

# Opportunities and Constraints: Prospects for Russian Oil and Gas Supply to Asia

---

*Comments on Russia's Eastern Gas Program*

*Matthew J. Sagers*

*Cambridge Energy Research Associates*

April 29, 2007 • Washington, D.C.



CONFIDENTIAL

© 2008, All rights reserved, Cambridge Energy Research Associates, Inc., 55 Cambridge Parkway, Cambridge, Massachusetts 02142  
No portion of this presentation may be reproduced, reused or otherwise distributed in any form without prior written consent.

## *Terms of Use*

The accompanying materials were prepared by Cambridge Energy Research Associates, Inc. (CERA), and are not to be redistributed or reused in any manner without prior written consent, with the exception of client internal distribution as described below.

CERA strives to be supportive of client internal distribution of CERA content but requires that

- CERA content and information, including but not limited to graphs, charts, tables, figures, and data, are not to be disseminated outside of a client organization to any third party, including a client's customers, financial institutions, consultants, or the public.
- Content distributed within the client organization must display CERA's legal notices and attributions of authorship.

Some information supplied by CERA may be obtained from sources that CERA believes to be reliable but are in no way warranted by CERA as to accuracy or completeness. Absent a specific agreement to the contrary, CERA has no obligation to update any content or information provided to a client.



# Russia's Eastern Gas Program: Not Really Implementable Development Program, But Expression of Political Policy

- **Program's Goals Clearly Aimed at Handicapping "Independent" (Non-Gazprom) Asian Supply Options**
  - Kovykta
  - Sakhalin
- **Gas from These projects Their Gas Earmarked for Domestic Consumption, while More Expensive Options (Altay Route, Chayanda) Promoted**
- **Other Program Goals:**
  - Maintain "single export channel"
  - Establish explicit link to European price netbacks with Altay Pipeline

**With Most Goals Achieved, Eastern Gas Program Seems Likely to be Revised Significantly.**

# Altay Pipeline to China -- Increasingly Unlikely to be Built with Gazprom's Takeover of Kovykta from TNK-BP



Source: Cambridge Energy Research Associates.  
60505-17

© 2008, Cambridge Energy Research Associates, Inc. No portion of this presentation may be reproduced, reused, or otherwise distributed in any form without prior written consent.

CERA\_NBR\_April 2008

# Likely Parameters of Possible Pipelines and Estimated Gas Prices at Chinese Market Hub

<b>Starting Point</b>	<b>Capacity</b> (billion cubic meters per year)	<b>Length of New Pipeline</b> (kilometers)	<b>Distance to Major Chinese Market</b> (kilometers)	<b>Estimated Construction Cost</b> (billion dollars)	<b>Estimated Gas Price at Chinese Market Hub*</b> (dollars per thousand cubic meters)
West Siberia (Altay)-China	30	3,050	7,217	11	~400
Kovykta	30	2,637	2,637	9	~300
Sakhalin	19	1,529	1,529	5	~310
Kazakhstan	30	2,475	6,642	9	~330
Turkmenistan	30	2,582	6,749	9	~240



Source: Cambridge Energy Research Associates.

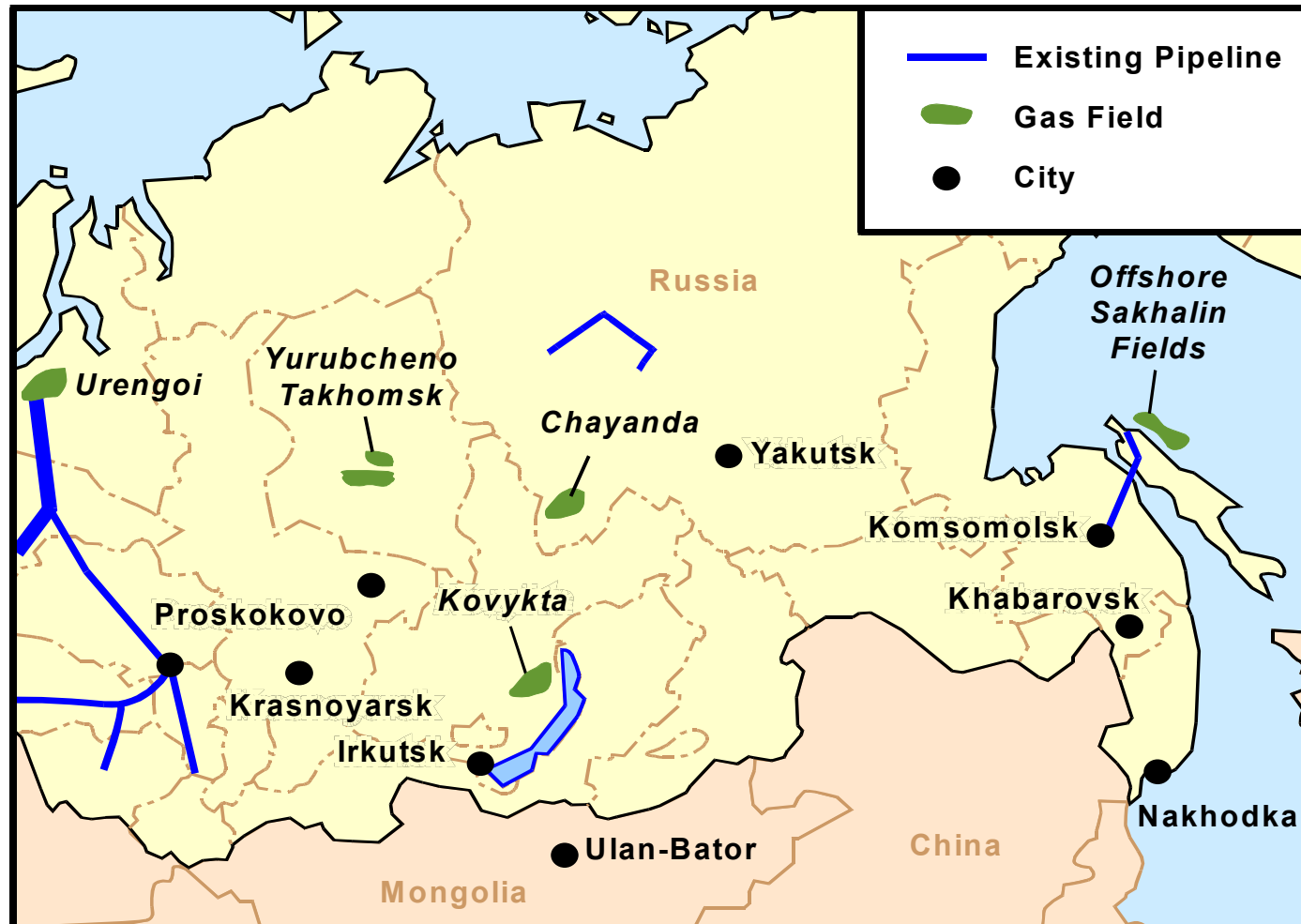
\*Price for Russian gas assumed to provide same netback in West Siberia as European exports of Russian gas.

Price for Kazakh and Turkmen gas assumed to provide same netback as their exports to Russia at the national border.

CERA\_NBR\_April 2008

© 2008, Cambridge Energy Research Associates, Inc. No portion of this presentation may be reproduced, reused, or otherwise distributed in any form without prior written consent.

# Major Gas Fields and Gas Pipeline of Eastern Russia

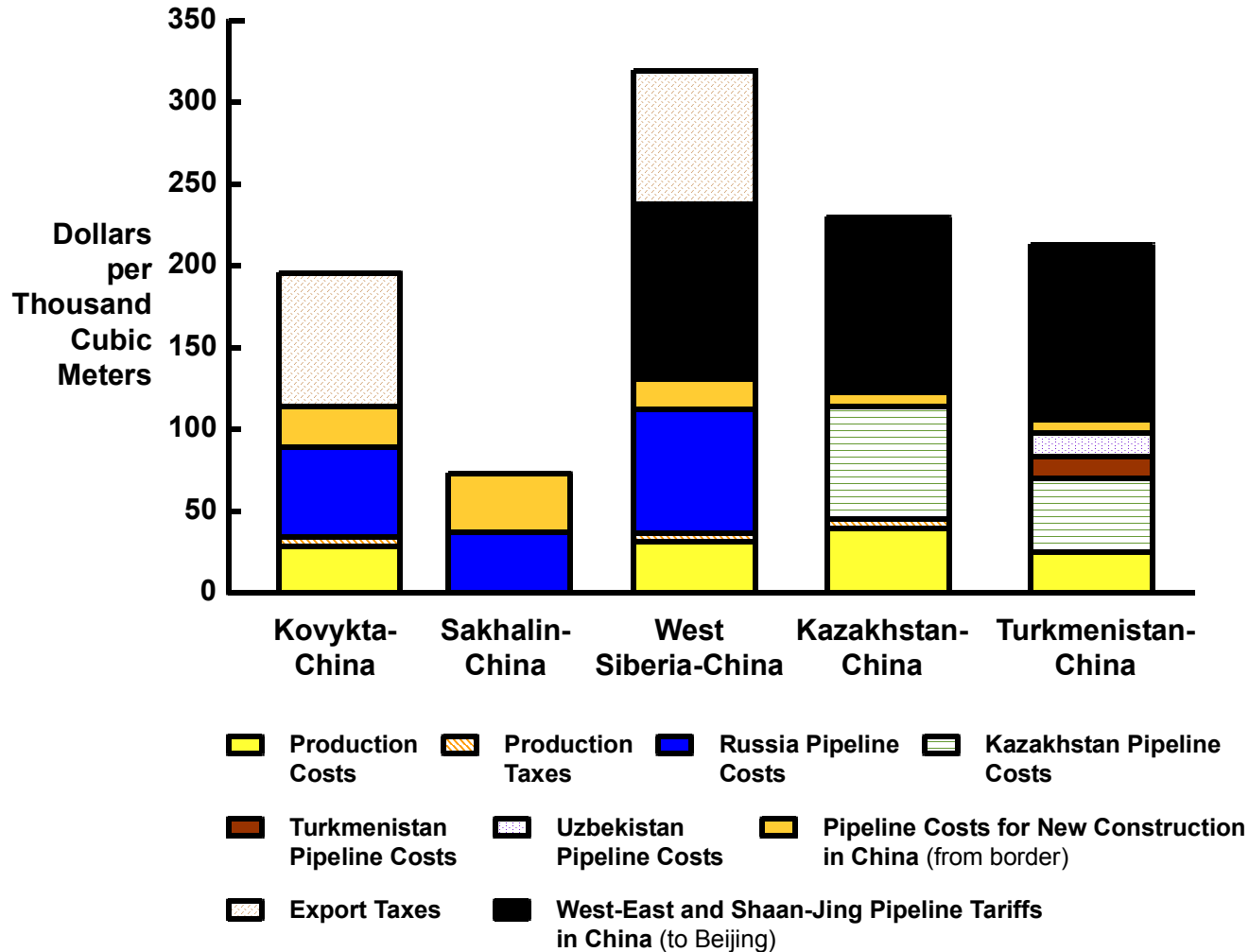


Source: Cambridge Energy Research Associates.  
60505-5

# Eurasia-China Pipeline Projects in Comparative Perspective: None Are Perfect (selected indicators)

Starting Point	Government Support	Readily Available Gas Reserves	Direct Route (Not Crossing Transit State)	Price in Chinese Market = or < European Price
West Siberia (Altay)–China	✓		✓	
Kovykta		✓	✓	
Sakhalin			✓	
Kazakhstan	✓		✓	
Turkmenistan	✓			✓

# Estimated Delivered Costs for Natural Gas to Northern China by Pipeline from Eurasia



Source: Cambridge Energy Research Associates.  
60505-28

© 2008, Cambridge Energy Research Associates, Inc. No portion of this presentation may be reproduced, reused, or otherwise distributed in any form without prior written consent.

CERA\_NBR\_April 2008

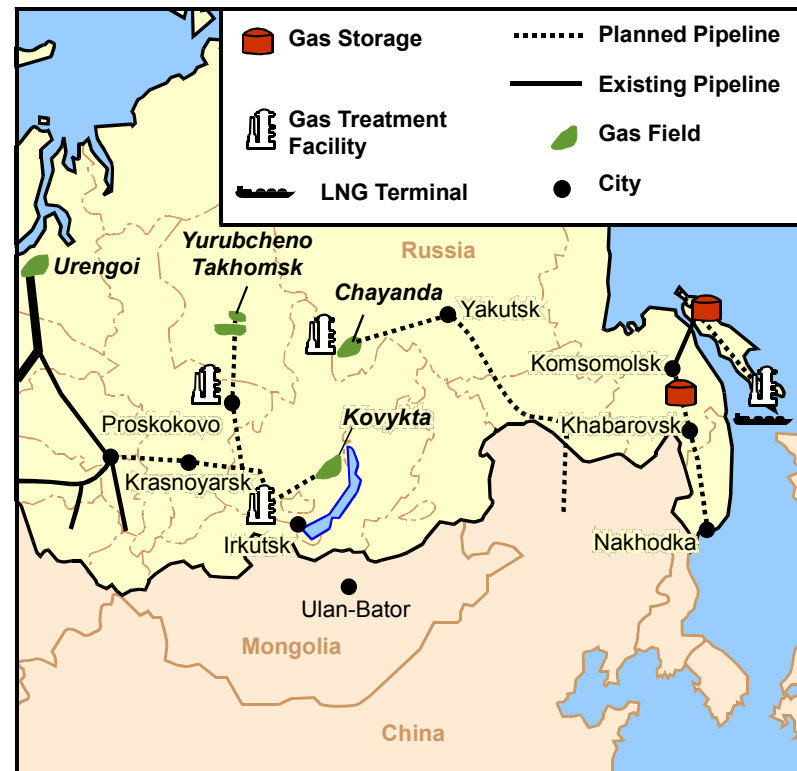


# Kovytko Gas: Eastward to China or Westward to Proskokovo?

East Siberian Gas Export Option



Gazprom's Vision of Russia's Eastern Gas Development



Source: Cambridge Energy Research Associates.  
60505-8

© 2008, Cambridge Energy Research Associates, Inc. No portion of this presentation may be reproduced, reused, or otherwise distributed in any form without prior written consent.

CERA\_NBR\_April 2008

# Kovykta Pipeline Pros and Cons



- **Single Largest Russian Gas Field Available for Pipeline to China in Near Term**
- **One of Shorter FSU-China Routes Under Consideration**
- **Kovykta Consortium May Neutralize Environmentalist Opposition by Following Route of Already-approved ESPO Oil Pipeline**



- **Opposition to Kovykta Export Program from Key Russian State Players, including Gazprom and Regional Government**
- **Without Gazprom's Participation in Consortium, Project May Remain Stalled, No Guarantee of Gazprom's Support for Export Component Even as Consortium Member**
- **Gazprom's Insistence on Large-scale Helium Extraction Operation and Processing Facilities May Kill Project Economics**



**If you have any questions about this presentation or  
CERA in general, please feel free to contact**

**Irina Zamarina  
izamarina@cera.com**



55 Cambridge Parkway  
Cambridge, Massachusetts 02142, USA  
[www.cera.com](http://www.cera.com)