

China's Shale Gas Strategy

Written by Ralph Winnie, Contributing Editor
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Over the past twenty years, China has experienced dramatic economic growth, transforming itself from a basically agrarian society into the world's second largest economy behind only the United States. Since the initiation of economic and political reforms in 1978, China has produced an average annual growth rate of 10 percent. From 1978 to 2008, China increased its GDP 83 times (NBS, 2009) and lifted over two hundred million of its people out of poverty. This has continued to generate increased energy supply. Within China's energy sector, production was stimulated by the clarification of mineral exploration rights, the development of transportation and roadway infrastructure projects, diversification of management structures and the liberalization of environmental and safety regulations.

As the sale of automobiles in China is expected to surpass those in the United States within the next five years, there is growing concern in China about energy security, power capacity shortages, as well as air pollution. The Chinese Central Government has begun to focus on alternative technologies, including clean coal technology and renewable sources of energy. China is expected to invest heavily in support of renewable energy development targets for 2020. Achieving these targets will depend on developing well-trained and highly skilled personnel, cost reductions in technology and effective distribution of power generation (electric grids) through electric utilities.

In terms of energy consumption, China is now second only to the United States. Given China's vast coal reserves, coal is currently China's main fuel source and supplies roughly two-thirds of its energy needs. Through the use of coal over the past twenty-five years, China has become the largest emitter of greenhouse gases in the world.

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Since coal based power is directly responsible for such a major share of global CO2 emissions, it will be imperative for China to develop new technologies, which allow energy to be extracted from coal without noxious emissions.

In an effort to alleviate some of China's reliance/addiction towards coal as a major source of China's energy policy, the Chinese Central Government has seriously embarked on an international campaign aimed at development and exploration of shale gas as part of China's energy strategy focusing on natural gas. China is drafting a National Shale Gas development plan, studying relevant policies and establishing pilot shale gas development areas.

China is believed to have significant shale gas potential. The preliminary findings (conducted by the United States) shows that the shale gas resources in China might be 100 trillion cubic meters, the same level as that of the United States. In April 2010, the Ministry of Land and Resources announced that the shale gas field in Chongqing would be available for commercial production starting this year. The goal is for shale gas production in China to be equivalent to 8-12 percent of the total annual domestic natural gas output. Shale gas has been incorporated by the Chinese Central Government into the "National Energy Strategies Toward 2030."

China has watched the shale gas boom explode within the United States and is looking to emulate the efforts of the United States in shale gas production. China holds roughly 30 trillion cubic meters of shale gas resources and the goal of the Chinese Central Government is to have about 12 percent of their natural gas production come from shale gas wells by 2020. However, extracting natural gas from the shale is quite difficult and requires specialized skills to understand the mechanics of shale gas exploration and production, which is something that companies in the United States have been perfecting for many years.

In 2009, China enlisted the help of Royal Dutch Shell to begin its first venture in developing China's shale gas. In September 2010, China Petroleum Corporation (SINOPEC) signed a joint venture partnership with Chevron to develop shale gas near Guiyong City. In October 2010, CNOOC, China's biggest offshore oil producer announced a deal with Chesapeake Energy where CNOOC (China National Offshore Oil Company) paid \$1 billion for one-third of the state assets of Chesapeake Energy in the Eagle Ford shale gas site located in South Texas. Furthermore Petro China recently announced that the company had finished the drilling of China's first horizontal shale gas well in Sichuan province in southwest China.

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In China, most gas shale gas fields are located in thinly populated areas, which makes shale gas development and exploration very lucrative for foreign companies who are increasingly entering the Chinese shale gas market under joint ventures with Chinese companies. Furthermore, in the United States, exploitation of shale gas is based on the price, which is roughly in the \$100 range. The industry ebbs and flows based on the market price. In China, the Chinese Central Government is able to control many economic factors, which make long-term projections for shale gas exploration in China very strong. These factors adopted by the Chinese Central Government to support the development of shale gas include establishing sustainable and stable market demand through favorable price policies, mandated market share policies, government investment and government concession programs. In an effort to ensure the projected success of shale gas exploration, the Chinese Central Government also has the ability to set renewable power tariffs and cost sharing policies as well as increasing fiscal input and tax incentives.

In conclusion, the Chinese Central Government is making concerted efforts to encourage foreign participation in the development and exploitation of China's shale gas industry. China has further taken the initiative of investing in various shale gas projects in North America in an effort to gain the proprietary understanding of the technology involved in shale gas development. China recognizes shale gas as the clear alternative to coal in order to reduce its carbon emission footprint and move away from coal fired power plants towards a cleaner, safer technology, thereby meeting the increasing demands for energy among the rapidly growing middle class in China.

Ralph E. Winnie, Jr. has worked extensively in China, advising individuals and companies regarding Chinese business practices and customs. He has been interviewed by CCTV and Phoenix Satellite Television and was appointed as a Business Development Representative for the province of Guangxi in Southern China, responsible for the promotion of business development, tax and trade between the province of Guangxi and the United States.