



# **The Future of Russian Gas and Gazprom**

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# **The Agenda for Russian Gas to 2020**

## **DOMESTIC AGENDA:**

- **Supply - different options for:**
  - **Gazprom**
  - **Oil companies and gas independents**
  - **Central Asia**
- **Demand: price and market reforms**
- **Reform/restructuring of Gazprom and liberalisation of the domestic gas market: prices, network access, structure**

## **INTERNATIONAL EXPORT STRATEGY AND OPTIONS:**

- **CIS - supply and transit**
- **Europe – ongoing and future projects – existing and new markets**
- **LNG to Atlantic and Pacific Basin markets**
- **Asian pipeline projects**



## Russian Gas Production 2003-05 (Bcm)

	2003	2004	2005*
<b>GAZPROM</b>	<b>540.2</b>	<b>544.4</b>	<b>547.2</b>
<b>“OIL” COMPANIES**:</b>	<b>40.4</b>	<b>44.9</b>	<b>48.9</b>
<b>Surgutnefegaz</b>	<b>13.9</b>	<b>14.3</b>	
<b>Rosneft</b>	<b>7.0</b>	<b>9.4</b>	
<b>TNK/BP</b>	<b>5.0</b>	<b>8.0</b>	
<b>Lukoil</b>	<b>4.7</b>	<b>5.0</b>	
<b>Yukos</b>	<b>3.4</b>	<b>3.4</b>	
<b>Sibneft</b>	<b>2.0</b>	<b>2.0</b>	
<b>GAS INDEPENDENTS:</b>	<b>39.4</b>	<b>44.7</b>	<b>44.5</b>
<b>Novatek</b>		<b>21.8</b>	<b>25.2</b>
<b>TOTAL</b>	<b>620.0</b>	<b>634.0</b>	<b>640.6</b>

\*\*total does not add \* provisional



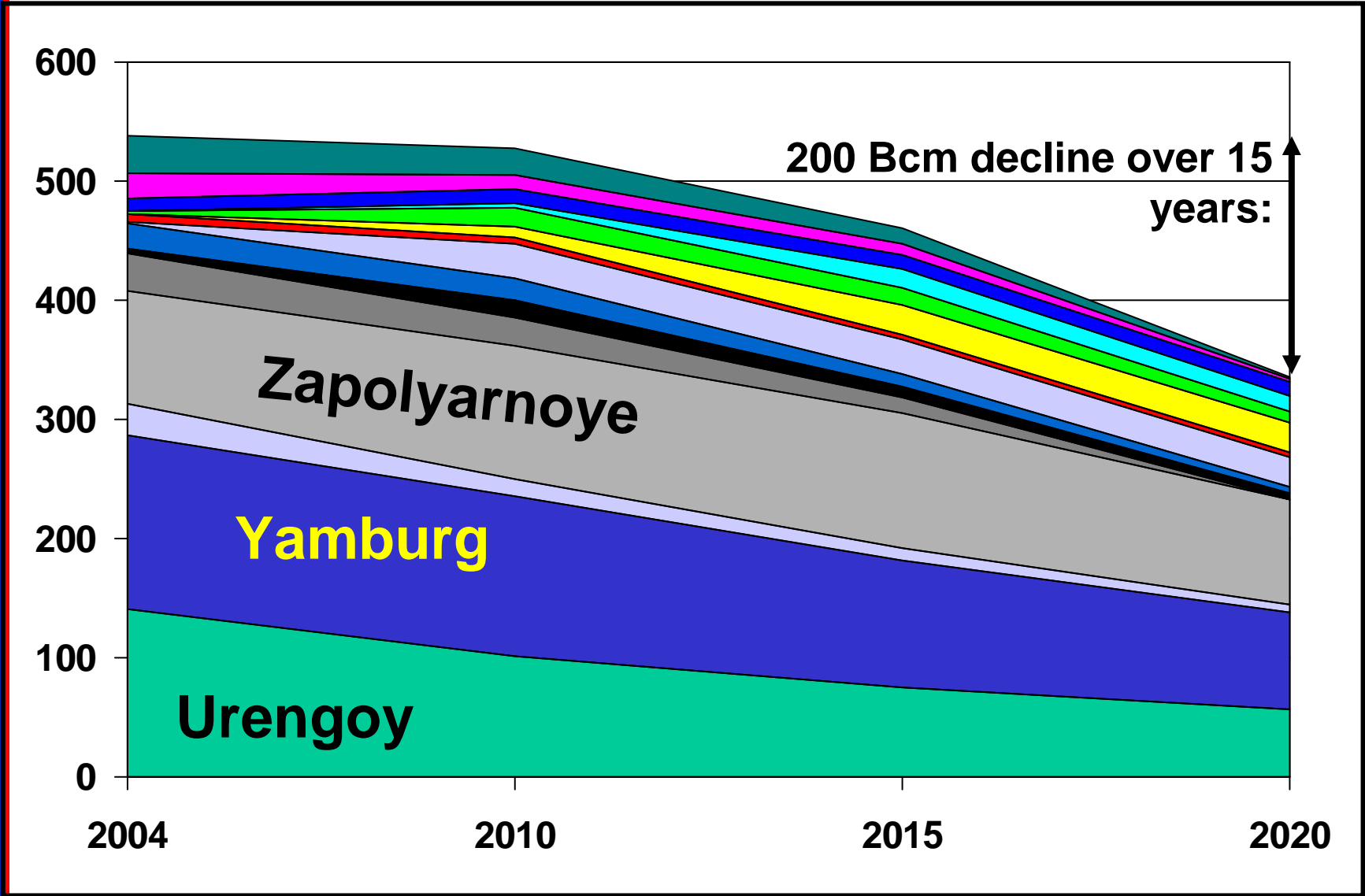
## **Gazprom Supply Issues Looking West**

- **Existing Nadym-Pur-Taz fields:**
  - Big three fields are declining at 20-22 Bcm per year
  - Zapolyarnoye allowed current production to more than offset decline elsewhere 2001-04 but now at plateau level of 100 Bcm/yr
  - Other new NPT satellite fields are relatively “small”
- **Yamal fields:**
  - Huge, but with relatively high production and transportation costs
  - To be developed in phases, with 2-3 investment decisions of \$15-20bn each

**Eastern Siberia/Far East are “another country”**

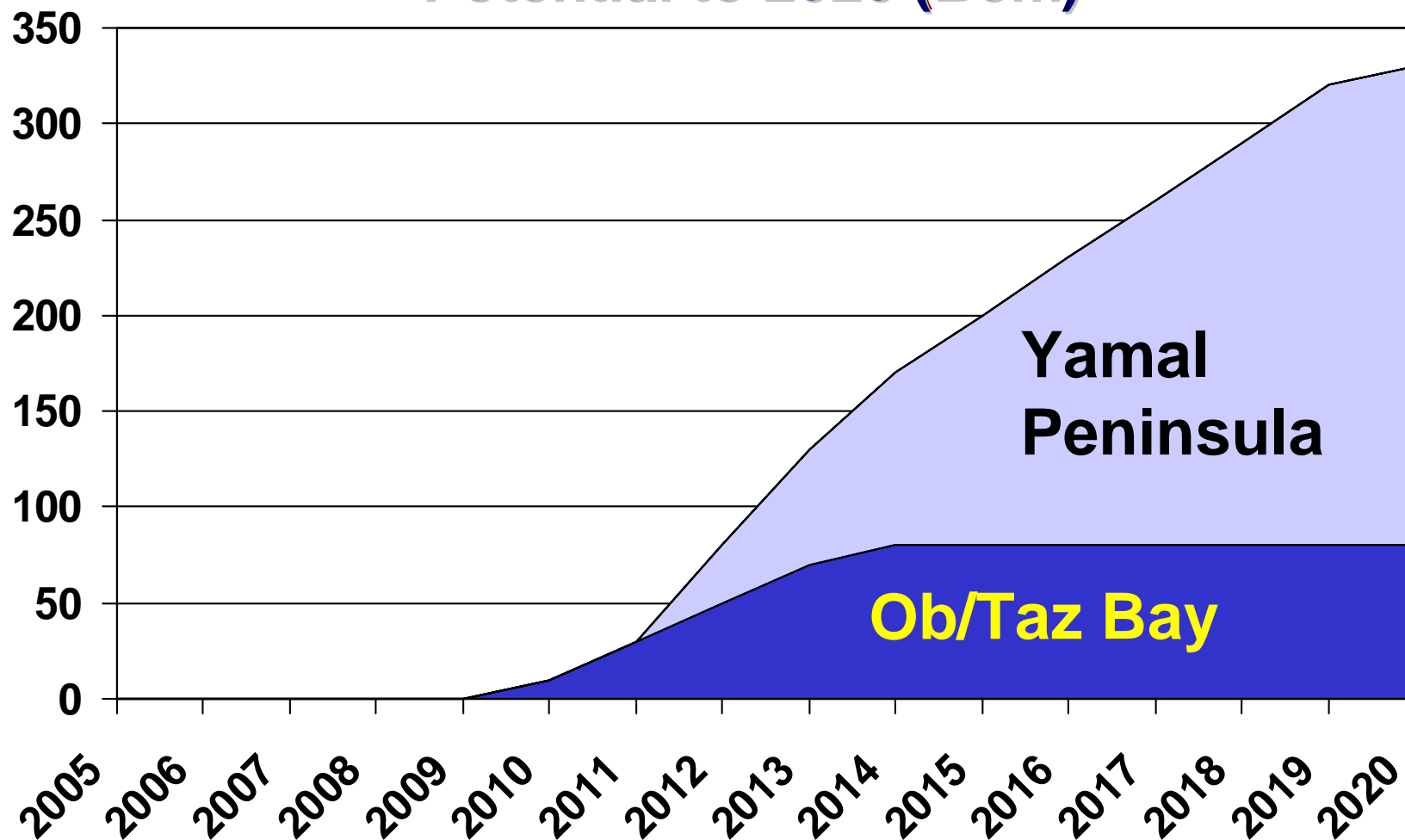


# Decline in Gazprom Production From Existing and Planned Fields 2004-2020 (Bcm)





## Gazprom Additional Domestic Production Potential to 2020 (Bcm)



**Note time scale of these supplies, compared with decline of existing fields**



## **Independents: who are they?**

- **4 Vertically integrated “oil” companies - Lukoil, TNK/BP, Surgutneftegaz, Rosneft: rich, complex agenda, many investment options, can afford to wait**
- **2 gas independents – Novatek and Itera: develop (gas and customers) or die**
- **Pure traders – Trans Nafta, Centrusgas**

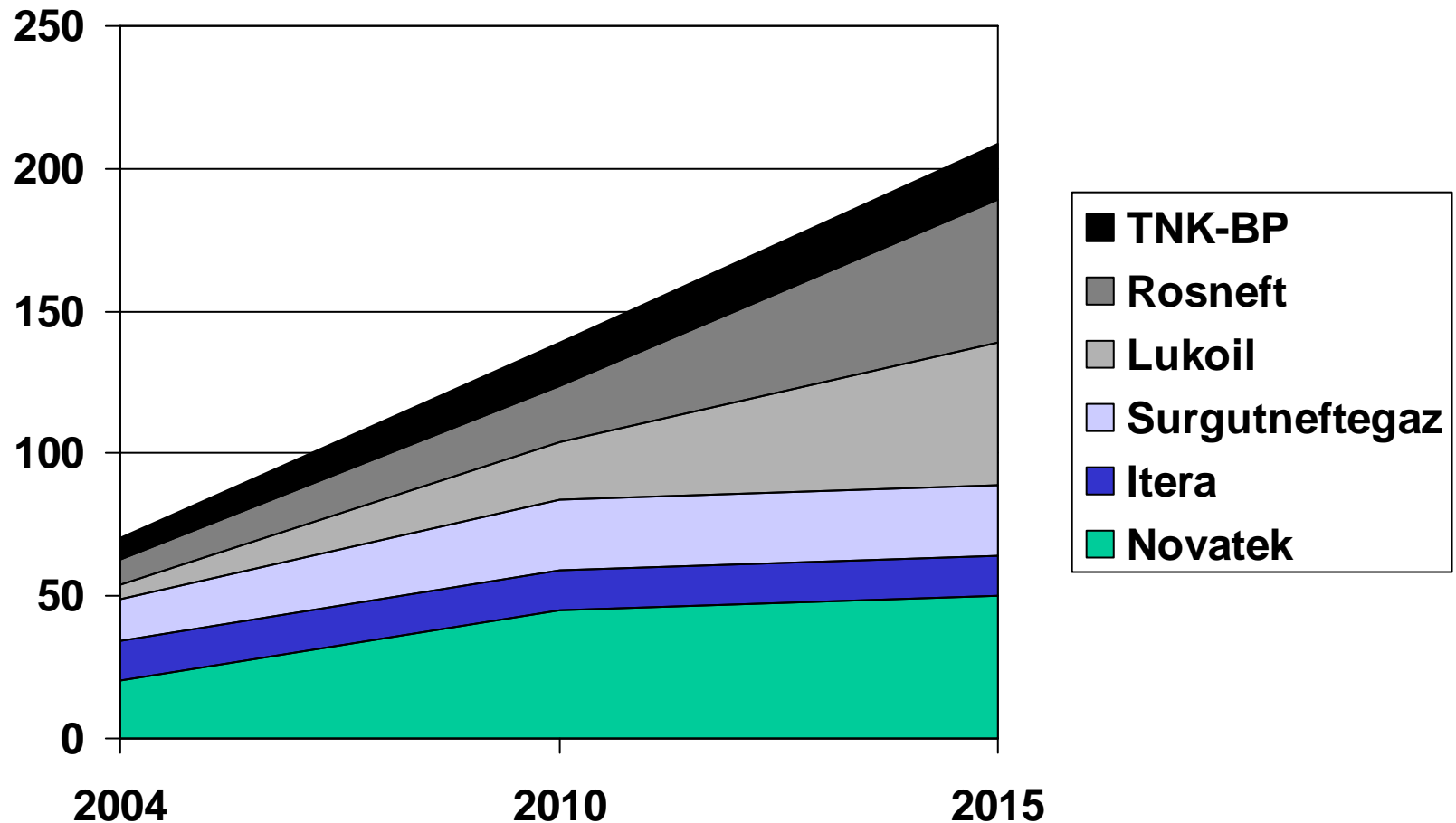
**All are very dependent on:**

- **Gazprom patronage and cooperation**
- **FEA decisions on transportation tariffs**
- **Government policy on taxation**

**Small number of companies with big reserves and very different agendas**



## Potential Independent Gas Production Potential Outside Eastern Siberia/Far East (Bcm)



**Assumptions underlying production potential are heroic but reserves are ample**



## **Regulated Transportation**

**Gazprom is required to transport processed gas for independent shippers since 1998 at regulated tariffs currently:**

- **RR 23.84 (\$0.84)/mcm/00km for delivery to Russian and CIS Customs Union customers**
- **\$0.92/mcm/00km for delivery to foreign (CIS not European) customers**

**believed to be substantially greater than Gazprom's internal charges**

**Obstacles to transportation include lack of:  
transparency of capacity bottlenecks, an  
established balancing regime, access to processing  
capacity, workable appeal procedures**



## Gazprom Transport of Third Party Gas 1998-2004

YEAR	Number of Shippers	Volume (Bcm)	Including from Central Asia (Bcm)	3 <sup>rd</sup> Party Gas as % of UGSS Throughpt
1998	6	28.2		
1999	10	83.7		13.5
2000	20	106.2		16.8
2001	24	92.4		14.7
2002	33	103.6	44	16.3
2003	35	110.4	48.8	16.4
2004*	35	111.8	50.2	16.3

\* preliminary

Source: Gazprom



## **Russia's Other Supply Source: Central Asia**

- **Turkmenistan: Gazprom deal for up to 80 Bcm/yr later this decade, but 2005 supply cut-off and price increase has created doubts**
- **Kazakhstan: up to 8.5 Bcm in late 2000s; potentially >50 Bcm/yr to sell in the 2010s**
- **Uzbekistan: up to 10 Bcm/yr – potential for up to 25 Bcm/yr in the 2010s**
- **Azerbaijan may have available gas (??)**

**Central Asian supply could fill any gap/delay in new NPT fields and Yamal, but is it reliable?**



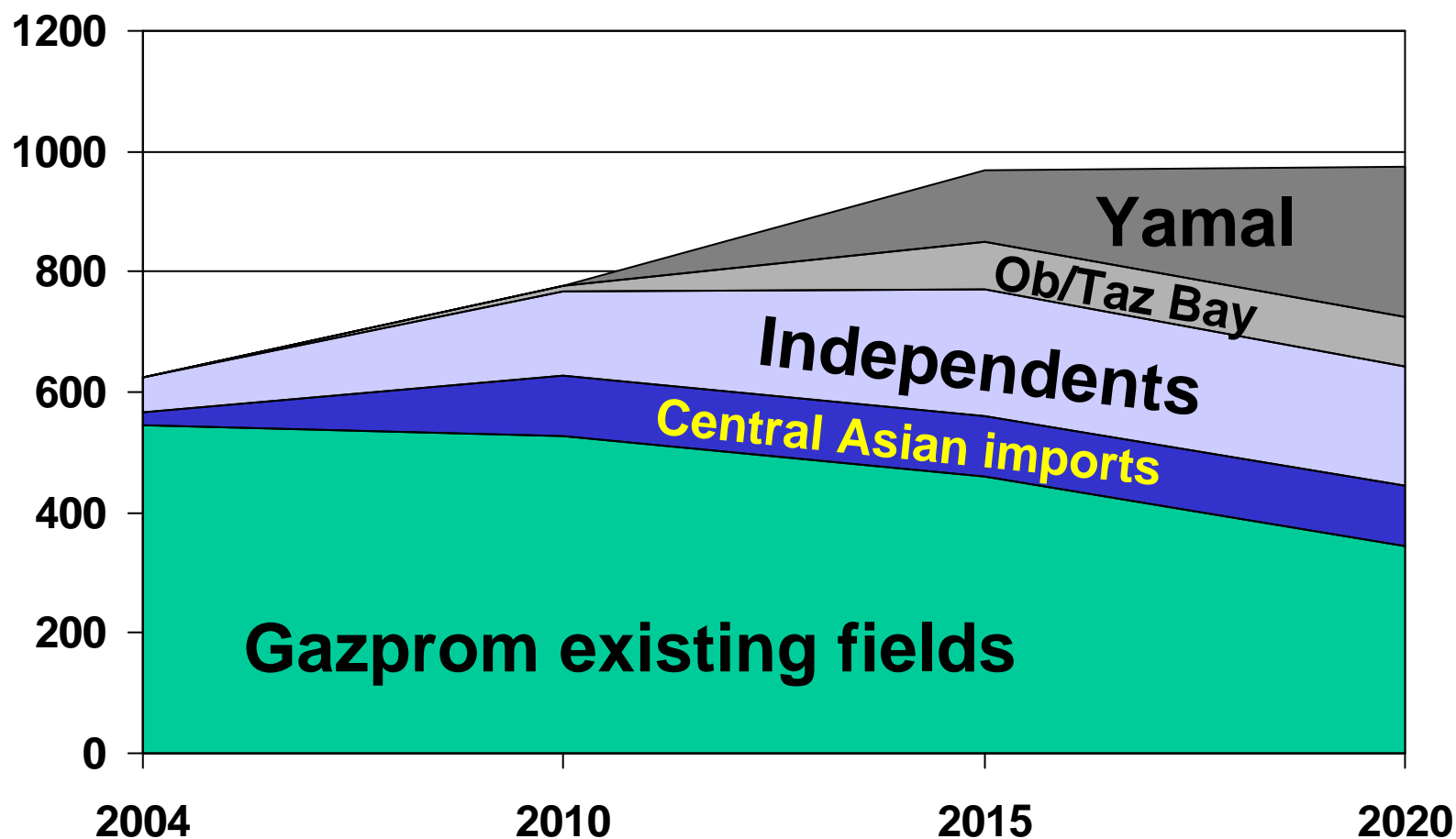
## Rough Costs of Different Supply Options

- Regulated 2005 prices for industrial customers in Moscow are ~\$40 per thousand cubic metres (\$/mcm); NPT gas is profitable at this price
- Cost base of independents is much lower but dependent on transportation cost
- Cost of Yamal gas delivered to Moscow depends on scale and transportation, estimated range is \$60-80/mcm (cost of Shtokman gas delivered to north west Russia is similar)
- 2006 Turkmen sales price is \$65/mcm (at Turkmen border) ~\$90 in Russia

**Central Asia *may be* more expensive than Yamal but critically more flexible than Yamal**



## Russian Gas Supply Options to 2020 (Bcm) (not including Eastern Siberia and Shtokman)



**Plenty of potential supply, but choices are complex**



## Price and Payment Reform

Situation is transformed from 1998-2000:

- Regulated industrial prices have made most customers profitable (or at least not loss-making) to serve since 2004; 2005 prices in Moscow are ~\$40/mcm
- Payments are up above 90% and cash payments above 80%
- Government has a commitment to raise prices to \$60/mcm by 2010 (inflation/location??)

**\$60/mcm (2005\$) would allow significant profits from SRMC (LRMC??)**



## **Prices: the Link to Demand and Efficiency**

**CURRENT PRICES MAY NOT BE  
SUFFICIENT TO CREATE EFFICIENCY  
INCENTIVES WHICH WOULD UNLOCK:**

- **savings potential**
- **efficiency potential**

**KEY ISSUE IS REPLACEMENT OF CAPITAL  
STOCK AND CONFIDENCE IN PROPERTY  
RIGHTS TO ENABLE INVESTMENT:**

**Industrial restructuring and market reform  
will reinforce savings/efficiency even as the  
economy grows**

**Quantification of sectoral potential and  
aggregate effects is a big challenge**



## Russian Gas Exports to Europe 1995-2005 (Bcm)

	1995	2000	2002	2003	2004*	2005
Western Europe	75.1	90.3	87.8	94.4	107.3	111.4
Eastern Europe	42.3	38.7	41.6	44.5	41.8	42.9
Baltic States	4.4	4.7	4.7	6.2	5.0	6
TOTAL EUROPE	121.8	133.7	134.1	145.1	154.1	160.3 (est)

\*Gazprom only, includes re-exports of Central Asian gas

**Biggest customers – 2004 (Bcm): Germany 41, Italy 22, Turkey 15, France 14**



## **Aftermath of 2006 Russia-Ukraine Gas Crisis**

**The January 4 and February 3 agreements:**

- **leave many questions as to volumes and prices for gas supplies that Ukraine needs**
- **do not deal with governance allegations against RosUkrEnergo**
- **need to address Ukrainian direct purchase of Turkmen gas: should RUE have a monopoly of Central Asian sales to Ukraine?**

**Unless the situation improves, Gazprom will minimise Ukrainian transit by:**

- **maximising Yamal and Blue Stream capacity**
- **ensuring NEGP is built as quickly as possible**



## **Russian Pricing of Gas to CIS Countries: a new era (prices in \$ per thousand cubic metres)**

**Ukrainian price of \$230 (cf German border price around \$235 in Q2 2006):**

- **Belarus \$46.67 – but under threat that “market prices” will be introduced in 2007 unless Gazprom gets 50% of Beltransgaz**
- **Moldova \$110 until June 2006 - \$160 thereafter??**
- **Georgia, Armenia, Azerbaijan all at \$110**

**Major issue is whether these countries are buying Russian gas or Central Asian gas, currently \$65 at the Turkmen border**



## **Gazprom: current export projects – Europe and LNG**

- **Gazprom Marketing and Trading sells spot gas in UK (but also Belgium):**
  - Minimum 3.5 Bcm/year, 8-10 Bcm by 2010?
  - Via Ukraine/German storage and using partners: Wingas, GdF, Hydro
  - Purchases from Kazrosgas JV
- **North European Pipeline (NEP) under way following agreement with E.ON and BASF**
- **LNG: to US from Shtokman; five JV partners announced (will be reduced to four?)**

**If NEP is completed on schedule Russian export capacity to Europe will be ~210 Bcm in 2010**



## **Chinese Gas Import Policy/Priorities**

### **CHINA BECAME FIXED ON LNG BUT..**

- **First two LNG contracts were signed on very favourable terms: low base prices plus ceiling prices not linked to oil, plus upstream equity shares**
- **Rise in oil prices plus tight Asia-Pacific market means that:**
  - **LNG suppliers will no longer offer these terms to Chinese importers**
  - **Without these price terms, gas cannot compete in Chinese power sector**
  - **China is already being outbid by Japanese suppliers for new LNG**

**China is being forced towards pipeline gas**



## **Putin's Visit to China in March 2006**

### **MOU Signed with China for Two Gas Pipelines (80 Bcm/year):**

- **One from Western Siberia - perhaps to join up with a second West-East Pipeline(?) – makes little sense for Russia given opportunity costs; little sense for the Chinese because of price policy**
- **One via the “eastern route” could be Kovykta or Sakha gas: makes a great deal more sense**

**Despite press talk of 2011-12; long negotiations (joint venture/price) seem likely**



## **Gazprom's Agenda 1: ongoing tasks**

- **REFORM:** corporatisation and legal unbundling, financial resp'ty/cost control
- **NETWORK RELIABILITY:** refurbishing and replacing a huge ageing network
- **SUPPLY REPLACEMENT:** moving to Yamal/ offshore as existing major fields decline
- **IMPORTS:** develop/maintain reliable large scale Central Asian imports
- **TRANSIT:** stabilise/normalise relationships with Ukraine, Belarus, Moldova
- **EUROPEAN EXPORTS:** manage huge export portfolio, including direct sales, at a time of potentially far-reaching change in terms of liberalisation/competition



## **Gazprom's Agenda 2: new projects/issues**

- **North European pipeline: create JV (including upstream), organisation of construction; arrange sales contracts including UK sales**
- **Shtokman LNG: create JV (upstream to regasification with 4-5 partners), arrange sales contracts; organisation construction**
- **Ust Luga LNG: decide whether to progress**
- **Decide on development of pipeline and LNG export business in North East Asia including: Sakhalin 2 (recently acquired stake), Kovykhta (TNK/BP), other projects**
- **PLUS Sibneft purchase – managing 1mmb/d of oil assets – domestic/international**

**Can any management handle all these tasks/projects simultaneously?**



## **Summary and Conclusions: increasing incompatibility of Gazprom's Agendas**

# **RUSSIAN GAS UTILITY AGENDA VERSUS GLOBAL GAS COMPANY AGENDA**

**Gazprom's current strategic vision of becoming "a global, vertically integrated energy company" is not a recognisable business model**



# **Gazprom and Russian Gas: past and future**

<b>THE PAST</b>	<b>THE FUTURE</b>
<b>Supply dependent on three major Russian fields</b>	<b>Supply much more diversified: domestic plus Central Asia</b>
<b>Gazprom has virtual monopoly of production</b>	<b>Independents account for at least 20% of production</b>
<b>Domestic market loss-making</b>	<b>Domestic market will be profitable</b>
<b>Exports to CIS and Europe by pipeline only</b>	<b>LNG exports to Asia and North America; longer term pipelines to Asia</b>
<b>Gazprom is Russia gas utility with exports</b>	<b>Gazprom is global gas (and oil?) company</b>
<b>Gazprom of interest to European utilities only</b>	<b>Gazprom of interest to all international energy companies</b>