

## **Shale: the wedge between Russia and China**

by Robert Blohm

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As the US undergoes a shale energy revolution, Canada is looking to China as an alternate market for exports, just as Russia looks to China as the EU diversifies its supplies and does its own shale development. If both the US and the EU move away from Canada and Russia respectively as an energy supplier, then China becomes Canada's and Russia's replacement market. Yet, according to the International Energy Agency, and as foretold by Li Guo Yu, China's venerable elder statesman, pioneer and geographer of energy, China has more shale potential than either the US or the EU! If China is smart, it should push for low prices (ideally zero profit) for Russia in natural gas negotiations and develop its own domestic resources instead. Indeed, making China more energy independent is in both China's and the world's interest, since it would increase overall supply and lower prices.

As the world's largest conventional oil and gas producer, Russia's not a shale player and therefore neither a willing nor a feasible player in China's shale development. To the contrary, since electricity production is the biggest consumer of natural gas, Russia is a key supporter of China's electric power sector in the protracted struggle to preempt domestic natural-gas pipeline grid development and expand electricity's dominance over long distance shipment of energy, namely by power transmission line, hub-and-spoke fashion from huge remote central generating units (coal, hydro, nuclear, and at natural gas import intake locations). Russia has provided ultra-high 1000 kilovolt (UHV) transmission-line technology that's used practically nowhere in the world, and that China's power sector supports but is hard pressed to fund to increase long-distance regional interconnectivity of the national electric power grid during the post-financial crisis infrastructure construction boom.

China's National Development and Reform Commission (NRDC) has been less than enthusiastic about UHV power-grid expansion. Instead, the NDRC favors development of an independently operated national natural gas pipeline grid network to supply smaller local gas-fired electric turbines distributed around the country and close to power consumers, connected by a gas pipeline grid, and providing a stabler, cleaner, more grid-like electric power system less vulnerable to wide-area blackouts.

A 2007 draft law unbundling production from the transportation business that would serve all producers and

consumers under a common transportation tariff was preempted by the financial crisis and is yet to be enacted, although a similar law has been implemented in Guangdong Province. While a robust natural gas delivery system would support import of Russian gas, it more importantly serves as a *sine qua non* for development of China's own natural gas resources in competition with import from Russia.

Bottom-line: minimally, don't expect a natural gas deal between Russia and China. Russia has no intrinsic interest in shale. The US does, and in lessening China's dependence on Russia and in participating in any natural-gas development boom in China. That ultimately requires allowing transfer of sensitive turbine blade metallurgy -- a technology needed to locally manufacture gas turbines which are basically just jet engines -- which is virtually impossible given the growing lack of trust between the Chinese and US militaries.

China's shale potential points to huge national security and economic benefits to strategic cooperation between the US and China. That's likely why the US and Canada don't mind Chinese investment partnerships in North American oil and gas that facilitates the transfer of knowledge China can use to jointly develop shale resources back in China. Russia would favor increased strategic tension between the US and China to prevent China's domestic oil and gas development and reduced energy dependence on Russia, and that's consistent with Russia's interest in continuing Middle East strife to keep oil prices as high as possible for as long as possible, something that's diametrically opposed to China's own economic interest.

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