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AQ FEATURE

The Next Energy Superpower?

BY Eric Farnsworth

New technology is transforming the U.S. energy sector. *(video available)*

A revolution in supply, driven by technological change and beginning in the United States, is transforming the energy sector. A commodity whose scarcity defined geopolitics and economics from the beginning of the industrial age is now becoming a potentially abundant resource. This will not only reshape the global energy map and global politics, but also change U.S. policy in the Western Hemisphere.

Unimpeded access to cost-effective energy supplies for itself and its primary allies has long been a U.S. strategic interest. Most observers know that Washington's foreign policy and defense priorities in the Middle East, Europe and Asia, including sea lane protection, are buttressed by energy security concerns. Many of these same observers do not appreciate that the Western Hemisphere is also a critical energy partner: peaceful, non-threatening and unthreatened.

But all that is about to change.

Watch an exclusive interview with* AQ *author Eric Farnsworth.

Our Energetic Hemisphere

Canada is the top energy supplier to the U.S.—a long-standing relationship institutionalized within the North American Free Trade Agreement (NAFTA). The U.S. has no closer friend on energy—literally or figuratively—than Canada, which, for its part, relies on the U.S. as a guaranteed, secure market.

The two economies are integrated so fully that the energy and commercial relationship is generally, but mistakenly, taken for granted. Canada outranks all others, including Saudi Arabia, in terms of U.S. energy imports. According to the U.S. Energy Information Administration (EIA), in 2007, the U.S. imported over 1.8 million barrels per day (bpd) of crude from Canada, a figure that increased to almost 2.4 million bpd in 2012. Canada is also the top supplier of natural gas and electricity to the United States.

Mexico is the third largest supplier of crude to the U.S., although imports have declined from 1.4 million bpd in 2007 to less than one million bpd in 2012, due to shrinking reserves and a lack of sufficient capital and technology to boost production. Venezuela is also vertically integrated into the U.S. energy sector through refining capacity for heavy Venezuelan crude and Citgo properties at the retail level, although imports from Venezuela have dropped from 1.1 million bpd in 2007 to 900,000 bpd in 2012. Other Western Hemisphere nations, including Brazil, Colombia, Ecuador, and Trinidad and Tobago, are also reliable energy suppliers to the United States.

Even when the politics of the moment have argued against close political relations—for example, with Venezuela since 1999, with Ecuador since the inauguration of Rafael Correa in 2007, and with Mexico in the 1970s and 1980s—the energy relationship has continued, sometimes below the radar, motivated by mutual self-interest.

In Venezuela, the bilateral energy relationship has continued despite the anti-American tone of the government of the late Hugo Chávez, and the contraction of supply due to an aggressive Venezuelan search for alternative markets, as well as mismanagement of the energy sector, which has reduced Venezuelan output. Arguably, in fact, U.S. purchases of Venezuelan crude at market rates have done as much as anything to underwrite the *chavista* project, both within Venezuela and across the hemisphere, adding a deeply ironic foreign policy dimension to an otherwise straightforward commercial relationship.

Latin America, including OPEC members Ecuador and Venezuela, also kept the wells pumping during the OPEC embargoes of the 1970s, when oil was overtly used as a weapon against the U.S. and its Western allies. During that time, non-OPEC member Mexico also continued to export crude to the United States. And when Mexico found itself in financial difficulties after the 1994 *peso* devaluation, Washington's financial rescue package was collateralized by oil exports to the United States.

And it's not just oil or gas that has linked the region over time. A longer-term desire to wean the U.S. from its "oil addiction," as George W. Bush memorably put it, has increased interest in the potential for cooperation on alternative fuels.

Emerging from its own energy crisis in the 1970s, Brazil developed global expertise as a low-cost ethanol supplier, facilitating the bilateral alternative energy partnership between the U.S. and Brazil that is often touted in official meetings.

The full potential for bilateral cooperation on alternative fuels has never been fully realized because Washington has generally regarded ethanol imports from an agricultural rather than an energy security perspective, and thus attempted to shield the U.S. market from the impact of Brazilian supplies rather than welcome them as a clean and renewable energy alternative. Still, the potential for enhanced cooperation remains very high under the terms of various bilateral agreements, even as global ethanol markets are in flux.

The new head honcho: Venezuelan President Nicolás Maduro visits an oil refinery in the Port of Guaraguao in March 2013. Photo: Handout/Reuters/Corbis

Simultaneously, energy has informed U.S. policy more broadly toward the Western Hemisphere. A primary example: when push comes to shove, a desire to maintain the existing energy relationship with Venezuela has been a compelling factor in reducing Washington's appetite for a more robust response to the *chavista* government's provocations, particularly as domestic gas prices repeatedly test the four-dollars-per-gallon threshold.

Indeed, as the Middle East has shown time and time again, support for democracy generally ranks lower in the foreign policy calculus than energy security.

At the same time, a desire to develop regional alternatives to Venezuelan energy supplies has directly supported U.S. efforts to assist Colombia's aggressive development of its own energy sector.

The U.S. has benefitted from its ability to source energy from a region that lacks the same volatility as the Middle East.

With Venezuela becoming increasingly complicated, recent exploration successes—notably the *pré-sal* Campos Basin in the deep water off Brazil, onshore shale fields from the Burgos Basin in Mexico and the Neuquen/Vaca Muerta in Argentina—have attracted significant interest. Brazil, Colombia, Paraguay, and others also have significant shale resources.

When President Barack Obama traveled to Brazil in 2012, he said he wanted the U.S. to be Brazil's largest energy customer. The statement reflected both economic and political interests, and it fit comfortably within the broader U.S. hemispheric and energy agendas. Similarly, at the 2009 Summit of the Americas in Trinidad and Tobago, energy was a top-priority agenda item, leading to the launch of the Energy and Climate Partnership for the Americas.

In this vein, Washington is watching potential energy sector reforms in Mexico closely, and stands ready to assist the Mexican government as may be appropriate. Mexico requires the technology, expertise and financial resources that will allow it to take advantage of the oil and gas resources that exist but are currently unattainable given existing restrictions on foreign investment and participation in the energy sector.

Reform would directly support Mexico's economic development and terms of trade while reducing the domestic costs of energy and manufacturing. And it would increase Mexico's energy supplies, some of which would be exported to the U.S., and all of which would increase global energy supplies generally.

New Game: Competition for Investment (Instead of Resources)

Investment is key. The global energy framework within which the region has operated for decades no longer applies. Just because the resources exist does not necessarily mean investors will magically appear with wads of cash.

To attract the investment needed to develop national energy resources, countries must focus more on relevant issues. In addition to sensible regulations and profit potential, these include improving infrastructure, reducing local content requirements, concentrating on workforce development and education, easing the tax burden, and improving the rule of law with respect to expropriations, contracts and dispute resolution, among others.

With changes under way in the U.S., the competition for investment dollars is heating up. The International Energy Agency (IEA) has predicted that the U.S. could be energy self-sufficient by 2035. Within just a few short years, the U.S. will potentially become the world's largest producer of natural gas, exceeding Russia—and within a decade it may overtake Saudi Arabia as the world's largest oil producer. In May 2013, the IEA said U.S. production is rising even faster than forecast and that North American oil production will lead global growth over the next five years.

Naturally, the rapid increase in U.S. supplies is reducing demand from other sources. Rather than racing to lock in regional production, companies and countries can now be somewhat more selective in their operations. Latin American and Caribbean nations are finding that they must increasingly compete with North Dakota, Montana and Texas. The alternative is a lack of investment, underproduction and less relevance in the global energy landscape.

By now, the story of technological breakthroughs that have opened up vast new oil and gas reserves is well known.

In particular, hydraulic fracturing ("fracking") and horizontal drilling techniques have freed previously unattainable energy supplies for production. The U.S. has led in the development of these technological advances and is reaping the reward for innovation and global competitiveness in the energy sector. A rush to production in the U.S. has created a glut, particularly of natural gas, that is lowering manufacturing costs and bringing production back to the U.S. from abroad.

There is even talk of a manufacturing renaissance in the U.S., particularly in chemicals and other sectors that either use natural gas as feedstock or are intensive users of electricity—whose cost is reduced with increasing supplies of the fuels. The renaissance may well stabilize or possibly even reverse the downward drift of manufacturing jobs that has occurred in the U.S. over several generations.

All this has meant a renewed focus among investors on certain sectors of the U.S. economy, which generally carries much lower risk than investing in developing and frontier economies.

Even if the predictions are borne out and the U.S. does become energy self-sufficient in 20 years, energy imports will still be necessary. Infrastructure, including refining capacity and market efficiencies determined by geography and other factors, will continue to dictate that crossborder trade will continue. For example, it may still be more efficient to supply users in New England with energy from Canada than from the American West, or users in California from Mrexico than from elsewhere in the United States.

At the macro level, however, the U.S. could become dramatically more competitive as the cost of energy decreases, the trade deficit shrinks, and jobs are created by investment pouring into the sector. As it becomes more competitive, investors who might otherwise have sought foreign markets will take a new look at the United States.

Predictably, given a finite pool of international investment capital, greater investment in the U.S. will mean less investment elsewhere, including in Latin America and the Caribbean, in the energy sector and more broadly. Additionally, the quality of investment in the Americas may suffer as high-quality investors content themselves with the steady returns of the U.S. market, leaving riskier markets to others who may play by a different set of rules on anti-corruption, environmental sensitivity and corporate social responsibility.

From a commercial perspective, this means Latin America and the Caribbean will need to boost their own competitiveness just to keep up. The only way they can do that is by focusing on the fundamentals of economic growth.

For the past decade, the region—particularly South America—has done well economically. As the International Monetary Fund has made clear in its 2013 Western Hemisphere Regional Economic Outlook, the income windfall from persistently high commodity prices over the past decade has been unprecedented.

Continued favorable economic conditions are not guaranteed, however, particularly as China slows economically. With unemployment already low, the key for continued Latin American growth will be increasing productivity. That, in turn, will require investments in education and training, infrastructure, and research and development, among other priorities.

It will also mean the region will have to concentrate on improvements in the energy sector specifically. The technology required to develop natural gas fields in Argentina, say, will not just appear. It will only come with investment, managerial skills and workforce expertise from the outside. Unless countries maintain attractive investment climates, therefore, it will be difficult to develop the energy sector across the region.

Countries can also encourage the development of local expertise and sector-specific production through joint ventures and various contracting models. But, as Brazil is finding, it's a delicate dance. Too heavy a government hand creates unintended consequences and dampens investor interest. And that, in turn, may well retard Latin America's ability to develop its energy markets consistent with the revolutionary changes ongoing in global energy.

Beyond the exploration and production of oil and gas, a concentrated focus on infrastructure is required, particularly in the power generation sector. High electricity costs are largely the result of expensive (and often dirty) fuel stocks, inefficient transmission networks and regulations—including burdensome and politically motivated market interventions, such as Argentina's efforts at cost control, that may dissuade investment.

Attention must be paid to national power grids. Otherwise, even if increasing amounts of natural gas and other fuels come on line, broader economic benefits to consumers and manufacturers alike may not materialize and production costs will remain too high to be truly competitive.

Finally, political issues are compelling. Countries will need to take the politically difficult step of reigning in fuel subsidies, particularly for gasoline, which encourages overconsumption that harms the environment, contributes to increasing costs for health care by increasing pollution, and depletes national budgets. As the Belo Monte and Hydro Aysen hydro projects in Brazil and Chile, respectively, show, they will also need to find a middle ground between energy production and environmental protection. Wherever that middle ground may lie politically, the longer it takes to locate it, the longer important energy projects will remain offline and competitiveness will suffer.

Increasing concern for environmental protection also means countries should want to import the highest-standard, best practices in the energy sector, including in the fracking industry. They should take steps to ensure, rather than discourage, U.S. and other Western energy companies' adherence to the highest global standards.

U.S. Policy Change Beyond Its Borders

From a foreign policy perspective, changes in the energy sector imply that the U.S. will likely begin to view the nations of the Western Hemisphere differently than in the past. The dramatic shift in energy markets means the U.S. has greater flexibility and increasing options in its regional foreign policy.

A more strategic approach to the region is appropriate.

In the first instance, the U.S. would do well to focus on the further economic integration of North America, with energy as a core priority. Increasing efficiencies in production and distribution will support economic growth and environmental protection. Coupled with reforms Mexico knows it must make (President Enrique Peña Nieto came into office with energy reform as a stated priority), a unified North American energy marketplace would also contribute significantly over the longer term to strategic national security interests.

That will require concrete steps, including construction of additional infrastructure such as the Keystone XL pipeline from Alberta's oil sands deposits in Canada, which is a more efficient and environmentally sound option than transporting the same petroleum across the border by truck or train. It is also an environmentally safer option than the current practice of shipping heavy, dirty Venezuelan crude across the environmentally sensitive Caribbean Sea to the same refineries on the Gulf Coast.

At the same time, energy sector reform in Mexico will be helped along to the extent that the Mexican people see outside investment as helpful and value-added, not one-sided or exploitative. Given the history and political sensitivity of the issues, confidence-building measures in the industry are appropriate.

In particular, the U.S. should quickly introduce and pass the U.S.-Mexico Transboundary Hydrocarbons Agreement that was agreed in 2012. This would help both nations develop projects in the transboundary region of the Gulf of Mexico by allowing PEMEX to enter into joint agreements with U.S. companies. The agreement would also provide the legal framework to encourage U.S. companies to enter into these partnerships and end the moratorium on developing oil and gas projects in the western Gulf of Mexico. A real political breakthrough will support a larger opening in the sector.

As well, increased supplies from Canada, Mexico, Brazil, Colombia, and elsewhere would allow the U.S.

to further reduce its intake of Venezuelan crude, which would have a salutary foreign policy impact by reducing the resources available to Venezuela to promote its anti-American Bolivarian project across the region.

China is in the process of building infrastructure to refine and distribute crude from Venezuela, but China also has increasing options globally. With ongoing political uncertainty in Venezuela, it is unclear that China is looking to build out a significantly expanded relationship with Venezuela in the near or medium terms. The internal contradictions of the *chavista* project would become increasingly apparent with reduced petroleum sales at market rates.

Even without such steps by the U.S., Venezuela's economy is deeply troubled, both because energy output has declined due to gross mismanagement and also because the bounty from the energy sector has been squandered on current consumption rather than investment. As a result, Venezuela may soon be forced to cut back its Petrocaribe energy diplomacy.

A reduction in Venezuela's ability to exploit its energy resources to service its growing debt load or to support political efforts across the hemisphere would have a far-reaching impact. Countries such as the Dominican Republic, Jamaica and others that have allowed themselves to become highly indebted to Venezuela now lack the fiscal space to backfill energy imports that a financially-strapped Venezuela is increasingly stretched to provide.

With this in mind, the U.S. should promote an alternative vision for the Caribbean Basin, based on the export of newly plentiful natural gas.

First, of course, the U.S. must permit the export of natural gas to its Caribbean and Central American neighbors. A new Caribbean Basin Initiative, substituting plentiful, cleaner fuel from the U.S. and its allies on a cost-effective basis, would reduce reliance on Venezuelan energy. As part of a broader program of engagement with the Caribbean and Central America, it would also contribute to regional development, thus assisting with the job creation required to reduce the attraction of illegal activities, including participation in the drug trade.

And it would support environmental priorities by substituting cleaner natural gas for the diesel fuel and deforested wood products that much of the region burns to generate its electricity—reducing, if only by a small amount, the global climate change pressures that are increasing the frequency and severity of hurricanes and other natural events across the region.

Finally, the U.S. should lead an effort toward regional consultation, coordination and the development and adoption of best practices—including standards and regulatory harmonization in emerging fields such as shale resources—complementing efforts already under way on alternatives, including ethanol. These are new technologies with dramatic implications for the hemispheric energy sector and for the United States.

The bottom line: partnership between the U.S. and other countries across the region offers a significant opportunity to promote an agenda based on mutual interest.

A new abundance of North American energy is a boon to the U.S., and offers the opportunity to rethink some of the regional approaches of the past, particularly if we use abundant, clean natural gas to promote U.S. interests in the Caribbean and Central America. Creativity and focus will be required, and that takes leadership.

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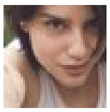

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