



China Oil Forum

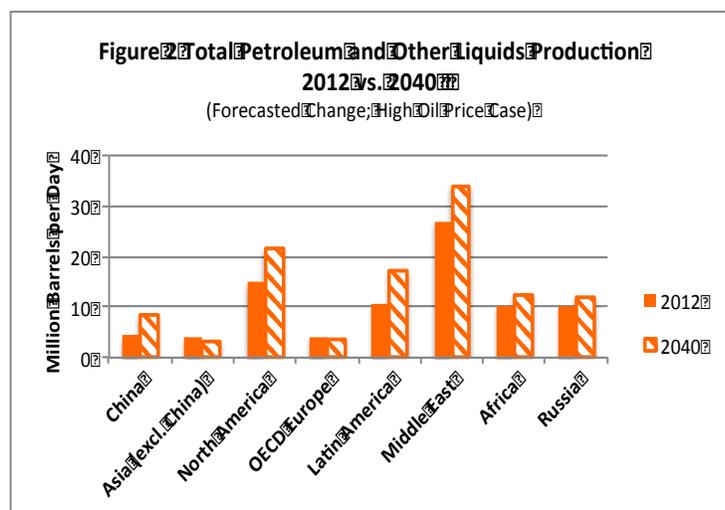
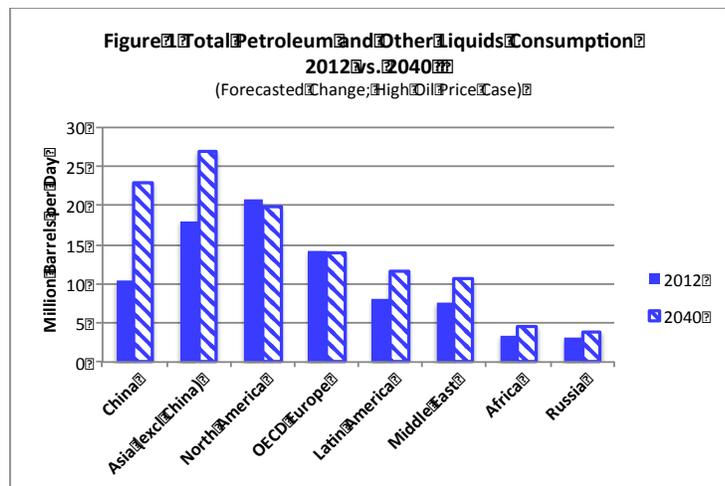
December 2, 2014
Washington, DC

Background

Total petroleum and other hydrocarbon liquids consumption are increasing at a faster rate in China than in any other major world region (Figure 1). As such, by 2040, China is projected to consume nearly one in five barrels of oil, making the nation one of the world's largest petroleum demand centers along with many of its neighboring nations in Asia.

While China's demand is soaring, its production capacity (Figure 2) pales in comparison to other major global regions. China today ranks as the world's seventh largest oil producer, but this represents only 5 percent of global oil production. Over the next two decades, China's oil production is projected to increase to 7 percent of total world supply, but this is not nearly enough to close the gap with their increasing consumption.

China's oil demand could outpace domestic oil supplies by a factor of 3:1 (high oil price case) or more troubling still, nearly 4:1 (reference case) in 2040, according to the U.S. Energy Information Administration. China therefore is almost certain to continue to rely in large part on imported oil, while pushing ahead to exploit the costly, difficult oils that are available domestically.



Sources: U.S. Energy Information Administration,
www.eia.gov/forecasts/aeo/tables_ref.cfm;
www.eia.gov/forecasts/aeo/data_side_cases.cfm#summary;
www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=3&pid=26&aid=1

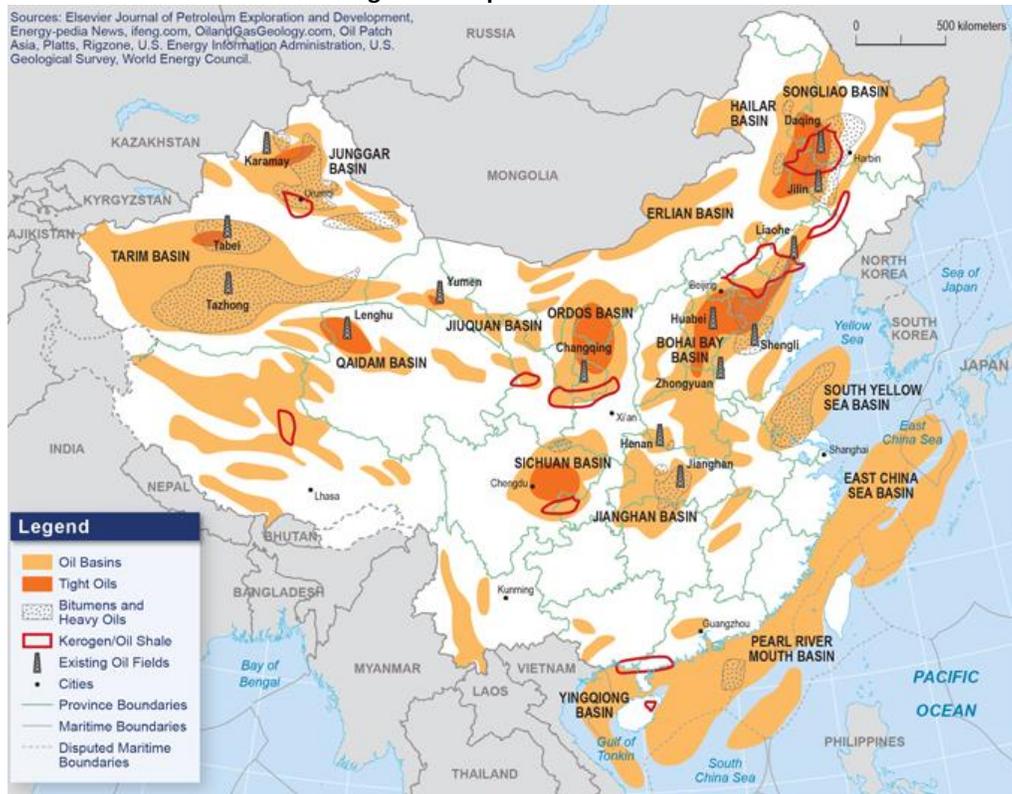
Understanding the Core Issues

China's oil dilemma cannot be understood in isolation. It is vital to understand the global paradigm shift the oil sector is currently experiencing. Broader energy supply questions will remain a major focus in China, but oil is expected to be front and center.¹ Coal currently accounts for two-thirds of China's primary energy needs. New policies to combat local pollution are being enacted, however, including shutting down coal-intensive production, encouraging coal substitution, and using more natural gas in cities and industries. These strategies may have played a part in recently cutting China's coal's dominance to the lowest on record.

However, given rapidly increasing access to private vehicles in a nation the size of China, oil issues are expected to rise to the fore. The petroleum sector—with its limited substitutes and massive share of global investment²—is expected to pose the most vexing economic, environmental, and geopolitical trade-offs for Chinese policymakers in the years ahead.

The recent boom in unconventional oil production in North America has led to great interest in potentially similar resources in countries around the world. China too is rich in unconventional hydrocarbon supplies (Figure 3). These are difficult to access and tend to be more costly and environmentally damaging to use. The Chinese government appears eager to gain access to these resources, while at the same time actively pursuing imports of a wide array of hydrocarbon resources from North America, Latin America, Russia, and the Middle East. Reliance on overseas oil investments comes, of course, with geopolitical risks, some of which have already begun to manifest.³

Figure 3: Map of Oil Resources



Source: Carnegie Endowment for International Peace, 2014, http://carnegieendowment.org/images/article_images/China_Oil_104-700.jpg



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A Forum for Discussion

Carnegie's Energy and Climate Program is hosting a China Oil Forum to engage public, private, and NGO stakeholders on the most pressing questions facing the country. These include:

- What will the November 2014 U.S.-China climate deal mean for oil consumption and production patterns?
- What nations might China pivot toward to fulfill its oil import needs and how might that alter energy economics, trade patterns, and geopolitical relationships?
- What unconventional hydrocarbon resources might China turn to—whether extra-heavy domestic oil, oil sands imports, or coal-to-liquids technologies—if conventional supplies cannot meet demands? What might be the unintended consequences of widespread use of heavy oils, and their so-called bottom-of-the-barrel petroleum products?
- What insights and knowledge can the U.S. offer China in terms of managing unconventional oils, economically, geopolitically, and environmentally?
- How do the different oils around the world, which China must pursue to meet its domestic needs, compare to one another in terms of their climate impacts?
- What role will key energy actors—state oil companies, energy agencies, and officials—play in shaping China's petroleum policies, both at home and abroad?
- How can China avoid the pitfalls of greater oil dependence, which brings with it a Faustian bargain with environmental (climate, air, water) pollution, economic, and geopolitical consequences?
- What options does China have to reduce its dependence on oil imports, and leap-frog the trade imbalances and other impacts that result when domestic consumption far outstrips production?

No doubt there are a multitude of other pressing questions. With China's economy slowing down after decades of double-digit growth, now is the time to think strategically about how the nation will deal with its physical resource limitations, associated environmental concerns, and oil's evolving geopolitical realities.

End Notes

¹ International Energy Agency, “China National Oil Companies’ Investments Going Global for Energy, November 3, 2014, <http://www.iea.org/ieaenergy/issue7/chinese-national-oil-companies-investments-going-global-for-energy.html>

² International Energy Agency, “World Energy Investment Outlook,” June 3, 2014, <http://www.iea.org/publications/freepublications/publication/name-86205-en.html>

³ Carnegie Endowment for International Peace, “China’s Oil Future, May 6, 2014, <http://carnegieendowment.org/2014/05/06/china-s-oil-future/h93y>