

Investments for North American oil and gas exploration will hit record -- report

Joel Kirkland, Environment & Energy Publishing, 12-7-11

Global oil and natural gas exploration and production in 2012 will approach a record \$600 billion, financial analysts at Barclays Capital said in a new report, building on an emerging conventional wisdom that Big Oil plans to plow bigger investments into North America.

If oil and gas producers go through with their drilling plans, the record will come on the heels of a 20 percent boost in global spending in 2011. Spending on developing fields in North America increased 31 percent this year compared to 2010.

The surge in North America's oil and gas production is bookended by the rapidly expanding Bakken unconventional oil field in Montana and North Dakota and the sprawling shale oil and gas formations in Texas, Louisiana and across the Northeast.

The past several years have been defined by energy industry exuberance about tapping big, energy-rich U.S. oil and gas deposits that had long been considered too expensive and challenging. Much of the success is a result of horizontal drilling and a method of extracting oil and gas called hydraulic fracturing. Drillers pump millions of gallons of water and a combination of sand and chemicals deep underground at high pressures, cracking dense rocks and coaxing gas up a well.

Gas burns cleaner at power plants, and is considered a medium-term replacement for tons of American coal. But concerns about water use and pollution remain an issue for hydraulic fracturing, also called "fracking." Unconventional oil producers in southern Texas and in the Bakken formation are also under pressure to use less water.

Drilling in the formations has increased shale gas production from being a fraction of domestic gas production in 2001 to about one-quarter of it today. Its slice of the pie is expected to be more than 50 percent by 2030, according to government projections.

U.S. energy independence at what price?

Barclays' analysts said sit tight. "We believe the majority of companies have taken a conservative approach in setting their initial 2012 budgets," they said, "and current oil price levels (if sustained) would suggest that there is considerable upside to our current forecasts as we move throughout the year."

Boosters say shale gas is an economic boon. "Large portions of dollars spent here end up staying here," John Larson, vice president of IHS Consulting, told reporters on a call promoting a report that says the shale gas industry supports 600,000 jobs.

The shale gas industry will contribute more than \$118 billion to U.S. gross domestic product in 2015, according to the IHS Consulting report, which was commissioned by natural gas industry proponent America's Natural Gas Alliance, based in Washington, D.C.

A debate playing out in industry and energy policy circles is over the extent to which new oil and gas discoveries at home push the United States closer to energy independence. Many analysts say the United States

has a long, long way to go before it's no longer importing oil from the Middle East and before it won't need any liquefied natural gas off the international market.

Further, it's questionable the extent to which North American oil finds can fundamentally change Saudi Arabia's influence over oil prices.

"Rising oil production in advanced economies is undoubtedly changing the map for international oil companies," wrote Michael Levi, an energy expert at the Council on Foreign Relations, in a blog post yesterday. "It's wrong, though, to claim a similarly decisive change for the world of oil more generally."

Changing the world's geopolitical map

Conventional gas discoveries this year could also change the equation. Energy analysts at the consultancy Deloitte Touche Tohmatsu predicted that if new gas discoveries pan out off the coasts of Israel, Cyprus, Mozambique and Azerbaijan, which is already a major gas exporter, they will all become significant natural gas exporters. "Russia, the largest exporter of natural gas in the world, will likely be the most impacted by losing market share to the new breed of gas exporting nations," they said.

Europe could be the beneficiary of Azerbaijan's claim to a large discovery by France's Total. Several trillion cubic feet of gas would further mitigate the impact of Russia's role as Europe's largest foreign gas supplier. Off the coast of Mozambique, a projected 22 trillion cubic feet of gas could feed a large liquefied natural gas terminal designed to send the energy to Africa and Asia.

Production in the Caspian and Mediterranean seas is years off, said the analysis from Deloitte, and geopolitical struggles over maritime borders will complicate prospects for getting at the supply. "Instead, the focus should be on Russia's reaction to recent competition and whether it can secure long-term supply deals prior to the influx of new supply to Europe and Asia."

China is the world's biggest energy consumer, and increasingly so, but Deloitte analysts also called China an "upstream game, not just a consuming black hole."

The trajectory of China's gas development is tied into China's contribution to global greenhouse gas emissions, says the analysis. "By increasing natural gas usage in China," it says, "carbon dioxide emissions trends can be slowed or reversed, but if nothing is done and the current path is continued, China's CO2 emissions will be more than the United States', EU's, and India's combined by 2020."

China is seen as a net oil and gas importer for the foreseeable future. Its state-owned producers haven't been expanding domestic production significantly enough, and international oil companies with more experience in cracking tough oil and gas fields have largely been kept on the sidelines.

But the cost of importing so much of oil and gas has weighed on the Chinese economy, and Beijing this year started establishing plans to expand the nation's oil and gas drilling. Gas wells are being tested in the hope of producing from shale basins, and U.S. gas producers are building partnerships with China's oil and gas companies.

"It can be expected that there will be a big push to get the shale gas industry off the ground in 2012," Deloitte said, noting that shale gas is likely to go slowly in China because of geological challenges and industry know-how.

The analysts homed in on the South China Sea, a body of water off of China's East Coast that has become a potential hot spot for regional conflicts over energy resources. The South China Sea could hold gas reserves comparable to Qatar, according to the U.S. Energy Information Administration.