China and Kazakhstan energy partnership – its implications for the world energy market

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Contents

• Sino-Kazakhstani energy relations: overview
• Kazakhstani hydrocarbons: value estimations
• Options of securing hydrocarbons open to China
• Estimating the impact on Kazakhstan’s external relations
• Research highlights
Sino-Kazakhstani energy relations: overview (I)

Figure 1 Share of the main trade partners in the Kazakhstani export, 2011, %

Source: National Agency on Statistics: Vneshnyya torgovlya Respubliki Kazakhstan
Kazakhstan's crude oil exports to China

Sources: World Bank & CGES

- To China
- Share of total exports


0 2 4 6 8 10 12

0% 2% 4% 6% 8% 10% 12% 14% 16% 18%

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Main oil and gas infrastructure in Kazakhstan
Kazakhstani hydrocarbons: value estimations

- \( NBV = P_s - C_d \), where:

  \( NBV \) – netback value of a barrel of oil, \( P_s \) – selling price of the oil in the target market, \( C_d \) – the cost of delivering the oil from the wellhead to the selling point

- In turn the delivery cost can be expressed as: \( C_d = P + L + S \)

  where:

  \( P \) – pipeline tariff, \( L \) – loading costs at the export terminal, \( S \) – shipping cost, including freight cost, insurance, demurrage and navigation dues where applicable

Average netback value for Tengiz crude in the first eleven months of 2012, $/bbl
Options of securing hydrocarbons open to China

- direct investment in oil and gas projects in countries that are shunned by Western investors, either due to government sanctions, shareholder pressure, or an unfavourable political/economic climate, such as Iran, Sudan, Venezuela, Ecuador and Myanmar;

- direct investment in oil and gas projects in countries that have been of marginal interest to their Western competitors, such as Chad, Niger, Mauritania and Peru;

- ‘oil for loan’ deals, in which future oil production is used as collateral for large loans to oil-producing countries from state-owned Chinese banks;

- direct bidding for service contracts in Middle Eastern countries, either with or without Western partners, particularly in Iraq;

- construction of pipeline infrastructure to allow delivery of hydrocarbons directly to China;

- aggressive acquisitions in key countries (Kazakhstan is the prime example).
Estimating the impact on Kazakhstan’s external relations

- According to authors’ calculations Chinese companies might control over 40% - 45% of Kazakhstan’s oil industry. This figure would exceed the share controlled by Kazakhstani investors.

- The Chinese oil and gas investment in Kazakhstan starting as early as 1997. Joint venture is one of the forms of investing to Kazakhstan by the Chinese companies.
Research Highlights

• China’s strategic objectives with respect to Kazakhstani energy resources are identified.

• Netback calculations are used in order to determine the value of Kazakhstani hydrocarbons at the wellhead derived from sales on the European market.

• Netback calculations provide a rationalisation for China’s preferred path of upstream investment in Kazakhstan’s oil sector over purchases from other producers.