



# PACIFIC ENERGY SUMMIT

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## **One Hundred Years of Sino-U.S. Energy Cooperation**

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At the sixth U.S.-China Strategic Dialogue held in July 2014, China and the United States reached an agreement on over one hundred items, with nearly half of these agreements involving climate change, energy, and environmental issues. China and the United States already rank first and second in the world, respectively, in terms of energy consumption, production, and greenhouse gas emissions. Both countries depend heavily on traditional fossil fuels such as oil, coal, and natural gas, with fossil fuels making up 92% of the energy composition in China and 87% of the U.S. energy mix.

Though similarities exist between China and the United States in regard to energy demand and environmental concerns, there is a growing gap between the two countries in terms of energy consumption and production. Over the past five years, the United States has increased domestic oil production at the fastest rate in the world, with half of the world's oil produced during this period originating from U.S. oil fields. Furthermore, the shale gas revolution has increased shale gas production thirty-fold in a ten-year period, making the United States a net exporter of natural gas as well as the world's largest natural gas producer. As a result, both coal and oil have decreased to less than 50% of the United States' total energy mix,<sup>1</sup> helping reduce the country's CO<sub>2</sub> emissions to 760 million tons.<sup>2</sup> The United States is currently leading a new world energy revolution, which has helped the global energy landscape undergo a gradual, but significant, transformation.

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<sup>1</sup> Herman Franssen, "Obama and Declining U.S. Dependence on Imported Oil and Gas," Middle East Institute, November 25, 2014, <http://www.mei.edu/content/article/obama-and-declining-us-dependence-imported-oil-and-gas>.

<sup>2</sup> Bobby Magill, "Natural Gas, Efficiency Fuel U.S. Carbon Emissions Decline," Climate Central, October 21, 2013, <http://www.climatecentral.org/news/natural-gas-efficiency-fuel-u.s.-carbon-emissions-decline-16639>; and "U.S. Energy-Related Carbon Dioxide Emissions, 2012," Energy Information Administration (United States), October 21, 2013, <http://www.eia.gov/environment/emissions/carbon/archive/2012/index.cfm>.

China's energy situation is also changing. Thirty years of reform and opening have integrated the Chinese economy with the global economy, pulling 300 million people out of poverty and turning China into the "world's factory." As the quality of life for its citizens increases, so does energy consumption. The country's energy structure, however, is stuck in the past. China is responsible for nearly 20% of the world's total energy consumption and remains highly reliant on coal, which represents 67% of the country's energy mix. Oil is another important energy source for China, which is the largest oil-importing country in the world and has a foreign dependency rate of over 60%.

Due to its 7.3% GDP growth rate in the third quarter of 2014, coal use, and growing energy demand, China is the source of nearly 27% of the world's total CO<sub>2</sub> emissions, the highest share of CO<sub>2</sub> emissions of any country in the world.<sup>3</sup> On a more local scale, the worsening of China's air pollution over the past few years has created tremendous physiological and psychological pressure on the Chinese people. Therefore, sustainability and green development are not just promoted by environmentalists and politicians but are also strongly desired by the Chinese populace. Environmental unsustainability has become the number one challenge in China's energy situation.

Throughout the history of modern oil development, three major instances of Sino-U.S. energy cooperation have taken place with profound impacts on the development of the Chinese oil industry. The current similarities and differences between the United States and China regarding energy production, energy consumption, and environmental concerns now call for a fourth Sino-U.S. cooperation.

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<sup>3</sup> Jake Spring and Xiaoyi Shao, "China's Growth Slowest since Global Crisis, Annual Target at Risk," Reuters, October 21, 2014, <http://www.reuters.com/article/2014/10/21/us-china-economy-gdp-idUSKCN0IA05W20141021>.

*Early Twentieth Century Oil Fields and the “China Oil Scarcity Theory”*

The first instance of Sino-U.S. oil cooperation resulted from the 1907 discovery of oil at Shaanbei Yanchang, which attracted the attention of the U.S. oil companies, including Standard Oil. Though the local Chinese government nationalized the oil deposit at Shaanbei Yanchang (along with all other oilfields in China) to ease its fiscal strains through oil profits, Beijing signed with Standard Oil the Sino-U.S. Joint Oilfield Communiqué. As part of this agreement, Standard Oil hired an exploration team to conduct geological surveys of the oilfields in Shaanbei. Unfortunately, none of these geological surveys yielded oilfields with the potential for large-scale extraction, and the joint effort by China and the United States came to a stop.

Upon returning to the United States, two members of the Shaanbei Yanchang exploration team named Clapp and Fuller published an article in the tenth issue of the American Association of Petroleum Geologists Bulletin in 1926. Based on their findings, Clapp and Fuller argued against the possibility of further oil discoveries in the Northeast of China. Around this time, other geologists published similar articles supporting what became known as the “China oil scarcity theory.” Experts from Stanford University, United Oil Company, and Texaco all argued that most regions of China are formed by continental beds, not the type of marine bed formations that are likely to accumulate large oil deposits. This theory was dominant at the time, and it overshadowed the possibility that large oil deposits could also exist in continental bed formations. Conventional wisdom at the time held the view that even if oil existed in these Chinese regions, the costs of development easily offset the production value.

As an indirect result of the Sino-U.S. Joint Oilfield Communiqué, the China oil scarcity theory greatly influenced the understanding and assessment of Chinese oil resources until the 1960s. This initial instance of Sino-U.S. energy cooperation also set the stage for future instances

of cooperation between the United States and China that would provide mutual benefits for the energy development of both countries.

*Late 1970s: Lifting the Ban on Offshore Oil Exploration, Oil Industry Reform, and the Establishment of the Modern Corporate System*

The second Sino-U.S. oil cooperation began shortly after Nixon visited China in 1972, when the U.S. government took actions to lift some export restrictions on China, and China took advantage of the new policy by increasing the procurement of American oil equipment. This cooperation continued in August 1977, when U.S. secretary of energy James Schlesinger officially welcomed the Chinese government to send delegates representing the oil industry to visit their counterparts in the United States. A few months later, from January 5 to January 31, 1978, the Chinese delegates representing the oil industry conducted a historic 25-day visit to the United States. This visit ultimately resulted in the formation of the Chinese National Offshore Oil Company (CNOOC). CNOOC is therefore a by-product of the national reform toward liberalization and Sino-U.S. energy cooperation. The company's development from Sino-U.S. cooperation has allowed for innovation, institutionalized management, and business models that have had profound economic, ideological, and behavioral impacts for both China and the United States.

*Two Years before the New Century: The Reshuffle of Overseas Oil Companies*

The third Sino-U.S. energy cooperation occurred as the Chinese government decided to restructure the economically critical state-owned enterprises by pushing them directly to overseas markets at the end of the twentieth century. Such a move was bold, yet strategically important. At that juncture, the 1997 Asian financial crisis had caused serious damage to the

world economy, and foreign direct investment began to shrink on a large scale. Acting as a responsible major power, China prevented troubles from spreading to other states by preventing the renminbi from depreciating. Now that twenty years have elapsed, China's important efforts in mitigating these crises are clearly recognizable.

Ultimately, business under corporations became the vehicle for the third cooperation. Of the three state-owned Chinese oil companies, CNOOC was the first to attempt to launch an international initial public offering (IPO). Unfortunately, the company failed to successfully launch upon its initial attempt on the New York Stock Exchange in October 1999. Approximately six months later, on March 28, 2000, the Chinese National Petroleum Corporation (CNPC) gained approval for its IPO. On April 16, 2000, CNPC began trading on the New York Stock Exchange, and the next day it began trading on the Hong Kong Exchanges and Clearing. On October 18 and 19, 2000, the China Petroleum and Chemical Corporation (Sinopec) successfully began trading in New York, Hong Kong, and London. Four months later, on February 27 and 28, 2001, CNOOC finally launched a public offering in both New York and Hong Kong, finishing off the task that it started sixteen months prior. As China allowed the flow of U.S. capital into the Chinese oil industry, transnational investment banks such as Goldman Sachs, Merrill Lynch, Morgan Stanley, and Citibank were on their feet immediately, proactively and comprehensively engaged in the largest foreign IPO finance movement in Chinese history.

The United States has also been a pioneer and leader in the oil industry, and China is ultimately the studious student trying to improve itself by the day. The third cooperation is a natural and required extension of the second cooperation, during which the capacity and quality of the Chinese oil industry were upgraded, and Chinese oil companies learned the rules and norms of international systems and markets.

*Looking Forward: Confronting Energy Transformation, Climate Change, and Globalization*

Although fossil fuel use is undergoing a transformation, fossil fuels are still the main source of electricity and energy production, and diversification of sources is no longer a contestable fact. The U.S. shale gas revolution created a new wave in the energy revolution, and the concept of U.S. energy independence has already influenced the world energy landscape. The Chinese energy structure still remains at the level of the industrial revolutionary era, and the growing problem of haze has clearly produced negative effects on people's lives and minds. The effects of environmental pollution and greenhouse gas emission in China have already gone beyond state boundaries.

China has replaced the United States to become the largest energy consumer, the largest oil importer, and the largest CO<sub>2</sub> emitter in the world. Chinese energy companies, due to organizational structure, culture, and history of the oil industry, seem unable to confront actively and accurately the newly emerging energy landscape. The U.S. government and U.S. enterprises also seem unprepared to use their recently acquired energy trump card. However, passivism in China is not solely due to Chinese companies. Today's energy challenges require an all-out effort by societies and the world. On the contrary, positivity and momentum in the United States have not allowed its oil enterprises to be carefree. As a source of primary energy, oil continues to drop proportionally; the advent of the energy nationalism and source diversification era will continue to challenge U.S. transnational oil companies that heavily focus on oil and force them to undergo a delayed transformation.

As the cornerstone of energy cooperation, oil companies from both countries urgently need creative concepts and models. Tens of thousands of large and small oil companies exist in the United States—transnational companies such as ExxonMobil, Chevron, and ConocoPhillips on

one end, and tens of thousands of domestically focused mid- and small-sized companies on the other end. Structurally speaking, the Chinese oil industry has only one end, that of the mega-corporations. Unfortunately, the mid- and small-sized company end, where vitality and creativity are fostered, is lacking. Yet nurturing this much-needed sector can improve the vitality and efficiency of the Chinese domestic oil and gas markets. Perhaps this is the key element of the fourth cooperation.

The resources and access to the markets of U.S. mega-firms are globalized; they earn the right to be called truly “global companies.” While some large Chinese companies have had some successes positioning their bases toward international markets, access to markets mostly remains domestic, as China has the fastest growing oil and gas demand. China’s big three oil companies face increasing pressures both internally and externally, and so far there has not been an effective strategy to reform and mitigate these pressures. Thus, strengthening cooperation with transnational mega-corporations on the aspects of resources and markets should be the new direction to take.

A common characteristic of the past three cooperations has been that government sets the stage and companies play the roles. However, the fourth cooperation is likely to depart from this model. In fact, the China-U.S. Strategic Dialogue is a very good platform. Comparing the two nations vertically, China is positioned to continuously move upward, whereas the United States is positioned to move downward. Sino-U.S. relations are currently at a historic stage more complex than a cooperation and competition. China and the United States have very different history and culture, and in contemporary history cooperation between the two countries has been more significant than competition; hence, mistrust and misunderstandings will not be easily removed. As major powers, leaders and politicians of both China and the United States are well

aware of their responsibilities, and it is precisely such awareness and closely connected economic activities that act as the bonding agent to this “fight without breaking.” Only by strengthening the economic-related and cross-leader communication and mutual understanding can rivalry be replaced with cooperation. Only through mutual trust and cooperation can a new landscape be created for the energy relationships and joint oil ventures. Political progress can easily change the progress on energy cooperation, but the other way around is highly rare to date.

### *Conclusion*

Even though similarities are increasing between Chinese and U.S. oil industries and companies, wide gaps still exist. Looking at the annual reports of both nations’ companies, the increase in oil and gas production and reserve capacity, technological innovation for higher managerial efficiency, and shareholder profit return assurance do not differ that much. The bigger differences lie in the institutional mechanisms, historical developments, and cultural backgrounds, as well as in corporate visions, mission statements, and agenda setting and motivational models as means for achieving goals. These similarities and differences precisely create the possibility for cooperation that is largely different from the motivations and intentions from the previous three cases of cooperation.

If we were to make sense in terms of significance from the previous three instances of cooperation, it would be the enlightenment for the Chinese oil industry in technology, operation management, capital management, and the concept of “going abroad.” The fourth cooperation may be the time when real significance comes from having cooperation on a more “equal playing field.” Not only the resource capital market is global, but the operational management model and the promotion in technological improvement are in need of mutual exploration. The environment is totally new, and the challenges and opportunities are unprecedented. I cannot predict what

event will unfold, and at what time, as a result of the fourth Sino-U.S. cooperation, but I believe that this time, the model will be completely new, the scope global, and the scale unprecedented. The trademark of oil companies might be permanent, but the sector must be flexible enough to incorporate diversity. Entrepreneurs may belong to a certain nationality, but their vision and knowledge must be global. I look forward to cultivating such entrepreneurs and enterprises through the fourth cooperation.