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AQ FEATURE

Power Shift

BY Jason Bordoff and Michael Levi

Will the Western Hemisphere overtake the Middle East? *(video available)*

The energy landscape in the Americas has shifted dramatically in just a few years. Only a decade ago, experts expected most of the world's new oil supplies to come from the former Soviet Union and the Middle East. Now the odds are that most of the growth in global oil supplies will come from North America and Brazil.

Just five years ago, conventional wisdom held that North America would become a big importer of natural gas—with some supplies coming from its neighbors to the south. Now, a boom in natural gas production raises the prospect that the U.S. will become a gas exporter.

This is occurring at a time when developing countries in Asia are driving the growth in world oil demand. The collision of these trends is radically reshaping the global energy map—reducing oil imports to Europe and North America while increasing shipments from producers in the Middle East, Africa and Russia to the Pacific Rim.

Many analysts argue that the boom in unconventional production—from the oil sands of Canada and (potentially) Venezuela to the tight oil (oil trapped in dense geologic materials such as shale and sandstone) of North Dakota and Texas and the ultra-deepwater "pre-salt" off the coast of Brazil—will transform the Western Hemisphere into the new Middle East of oil, with geopolitical implications presumably as radical as those that accompanied the rise of the "old" Middle East, whose position as the world's pivotal oil supplier was underlined by the oil embargo of 1973.

Although that case is overstated, there are real and important changes afoot. In trying to determine whether the Western Hemisphere will overtake the Middle East's role as the epicenter of the world's oil markets, it's best to begin with two questions: How big will the gains in the Americas really be? And what led to the Middle East's critical role in global energy markets in the first place?

The answer to the first question is that the Americas could see a sharp increase in oil production—the International Energy Agency (IEA) projects a 25 percent rise by the end of the decade, but the potential to exceed that, perhaps substantially, is high. But the second question provides the most instructive clue: the centrality of the Middle East to the oil supply chain stems from much more than just its total share of world oil production.

Watch an exclusive interview with AQ author Michael Levi.

Supply Boom

Big supplies are a necessary if not sufficient requirement for dominating world oil markets. And huge resources are a central reason the Middle East has been the epicenter of oil for 40 years.

Persian Gulf countries supply 28 percent of the world's oil. While that is down from 37 percent in 1973, it remains a hefty share. So, although much of the growth in global demand in the next decade may be met by supply from the Americas, total production from the Americas will remain far smaller than production from the Middle East. Also, any reorientation in the global oil and gas landscape will not rebound to the Americas overall, but largely to the U.S. and Canada, and to some extent Brazil.

Some numbers help show why.

The U.S. has shifted from an outlook of rising imports, scarcity and increased natural gas prices to one of greater abundance and the lowest natural gas prices of any major consumer. This year the U.S. will likely become the world's largest producer of oil, biofuels and natural gas liquids (compounds produced alongside natural gas that can substitute for oil), surpassing Saudi Arabia. U.S. oil imports are at their lowest level in 25 years, and are projected to decline much more steeply as a result of surging production and reduced gasoline use, the latter due to a mix of higher prices, new technology and the Obama administration's increase of fuel economy standards. The U.S. now produces more oil than it imports for the first time since 1995.

Surging shale gas production means the U.S. will soon be a net natural gas exporter, a shift facilitated by the approval in May of a new liquefied natural gas (LNG) export project. Indeed, the abundance of this resource has fueled a decline of more than two-thirds in natural gas prices since their 2008 peak.

Pipe dream: The Alaska Oil Pipeline near Richardson Highway in Alaska. Photo: Bob Kirst/Corbis

Private-sector forecasts and recent evidence indicate that even these high projections may be too conservative. The Potential Gas Committee, headquartered at the Colorado School of Mines, predicted a 26 percent rise in U.S. domestic natural gas supply in its recent biennial estimate—indicating more than a century's supply at current demand levels. As for oil, the U.S. Energy Information Administration's (EIA) detailed April projections of future oil supply growth have already been overtaken by actual oil output, clocking in close to the level the EIA had called its "high production" case.

In Canada, crude oil production has increased by 45 percent since 2005, with nearly all of the increase coming from oil sands production. Canada is now the fifth largest producer of oil in the world. Projections for Canadian oil production have more than doubled in the past five years, from an estimated 2.4 million barrels a day in 2008 to 5.6 million in 2013. The story is similar for natural gas, with production expected to rise 25 percent from now through 2025.

In Latin America, however, the picture is less rosy. In Brazil, optimism about the country's potential production from its offshore pre-salt reserves has dissipated. Brazil faces significant challenges, and there is increasing skepticism of its ability to achieve this potential. Local content and worker requirements increase costs and slow the development of highly complex projects. Moreover, foreign investment is discouraged by state mandates requiring private oil producers to allocate 30 percent of the ownership stake in their projects to Petrobras and give the national oil company a role as operator in every field. To be sure, projections for Brazilian oil output through 2025 have grown nearly 50 percent in the past five years, but observers are increasingly skeptical about major gains.

Venezuela's massive oil sands reserves in its Orinoco Belt hold an estimated 500 billion barrels of extra heavy crude oil, according to a recent U.S. Geological Survey study. Yet production has declined since Hugo Chávez renationalized the industry, and the new Venezuelan administration seems poised to continue his policies. The country's oil production has fallen by nearly as much as Canada's has increased in recent years, and is expected to barely recover in the next five, with no serious changes in investment climate on the horizon.

Farther south, Argentina has what EIA estimates to be the second largest shale gas reserves and fourth largest shale oil reserves in the world. Yet Argentine production levels have consistently fallen. International oil companies are reluctant to invest, given last year's re-nationalization of heavyweight oil producer Yacimientos Petrolíferos Fiscales (YPF). That may change, with Chevron recently announcing $15 billion in shale investment and signals that the Argentine government increasingly understands the need to develop shale gas for its own energy needs. If Argentina can make the regulatory landscape more attractive—a big if—production may surge in the coming decade.

The last big spot on the continental oil map is Mexico.

Mexico's new government recognizes that constitutional reforms are needed to allow foreign companies to invest, which could reverse its recent (and continuing) declines in production. If the government can secure reforms to the constitutional requirement that the state must be sole operator of production projects and owner of hydrocarbon resources, more foreign investment will be attracted to share in the risk and rewards of developing uncertain oil and gas prospects. The result will affect Mexico's potential to increase its production from both conventional and unconventional crude sources. It has many of the necessary ingredients, including vast reserves, a strong legal framework and experienced workers.

Yet constitutional reform is a heavy lift because changing the nation's charter requires approval by two-thirds of Congress and a majority of legislatures from 31 Mexican states and the capital, while other less challenging legal changes are likely insufficient. Indeed, it is striking that while Mexico has the sixth largest shale gas and seventh largest shale oil reserves in the world, the country is building infrastructure to import gas and refined petroleum from the U.S. rather than building out its own production capacity.

The Power of Spare Capacity

All of this adds up to bright prospects in parts of the Americas but something far from a uniform renaissance stretching from Canada in the north to Argentina in the South. But that is not the biggest reason the Western Hemisphere will not become the new Middle East. That distinction comes down largely, as noted above, to two critically important words: spare capacity.

The ability to curtail or ramp up production on short notice, and sometimes for political ends, provides a unique capability to influence global oil markets—and to extract concessions from other countries. Prior to the 1970s, the U.S. was able to play this role, as robust production in Texas, and a far-less-free market than the U.S. enjoys today, led the Texas Railroad Commission to keep a large portion of its production capacity in reserve.

That helped blunt the typical ups and downs of the oil market and provided a shield against geopolitically inspired oil shocks, such as the supply shortages triggered by the 1967 Arab-Israeli War. But starting in the early 1970s, U.S. production flattened out. As a result, for the past 40 years, the Organization of Petroleum Exporting Countries (OPEC) has had the unrivaled capacity to ramp up production quickly by tapping its spare capacity. Although that ability has declined as OPEC states have chosen to maintain less spare capacity in their systems, it continues to give Middle East oil producers, in particular, disproportionate global influence.

Within OPEC, it is primarily Saudi Arabia that has the potential to quickly produce more oil on demand. Overall, OPEC is estimated to have invested enough money in oil production infrastructure that it doesn't use to be able to turn on 3.5 million barrels per day on short notice—nearly all of which is located in Saudi Arabia.

Even with a sharp increase in production, the Western Hemisphere will have no such capability. The U.S., Canada and Brazil will not conspire to hold oil off the market to buffer geopolitical shocks. The U.S. is going to remain a net importer of crude oil for the foreseeable future. That means OPEC countries, particularly Saudi Arabia, will maintain the unique capability to lessen price volatility by supporting global oil prices or by mitigating potential price spikes, continuing the Middle East's global influence over the oil market.

Indeed, some of the biggest fallout from the North American oil boom may come if spare capacity gets too high. The International Energy Agency projects that spare capacity will grow steadily, rising to more than 7 million barrels per day in the next few years. The IEA assumes OPEC will not increase its sales if demand is being met by other countries, notably in the Americas, allowing North America to continue to emerge as a dominant supplier.

Whether OPEC countries will actually hold so much oil off the market, though, is an open question. As production rises not just in the Americas but within OPEC in Iraq too, adding huge amounts of oil to the world market, OPEC's agenda-setting ability will be tested. If cooperation among OPEC members falters, countries may ramp up production in a race to grab oil revenue, causing world prices to plunge. That would sink investment in the Americas, which currently relies on high prices. The fact that decisions in the Middle East could have such big consequences for the rest of the world is yet another reason that region should remain a big focus of attention.

What the Boom Will Really Mean

Yet even though the claims for the region's looming energy prominence have often been overstated, the rise in hemispheric oil and gas supplies will have significant economic and geopolitical impacts.

On the economic front, increased production means more economic activity and, in weak or developing economies, job creation. This is particularly a strong story for the U.S. and, to a lesser extent, for Canada and Brazil. As the rest of the world increases unconventional oil and gas production, there will be more opportunities for U.S. firms (which pioneered these new techniques) to export technology and services. Low natural gas prices are also saving U.S. consumers money on heating and electricity. Billions of dollars in investment in chemicals manufacturing are returning to the United States, because natural gas prices (which critically help the industry) are so low there, while remaining high elsewhere. These benefits, though, are mostly a U.S. story.

The changing energy landscape has already registered important geopolitical consequences. The most prominent will be seen in natural gas. The drop in the U.S. need to import natural gas has led to greater market competition among other gas suppliers, thereby increasing Europe's leverage with long-time producers like Russia, and helping to reduce European natural gas prices. The entry of the U.S. and Canada into the Asian natural gas market could shake things up there, too, by providing consumers with alternative sources of supply and driving down natural gas prices that historically have been linked to the price of oil.

The recent and surprising rise in U.S. oil production has also paid an important one-time dividend. In 2012, it offset a major loss of oil supply from Iran, making it easier to impose economic sanctions on Iran without imposing damage on the world economy by driving up oil prices. That has helped put pressure on Tehran over its nuclear program, though it is yet to pay off in a resolution to the nuclear standoff.

Other impacts will be more subtle.

Redrawing the global crude trade map so that more Middle East crude flows east and less west will lead to increasing calls for Asian nations to play a role in maintaining Middle East stability. Indeed, China is building up a 200 million barrel stock of strategic oil reserves, and will increasingly be called upon to participate in globally coordinated efforts to address supply disruptions and provide oil market stability. Venezuela, too, will likely see more of its crude exports flow to Asian countries and less to the U.S., as Canadian heavy oil sands production ramps up. It remains to be seen what actual changes in security structures will result. No Asian country has the ability yet to substantially replace the U.S. as a protector of trade on the high seas. And the U.S. still relies critically on the free flow of oil to Asia; if that faltered, Asian buyers would simply bid away oil from countries closer to home, pushing up the global price of oil for all consumers.

Making the Most of It

The Western Hemisphere may never equal the Middle East's unique capability to hold spare capacity, but it is still going to play a significant role in global oil and gas markets in the coming years. Several steps would help the region achieve its potential and avoid pitfalls.

In North America, regulators need to make sure the right rules and enforcement are in place to allow unconventional oil and gas development to proceed safely, protecting not only public health, but enabling the U.S. and Canada to reach their production potential by avoiding a backlash against these new production technologies in response to environmental damage.

Moreover, the U.S. has a significant ability to affect global gas markets—much more than it does global oil markets—by allowing exports of natural gas. The U.S. has the potential to be one of just a handful of countries with significant LNG exporting capability, which can encourage more competition in global gas markets and change the way natural gas is priced, particularly in Asia. Lower gas prices can help allies like Japan promote economic growth, and encourage substitution of gas for coal and oil, which is better environmentally and will further loosen the global oil market. If the U.S. imposes a policy to significantly restrict its exports of gas, it will undermine the open markets that it has rightly championed for so long.

In Latin America, regulatory reforms are needed in the major producing countries to allow more foreign investment through production-sharing agreements and changes to tax and royalty regimes. This is particularly true as U.S. and Canadian growth makes it easy for investors to choose to focus elsewhere. Local content and worker requirements should also be carefully reexamined to make sure they don't provide a disincentive to investment and development of the sector. Stronger legal protections are also needed to give foreign companies confidence that their investments will yield returns, rather than result in nationalization efforts.

Latin American countries can also increase their ability to supply the global oil market, and reduce burdens on their own budgets, by phasing out fossil fuel subsidies. Energy subsidies, for example, cost Venezuela $20 billion per year and Mexico, $10 billion. These subsidies are also inefficient, as they encourage more domestic consumption, exposing countries to oil market turmoil. They are also regressive: numerous studies show that the poor actually benefit far less than the rich.

The rapid rise in North American energy production has made the Western Hemisphere increasingly self-sufficient, but not independent. This transformation will provide economic and security benefits, particularly for the U.S., and could change the traditional beliefs about burden-sharing to maintain global oil market stability.

At the same time, the Persian Gulf, particularly Saudi Arabia, will remain uniquely influential in global oil markets. Policymakers ought to take advantage of the changes, but they would be wise not to misinterpret them and over-react, becoming overconfident and neglecting the continued economic and security challenges that countries of the Americas face.

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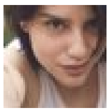

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  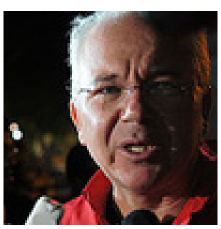

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