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# Cross-border Cooperative Energy Resources Projects within Northeast Asian Countries

Dr. Jianping Zhang  
Institute for International Economic Research, NDRC  
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# **Part I. Current Situation of cross-border energy cooperation projects in Northeast Asia**

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## **A. Sino-Russian cooperation**

- China has noticeably strengthened bilateral energy cooperation with Russia since 1996. China's rapid developing energy market has a tremendous appeal to Russian energy companies in energy supply, energy equipment, technologies and services.
  - Oil
  - Natural gas
  - Electric power

**Table 1 Sino-Russian cross-border energy cooperation projects in recent years**

Cooperation area	Time	Plans
Oil	2006.4	Sino-Russian Oil Pipeline (branch line of (Taishet- Nakhodka) was started.
	2007	Russian TNK-BP, Russian Oil Company and Russian Oil Pipeline Transport Company planned to use the China-Kazakhstan Pipeline along the Atasu-Alashankou route to export oil to China, which an annual amount of 1.5 million tons of oil is supplied.
Natural gas	2006.3	Gazprom and CNPC signed the "Memorandum of Understanding on cooperation in natural gas" in Beijing. Russia planned to build two natural gas pipelines to China, providing an annual volume of 68 billion cubic meters to China from 2011. West Line is from West Siberia pipeline to Xinjiang in China by the Altai Territory, and ultimately connected to the pipelines of West-East natural gas transmission project, supplying natural gas to Chinese coastal area; Eastern line is from Sakhalin, via Gongqing City and Khabarovsk to Northeast China region.
Electric power	2005-2006	A number of cooperation agreements have been reached between SG and Russia Electricity company. Russia planed to expand the power capacity in the Far East and export electricity to Northeast China at phases. At present, the first transmission projects agreement has been signed, planning to lay 145 kilometers length of 500-kilovolt transmission lines and connecting the power systems of Eastern Russia and Heilongjiang Province in Northeast China.

## B. Russian-Japanese cooperation

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- Implementing development project of large-scale oil-gas field
  - “Sakhalin I ”
  - “Sakhalin II ”
- Currently the major large-scale cooperation project is the construction of the Oil Pipeline from Taishet in East Siberia to Nakhodka in the Far East area.
- At present, Russia and Japan are discussing the possibility of the joint nuclear energy development, planning to establish 12 nuclear power plants in the Far East together.

Table 2 Russian-Japanese energy cooperation plans  
at feasibility study stage

Cooperation area	plans
Natural gas	Gas pipeline plan from Russia South Sakhalin Island to Japan's Hokkaido
	"Blue Fuel" plan of gas pipeline from Sakhalin - Khabarovsk - seaside territory- North Korea - South Korea - Japan
Electric power	"Russia-Japan Electric Power Bridge" program from Sakhalin Island to the Japanese archipelago by laying 4,000 megawatts of undersea electric fiber cable

## C. Russian-Korean cooperation

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- In recent years, South Korea has regarded Russia in energy policies, especially after the Russia-Korea summit meeting in 2004. The recent main cooperation projects are:
  - ① Gas supplying plan of Kovykta Condensate Gas Field.
  - ② Gas supplying plan of “Sakhalin II”
  
- In addition, South Korea and Russia have also developed close cooperation in oil exploration, crude oil refining and infrastructure reconstruction in Russian Far East. Key items are:
  - ① In Russia's major oil-producing region Tatarstan, their target Tatar Oil Company and South Korea signed a cooperation memorandum.
  - ② South Korea's Samsung Corporation and Russian Oil Company signed an agreement on rebuilding the Khabarovsk Oil Processing Plant in Far East.
  - ③ South Korea's National Oil Corporation and Russian Oil Company signed a memorandum of understanding on cooperation.

## **D. Sino-Mongolian cooperation in electric power**

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- State Grid Corporation of China (SG) started the Sino-Mongolian cooperation in electric power at the end of September 2005. In November, SG signed the cooperation memorandum with Central Grid Company of Mongolia.
- On June 1st, 2006, the energy cooperation parties signed the “Agreement on the Primary Feasibility Studies on the Construction of Coal Power Projects in Mongolia Transmitting Electricity to China”.
- This is the first large cross-border cooperation in electric power which has been put into implementation between China and its neighboring country.

## E. Multilateral cooperation

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- There are few multilateral energy cooperation projects in Northeast Asia.
- The comparatively influential one is the development of Kovykta Condensate Gas Field and its pipeline construction.
- December 1997, Russia, China, Japan, South Korea and Mongolia have discussed the item that laying down 4000 kilometers gas pipes via Russia and Mongolia to China.
- The project was expected to cost 10.8 billion US dollars and was from Russia to South Korea via Mongolia, and Northeast China. It was designed to supply gas to China, Japan and South Korea.
- However, Japan lost interest in this project at last. In 2006, the decided natural gas pipeline changed its way and was not through Mongolia.

## **Part II. Problems of Cross-border energy cooperation projects**

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### **A. Greater energy competition than cooperation among major countries**

- The changes of Russian Far East oil pipeline from “Angarsk-Daqing”, “Angarsk-Nakhodka” to “Taishet-Nakhodka” are the results of mutual game among Chinese, Japanese and the Russian governments.
- The oil competition on Russian Far East Oil Pipeline between China and Japan has much more negative effect on energy cooperation in Northeast Asia.
- It not only detained the agreement of the oil pipeline that already reached between China and Russia, but also caused tension again and again on Sino-Japanese relation.
- Russia is the largest winner in the oil pipeline competition while China and Japan have different degrees of interest loss.

## **B. Russia's doubts with regard to cooperation and financing problems in Sino-Russian energy cooperation**

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- Russia has various worries on major energy projects with China, and it's afraid that China will impose economic and political pressure on it.
  - Energy trade takes so large a percentage of the total between the two sides that Russia doesn't want to become China's raw materials export country.
  - The "Dangerous China Theory" causes reservations to Russia's energy policies toward China. China has great difficulty in getting exploitation access to the Russian Far East oil.
  - With respect to capital, China is in an inferior position when developing energy cooperation with Russia.

## C. Price volatility affects progress of energy cooperation projects

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- In recent years, international crude oil prices continues rising and Russia has new demands on oil prices provided to China.
  - Russia's oil companies expressed their dissatisfaction to the current oil price given by China.
- On the other hand, natural gas price is affecting China-Russian gas pipeline construction too.
  - China and Russia have been holding many negotiations on the natural gas price. But both sides have not yet reached an agreement and the design and construction of the natural gas pipeline system have been delayed.

## **Part III. Prospect for cross-border energy cooperation**

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### **A. Cross-border energy cooperation projects will be accelerated**

#### **■ Oil bilateral cooperation will be upgraded**

- China, Japan and South Korea will focus on strengthening energy cooperation with Russia. They will promote bilateral relations through energy trade, especially the oil trade.
- Russia is trying to increase the railways' oil transportation capacity by reconstructing the railway infrastructure, rebuilding oil export ports and reducing railway transportation prices.
- After the completion of Far East oil pipeline, the oil pressure will be greatly alleviated in Northeast Asian countries such as China, Japan and South Korea, and countries' cooperation relations will be more closely linked by oil.

## ■ Natural gas trade will be expanded

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- Although there are dispute between China and Russia on the natural gas export prices, it should not affect the construction of Sino-Russian natural gas pipeline ultimately.
- Russia's natural gas exported to China and South Korea's will be increased significantly as soon as the completion of Sino-Russian natural gas pipeline project.
- China, Japan and South Korea will be the potential important customers of the natural gas network in Russia's Far East. China will become Russia's largest natural gas market in Northeast Asian, because its supply shortfall will reach 80 billion cubic meters in 2020.

## ■ **Electric power cooperation will be enhanced**

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- Sino-Russian cooperation in electric power will be strengthened further.
  - The strong complementarity would contribute to the rapid development of Sino-Russian electricity trade.
  - Cooperation between the two sides will be deepened. The cooperation should include all aspects of the power industry.
  - It can be predicted that under this cooperation mode, China will no longer be a unilateral electricity importer and it will receive the same investment opportunities.
- Within the framework of “Sakhalin” project, the Russian-Japanese electric cooperation will be gradually developed.
- Sino-Mongolian Thermal Power cooperation has been steadily processed. There is also a certain foundation for Russia-Mongolia electricity cooperation.
- In the next few decades, China will start more than 40 nuclear power projects, some of which will be cooperated with Russia, South Korea and Japan.

## **B. Forms of energy cooperation projects will be diversified**

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- Northeast Asian nations will promote cooperation on energy efficiency improvement and environmental security.
  - Japan and South Korea's advanced technology and experience in the clean use of coal, energy conservation, nuclear power, energy efficiency improving, renewable energy and other aspects will be further transferred to China, Russia and other countries.
- China, Japan, South Korea and Russia might carry out on a series of important cooperation, so as to improve the joint response ability to energy crisis.
- In the aspect of renewable energy and new energy's development and utilization, there is large cooperation space for Northeast Asian nations.

## **C. Promoting the building of regional multilateral energy cooperation mechanism**

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- China, Japan and South Korea have been aware of the importance of regional energy cooperation, and have made great efforts to establish a regional multilateral energy cooperation mechanism.
- For Russia, China, Japan and South Korea's cooperation can form a stable oil export market and gain access to large amount of investment for energy development and infrastructure construction. Besides, Russia can effectively balance the bargaining power with Europe and the United States in world energy market and increase national interests.
- To solve the financing problem in cross-border energy projects, China, Japan, South Korea and Russia can accelerate the foundation of Northeast Asian Development Bank in a joint venture form.

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■ Thank you for your Attention!

- [Zhangjp@amr.gov.cn](mailto:Zhangjp@amr.gov.cn)
- 86-10-63908914(o)
- 13366207917