsovpetro (49%), PSA on block 12/11, Block 04-3, VRJ Petroleum Company (50%)
Myanmar		Bashneft	PSA on oil block EP-4

«Sakhalin-1»

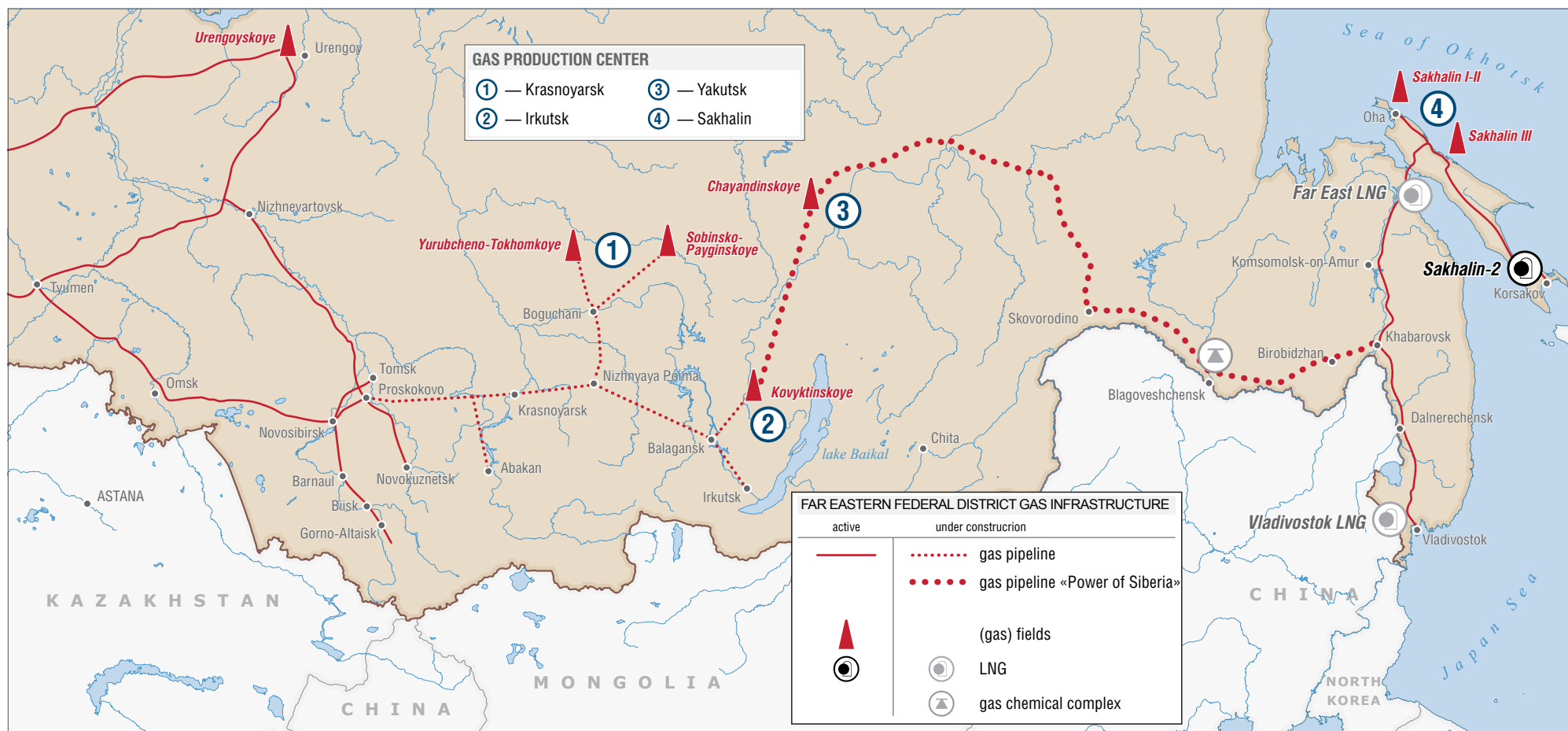


- **The first large-scale PSA offshore project in Russia (1996)**
- Shareholders: Rosneft (Russia) – 20%, Exxon Neftegas Ltd (USA) – 30%, SODECO (Japan) – 30%, ONGC (India) – 20%
- The project provides for production from Chayvo, Odoptu and Arkutun-Dagi fields located on the north-eastern offshore of Sakhalin island in Sea of Okhotsk.
- Proved oil reserves ABC1+C2 – 307 Mt, natural gas reserves – 485 bcm
- **Oil production in 2014 – 7,6 Mt**

«Sakhalin-2»



- **Operator of Sakhalin-2 (PSA since 1996) is Sakhalin Energy**
- Shareholders: Gazprom – 50%+1 share, Shell (UK-Neth.) – 27,5%-1 share, Mitsui (Japan) – 12,5%, Mitsubishi (Japan) – 10%.
- The project provides for production from Piltun-Astokhskoye oil field and Lunskeye natural gas field
- **The first floating oil and gas rigs in Russia.**
- **The first Russian LNG plant.**
- **The first Russian gas shipments to Asia-Pacific Region and American north coast.**
- Proved oil reserves ABC1+C2 – 170 Mt, gas reserves – more than 600 bcm
- **Gas production in 2014 – 17,6 bcm**



Source: Gazprom

- Eastern gas program is intended for establishing of 4 gas production centers (Yakutsk, Irkutsk, Sakhalin and Krasnoyarsk). Following the implementation these centers will be technologically connected to each other and with the Unified Gas Supply System of Russia.
- Major development of gas production in Eastern Siberia and Far East is firstly relating with providing of gas supplies via constructed transmission gas pipeline Power of Siberia. The basis of raw material source for the gas pipeline will be unique in their reserves Chayandinskoe and Kovyktinskoe fields.
- **In accordance with a contract, which was signed in May 2014, export volume of Russian gas to China will amount to 38 bcm yearly for 30 years.**

TARGETS OF RUSSIAN ENERGY POLICY EASTWARD:

- **Further energy export diversification**

Increase of energy export eastwards in 2,5-3 times and growth of APR share in Russian energy export to the level of 36-39% by 2035

Increase of LNG share in gas export from 7 to 17% by 2020 and to 23% by 2035

- **Increase of hydrocarbons production in Eastern Siberia and Far East**

Doubling liquid hydrocarbons production share of Eastern Siberia and Far East from 11% (2014) to 22% (2035)

Doubling gas production share of Eastern Siberia and Far East from 6,5% (2014) to 13% (2035)

- **Development of hydrocarbons deep conversion in the region**

Construction of Eastern Siberia and Far Eastern petrochemical clusters





MINISTRY OF ENERGY
OF THE RUSSIAN FEDERATION

THANK YOU FOR YOUR
ATTENTION!

Prepared by «CDU TEK»
2015

