Deloitte.

Getting to par

Spotting the sand traps in Latin America oil and gas

Contents

Two steps forward, one step back

Latin American energy in transition

Ever a study in contrasts, Latin America has emerged in the 21st century as a story of challenge combined with unparalleled opportunity and progress – a region marked by uneven and unpredictable development, yet so rich in hydrocarbons that it accounts for 20 percent of the world's known oil reserves.

Indeed, not only has the region weathered the global financial crisis to become one of the world's most rapidly growing markets, its vast hydrocarbon resources have become enough of a political prize that roughly 80 percent of the region's oil and gas business is now conducted through national oil companies (NOCs) – organizations accountable to governments more than shareholders and that may, or may not, operate according to traditional corporate models.

"Which other country in the world has the oil reserves that Brazil has, that is not at war, that doesn't have an ethnic conflict, which respects contracts, has clear democratic principles and vision, is generous, and in favor of peace?"

Brazilian President Dilma Rousseff[1]

The result is an emerging trade powerhouse, but one that faces issues of apparent contradiction that many see as vitally important for the region to overcome, such as:

- Parlaying hydrocarbon assets and development into fully diversified economies, while ensuring traditional sectors like manufacturing and agriculture do not suffer diminished government support due to focus on resource development alone

- Resolving infrastructure issues – both physical and, perhaps more importantly, social – that threaten the region's oil and gas potential

- Managing the expectations that often come with newly discovered oil wealth, such as the over reliance on the NOC to single-handedly cure a country's economic and social woes

At the same time, many industry leaders in Latin America are optimistic and eager to learn the international community's proven pathways to sustaining hydrocarbon-fueled economies. Brazil's 2007 discovery of its massive "pre-salt" oil fields, representing some 50–80 billion barrels (bbl) of reserves, is a case in point. Managing the largest oil deposit discovery in the country's history has not only afforded Brazil the opportunity to practice acknowledged expertise in offshore deep-water exploration but also to become a global showcase of long-term mega-project planning.

Caught in the updraft of developments like these, smaller and unexpected centers of excellence have opened up in other sectors as well. The information technology sector, for example, has opened markets for Internet and mobile innovation in Mexico, where developers expect to invest at least US$3 billion over the next few years[2] as well as grid computing and satellite/telescopic imaging in Chile – a country scoring high on international change readiness indices and whose economy has expanded at twice the rate of Brazil's.

The challenges are nonetheless formidable, and Deloitte* sees six specific areas where companies and countries will need to focus in order to maintain momentum and leverage their expanding presence on the world stage. The region, in others words, is on the right course and playing a strong game – but sand traps abound, such as:

1. **Fueling the foreign investment dragon** – ensuring that heavy investment in the region doesn't infect it with its own case of "Dutch Disease"

2. **Untangling Latin American energy policies** – navigating through widely divergent regulatory, taxation, and investment regimes

3. **Minding the productivity gap** – improving competitiveness by strengthening management systems and public governance over revenues and spending

*As used in this communication, *Deloitte* means Deloitte Touche Tohmatsu Limited and its member firms.

4. **Easing energy's bottleneck** – building on successes like the region's information and communications technology (ICT) sector to solve infrastructure constraints, including education and healthcare, that have long been considered the bottleneck in Latin America's growth potential

5. **Relieving the talent crunch** – stemming the flight of talent for opportunities elsewhere in the world by advancing human capital planning and incentives aimed at young scientists and organizational talent

6. **Managing the realities of NOCs** – acknowledging that NOCs may not conduct business like purely commercial oil and gas corporations, in particular the extent to which NOCs are sometimes used as a key pillar in the social support policies of many countries

Latin America has enjoyed the world's most rapid growth in both outward and inward foreign direct investment (FDI), with inflows up by 40 percent in 2010 over the previous year, and outflows up fourfold to hit an all-time high of US$43 billion.[3] The future is equally bright, with economists predicting GDP growth in Latin America to average 4 percent in 2012, after 6.1 percent in 2010 and 4.5 percent in 2011.[4]

Dutch Disease: An economic theory that describes how rising resource exports can push up a country's real exchange rate, rendering other exports expensive and uncompetitive, while drawing capital and labor out of other tradable sectors (namely manufacturing and agricultural) and ultimately driving down economic growth.

Realizing a winning strategy begins and ends, however, with minimizing risk while avoiding shortcuts. Latin America is poised for performance, but overcoming these mission-critical obstacles will be essential to steer clear of the sand traps and keep to the fairways and greens.

Let's get started.

Sand trap #1

Fueling the foreign investment dragon

Economic ties between countries and the influx of foreign companies into the Latin American region continues apace, but few observers are surprised to learn that China still drives much of this growth. Strong commodity demand from this economic juggernaut has turned formerly casual business partnerships with Brazil, Chile, and Peru into trade marriages – indeed, the Economic Commission for Latin America and the Caribbean (ECLAC) reports massive demand increases over the past decade, with China going from absorbing 1 percent to a full 7 percent of the region's exports. In 2010, Chinese transnational interests invested over US$15 billion in the natural resource extraction in the region.[5]

Nor is it a shock to learn that oil is the greatest prize in the courtship. Recent business deals have seen China securing a decade's worth of oil from three of the region's major producers – Brazil, Mexico, and Venezuela – by means of large investments and loans. Venezuela alone now transfers 460,000 barrels a day to China, which is approximately 20 percent of its oil exports.[6]

But while that partnership has significantly bolstered the Latin American economy, the relationship is not always as balanced as it might be. Observers warn that if it goes unchecked, the region's mild case of "Dutch Disease" may flare into a more serious economy malady – not unlike Chile's decades-long and GDP-distorting dependence on copper exports. And it's not just that Latin America is vulnerable to China's slowing growth, or, in the worst case, a global crash in oil demand. Industry watchers also note that many of the countries that benefit from Chinese FDI also compete directly with China – Central America and Mexico in particular – with its manufacturing exports to the world's consumer markets. Market share studies suggest that over 90 percent of exports from Honduras and El Salvador are in categories that are wholly or partially under threat by Chinese competition; for Mexico, 85 percent of its exports are under such threat.[7]

Onto the green

While rocketing foreign investment in the region has had tremendous short-term benefits, asymmetrical trade relationships and excessive dependence upon oil exports could result in long-term economic insecurity for host countries. Deloitte believes governments need to incorporate their FDI policies into a larger, comprehensive development strategy aimed at gradually moving toward more sophisticated goods and less reliance on raw materials and natural resources while raising the capabilities and competitiveness of domestic firms so that in the long term these firms develop into competitive exporters themselves.

> "Since 1997 we have had transnational energy companies come to Brazil to investigate investment opportunities, and now, we see the presence of the Chinese oil companies. We're also seeing partnerships between the global oil service companies with small or medium domestic companies. The door is open for oil activity and joint ventures within Brazil."

Carlos Vivas, Oil and Gas Leader, Deloitte Brazil

Sand trap #2

Untangling Latin American energy policies

The considerable energy poured into promoting Latin America's oil and gas investment opportunities has smoothed the way for foreign direct investment – and an active priority for many countries remains the refinement and/or development of measures like tax incentives and dispute settlement processes to ease the process.

Yet, Latin America remains a daunting prospect for many foreign investors. Divergent regulatory, tax, and financing regimes are common across the region, as are fuel specifications, industrial emission limits and caps on carbon production. Historically, free trade agreements and tax-integrated zones like the Common Southern Market or MERCOSUR (comprising of Argentina, Brazil, Paraguay, Uruguay, and Venezuela) and the Andean Community (CAN) trade bloc have reached for harmonization but with mixed results.

Energy reforms also often meet with internal opposition. For example, Mexico's 2008 energy reform package to stimulate its dwindling reserves was initially off to a good start, adding independent business-sector members to its board, modifying inefficient procurement rules, and encouraging private-sector investment in the industry. However, political clashes with Mexico's nationalist Democratic Revolution Party (PRD) significantly weakened the reform: the resulting policy retained the old restrictions on joint-risk contracts with private investors and limited foreign participation in the industry to service contracts.

Other areas of concern and attention include:

Entitlement – Citizens of hydrocarbon-rich economies often believe they have a right to lower-than-market-based oil prices. In times of regime instability and growing inflation, however, this privilege often parlays into artificial depression of oil prices and expensive subsidies that threaten overall stability, regardless of good intentions. For example, the International Energy Agency, which tracks energy subsidies by country, reports that in 2010 Venezuela spent US$15.7 billion on oil subsidies and Argentina spent US$2.53 billion on gas subsidies.[8]

Developing resources, unconventional reserves in particular – Argentina's and Brazil's major oil producers both recently announced major investments in its exploration and production units in an attempt to boost its oil output. However, Latin America's substantial oil and gas deposits continue to be slowed by price controls, local content requirements, and restrictions on foreign participation that have hindered wide-scale development of these assets.

Health, safety, and environmental (HS&E) policies – The 2010 oil spill in the Gulf of Mexico has highlighted the risks of drilling in deep-water, flagging for all regional NOCs the importance of worker and environmental safety. Indeed, the late-2011 deep-water oil spill off the southeastern coast of Brazil has prompted its National Agency of Petroleum, Natural Gas, and Biofuels (ANP) to revisit its environmental and safety policies, particularly those involving foreign partners, in the effort to restore public faith in upstream regulation and offshore drilling.

Investor taxation – As is often the case in emerging economies, tax structures in the region have not caught up to industry reality. Brazil, one of the more complex taxation environments in Latin America, still lacks income tax legislation specifically for the upstream oil and gas industry. As a result, investors are often unclear on the finer points of depreciation and depletion of assets from a tax perspective and, accordingly, procedures to interpret Brazilian tax legislation can vary from company to company. Brazil also has a complicated indirect tax system that significantly impacts capital and operating expenditures, such that the recovery of indirect tax credits is dependent on the nature of the transaction of the company. How indirect tax applies to new production-sharing agreements, meanwhile, remains uncertain.

As the oil and gas industry continues to mature in Latin America, investors may find the route forward somewhat clearer as energy policies continue to evolve. Brazil's 2010 framework to affect rational and staged development of the country's massive pre-salt oil discoveries is a case in point. Even given uncertainty around taxation, investors considering the benefits of exploration of this region's on- and offshore and deep-water assets will at least have a level field on which to play.

Onto the green

The European Union has learned over the years that tax integration is critical to attracting foreign direct investment and avoiding distortion in global trade. Although the regions are not completely analogous, there may be helpful lessons and successes here for Latin American countries to consider. Furthermore, if tax policy is to benefit not just a specific country but the entirety of Latin America, a cooperative approach among the region's tax authorities is essential. Barriers to foreign trade may be reduced when foreign investors can focus on a regional, rather than a small localized, market.

Meanwhile, diversifying their energy portfolio through renewable energy sources – including looking to import gas from outside the region to secure their energy supply – will allow NOCs and their owner governments to address the challenges of entitlement and HS&E simultaneously. A more heterogeneous mix of energy sources will help to meet broad and voracious demand, contribute to reducing the cost of gas throughout the region, and begin to satisfy concerns about the human and ecological toll of resource development.

“We have the opportunities, the resources and the enterprise to make oil and gas an economic staple in Latin America, but to do so, all players and energy policy makers must truly embrace the industry. Engaging foreign investment in the region will be a key challenge over the coming years.”

Ricardo Ruiz, Latin America Energy and Resources Leader, Deloitte LATCO (Argentina)

Minding the productivity gap

Informed onlookers agree that since 2002, productivity has grown substantially in many of the region's countries – most notably Brazil, Chile, Colombia, Costa Rica, and Panama. In many cases, partnerships with transnational companies and public investment have broadened the horizons and expectations of many regional managers. Colombia's NOC, for example, has worked to benchmark itself against world-class organizations, transforming many of its most rigid management policies into more competitive and flexible strategies.

But economists who study Latin America suggest many of the region's businesses are not yet competitive with their counterparts in fully developed countries: they remain small and inefficient and many operate within the informal economy. Corporations and civil services in Latin America are often hobbled by undeveloped management systems and somewhat antiquated concepts around wages and performance. Economists further point out that, traditionally, private firms tend to outperform public entities[9] – a note of particular interest in a region where NOCs often have a monopoly on the production, refining, export, and import of hydrocarbons. Underinvestment in the regions' upstream sector has also contributed to steep production declines. In Mexico, oil production is steadily declining as its NOC has failed to develop new reserves: in fact, reserves have fallen from 20.2 billion barrels in 2000 to 10.42 billion barrels in 2011 and analysts predict Mexico will lose its status as a major exporter to become a net oil importer by 2020.[10]

At the same time, a strong union culture in many Latin American countries has produced a generation of workers opposed to free trade and privatization, helping give rise to labor and community conflicts and loss in production. Argentina's NOC reported that labor unrest cost them about 9.6 million barrels of oil equivalent (boe) in lost production last year alone.[11]

Governments, however, recognize the need to be competitive for sustained growth and have begun recently to focus on a productivity agenda. Ecuador's NOCs, for example, embarked in 2011 on a very ambitious transformation program – from well head to gas station – in an effort to modernize its oil and gas industry.

Onto the green

Deloitte believes that increased productivity can occur when governments and business understand the importance of transparency. In government, transparency means revenue and procurement information is openly accessible and subject to public scrutiny, while, in business, corporate social responsibility ensures that organizations report upon their practices honestly and completely. Without co-ordinated pay criteria or transparency about remuneration and career advancement, local workers may lack motivation or the sense that they have a future in the organization.

In 2010, Colombia and Mexico scored at least twice as high in the International Budget Partnership's budget index as other global countries relying on oil and gas revenues – proof that, while opaque and irregular business practices are often the elephant in the room with regard to Latin America, positive results can occur when governments make transparency a priority.[12]

The **informal economy** refers to all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements concerning registration, tax payment, conditions of employment, and operating licenses.

"Colombia's NOC is looking to benchmark itself against major international oil companies, with the goal to identify gaps and plan how these might be addressed. The company is developing technologies and searching for new technologies that may not yet be available to them, or that could better position them within the marketplace. Now that they have public investors, the organization is being transformed into a fully competitive business."

Jorge Hernandez Orduz, Oil and Gas Partner, Deloitte LATCO (Colombia)

Sand trap #4

Easing energy's bottleneck

Physical and social infrastructure constraints have often been considered the bottleneck in Latin America's growth potential. Without secure and predictable networks for transportation, finance, and materials supply, business faces crippling uncertainty in logistics and risk. Although the private sector has sunk considerable funding into physical infrastructure development in recent years, countries in the region will need by comparison to invest 9 percent of their GDP in order to close the infrastructure gap with Southeast Asia.[13]

Deloitte sees most physical infrastructure issues – and opportunities – arising in relation to energy and transportation, and several areas emerge warranting both optimism and some concern:

Pipelines – The pipeline situation in Latin America is improving, with passageways planned from the northeast coast of Brazil. Colombia is leading the construction of a US$4.2 billion oil pipeline, the Oleoducto Bicentenario, to resolve capacity constraints, while Argentina and Bolivia in 2011 opened a new pipeline that has expanded their combined capacity by nearly 50 percent – from 7.7 mcm/d to 11.3 mcm/d.[14]

Transportation corridors – Although the public sector has generally focused its transportation investment in its roadway networks, roads throughout Latin America lag behind those in other regions with similar economic conditions. There has been little interest in building new roadways in the region and even less in improving existing roads; further, responsibilities for road infrastructure are neither clearly defined nor methodically distributed amongst different levels of government. Contracts for new road building are often granted without land studies or designs, a situation that often leads to cost overruns and delays. Rail transport, historically the region's transportation mode of choice given its importance in the region's mining industry, has also not kept pace with regional needs.

Port systems in Latin America fare somewhat better, although improvements to port infrastructures in countries like Costa Rica and Peru have experienced lengthy delays in recent years. Development authorities expect the region's waterways and river ports to suffer similar inattention from their public sectors. Major airports in Brazil in particular are overcrowded, suffering decades of underinvestment. However, with increased demand from both industry and the 2014 World Cup planners, investment in this transportation sector is now picking up steam, with airport infrastructure expected to grow by 8.2 percent between 2012 and 2014.[15]

Information networks – A bright spot in Latin American infrastructure is information and communication technology (ICT), which is producing rapid change in the region's economic and business life. While still constrained by relatively low reach to households and small enterprises, higher-income households and business have greater access to these services, rivaling the European Union and surpassing the United States. In Brazil, Costa Rica, Jamaica, Panama, and Uruguay, telecommunication offerings are good, but access to the service is not equally distributed.

Social systems – At the K–12 level, the Programme for International Student Assessment study reveals that, on the whole, Latin American students perform worse than their counterparts in OECD economies: almost 50 percent of the region's students fail to attain minimum acceptable levels in reading tests (vs. less than 20 percent among other OECD countries).[16] But as students increasingly aspire to careers in the oil and gas industry, higher education becomes a goal for a broader section of society. Today, over half the students at Latin American post-secondary institutions are the first of their families to attend university. Universities in the region are also challenged by their relative lack of researchers and by an imbalanced weighting towards social sciences and humanities against science and technology disciplines.

Universal healthcare continues to be a government priority, with many countries struggling to provide its citizenry with adequate reforms. Brazil, for example, has worked for 20 years to establish a state-controlled public national health system while Colombia has sought market competition and employer-based healthcare insurance. Of the two systems, Colombia's has been less successful, with underfunding and inequitable access the main obstacles to smoothly functioning healthcare provision.[17]

Citizen and energy security – Another significant threat to the sustainability of Latin American economies is citizen security. Despite rigorous attempts to contain it, only a few countries in the region have made significant headway over the past decade in curbing internal criminal violence, and studies on the subject agree that one major cause of this transnational insecurity stems from drug trafficking and related organized crime. But while substantial efforts by Colombian and Mexican forces have to some degree curtailed the production and traffic of drugs, foreign demand for illegal substances has not subsided. And it's not just risk to those caught in the drug war crossfire. In recent years, Mexico's opportunistic drug cartels have infiltrated the country's hydrocarbons business, siphoning petroleum product from underground pipelines into their own tankers.[18]

Threat to personal, infrastructural, and economic security also comes from the activities of self-financed insurgent groups in some Latin American countries, most notably Colombia and to a lesser degree Venezuela. The Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army (ELN) often target foreign oil multinationals and local energy infrastructure, claiming such transnational interests work against the construction of an effective national oil industry. In the past, Colombia has dealt with pipelines being destroyed by explosives, with extortion, and with the kidnapping of oil workers and managers. On the bright side, both the former Colombian president

Alvaro Uribe (elected 2002) and his successor Juan Manuel Santos (elected 2010) have had considerable success in mounting extended campaigns to confront guerrilla activities with the goal of dismantling terrorist groups like the FARC. Many expatriate Colombians recognize this improvement in their country's welfare by returning home to revive their careers in the oil and gas industry.[19]

Onto the green

When it comes to Latin America's all-important physical and social infrastructure challenges, Deloitte sees the glass as half full. While significant issues remain, investment in both physical infrastructure and social systems continue to grow year over year. Planned pipelines and refineries such as Argentina's and Uruguay's co-financing of the latter's first liquefied natural gas (LNG) terminal, the GNL del Plata,[20] and the Abreu e Lima refinery, a 230,000 barrels/d joint-venture between Brazil and Venezuela,[21] are opening doors for developing regional infrastructure. Governments, meanwhile, are leveraging oil royalties to provide better quality healthcare and access to higher education for its citizens. For example, healthcare has seen considerable reform in Mexico, where the government has streamed considerable amounts of its oil revenues to implement a universal healthcare insurance system.

More joint projects and reforms like this will go a long way to easing bottlenecks and other obstacles preventing the full development of not only the region's resource potential but also, given the often broad role of NOCs charged with that development, the potential of its people.

> "The complexity of Mexico's NOC and its frameworks for remuneration has led to an unfortunate development in our post-secondary education offerings. Recently, two of our universities have shut down their earth sciences programs, which means our geologists, geophysicists, and reservoir engineers are going elsewhere to pursue their studies. We may see these programs return when our exploration programs ramp up again, and when the compensation programs for these key positions get aligned to the market."

Jorge Castilla, Oil and Gas Partner, Deloitte Mexico

Sand trap #5

Relieving
the talent crunch

Latin America's oil and gas industry faces a specter all too familiar in other parts of the world: mounting shortages of experienced talent and skilled labor. In 2012, the issue of skills shortages in South America was the primary concern of 45 percent of the region's oil industry employers, a significant leap from the previous year when only 28 percent of executives considered it a problem. This concern for the industry's human capital deficits is the second highest globally, ranked just behind Australasia.[22]

Deloitte expects increasing retirement among Latin American professionals to intensify the shortfall trend. In countries like Brazil and Mexico where unconventional projects demand specialized reservoir and technical expertise, a disproportionately large group of retiring employees is taking with it essential and particularized knowledge that is not effectively transferred to younger generations of workers. Adopting a robust program of knowledge management, which teaches an organization to retain its intellectual capital, could be an important component in furthering the region's strategic objectives.

Another challenge: foreign service contractors with deep pockets often hire the most talented young workers from Latin America's oil and gas pool, thereby cherry-picking national talent and draining NOCs of their potential for innovation and excellence. Further, regional industries such as mining and manufacturing feeling the same manpower pinch often launch aggressive recruiting campaigns to introduce undergraduates to their business opportunities. Once ensconced, specialized workers often find it difficult to cross over into oil and gas careers. Even the regionalized nature of large Latin American

"In the '90s, we saw in Brazil a 10-year industry slowdown that virtually eliminated an entire generation of talent. We see a generation of aging baby boomers and an upcoming group from the Y Generation, but we're missing a vital bridge between the two – namely, the X Generation. It's a challenge to put these two disparate generations together to transfer knowledge from one to the other. That knowledge transfer will be expensive and time-consuming, but it must be done if oil and gas companies are to thrive."

Eduardo Raffaini, Oil and Gas partner, Deloitte Brazil

cities – for example, Rio de Janeiro, a major center for hydrocarbon activities, vs. Sao Paulo for manufacturing and commerce – works against professionals looking for career advancement within their own countries.

Onto the green

Deloitte believes advanced human capital planning based on clear and quantifiable metrics in support of talent management is fundamental to an organization's ability to identify future gaps and create plans to address them. In-house research teams are also a way of the future for many oil and gas companies: Brazil, for example, combats brain drain among its oil companies by recruiting young scientists to work on long-term research projects in dedicated teams – many of which share knowledge and resources with regional universities, laboratories, and other companies.
Such national teamwork inspires young professionals to "stay at home" with their research, where the larger benefits will ultimately be realized.

Sand trap #6

Managing
the realities of NOCs

Resource nationalism represents the single largest wildcard in Latin American economies today. NOCs own more than 80 percent of the reserves from Mexico in the north to southernmost Argentina – and the size of this resources gift is extraordinary. In 2007, Brazil discovered its massive offshore "pre-salt" oil reserves, with total reserve potential of more than 50 billion boe[23] – an asset that could transform the country into one of the world's largest oil producers. In 2011, analysts tallied Venezuela's proven oil reserves at 211.2 billion bbl, Mexico's at 10.4 billion bbl,[24] and Ecuador's at 6.5 billion bbl.[25] Argentina's newly discovered shale oil reserves have the potential to reach a whopping 22.8 billion boe.[26]

Yet, with great oil wealth comes great opportunities – and temptations. Latin American governments continually deal with competing priorities, including the long-entrenched directive to retain control and ownership of energy resources versus the need to raise foreign capital and expertise, as well as the commitment to distribute surpluses generated from the industry back to the populace at large.

Deloitte sees several areas for improvement as Latin America evolves its resources sectors to global actor status:

The compulsion to gatekeep – Responsibility to guide the region's reserves falls to NOCs at one level, but at a higher one to governments, that consider the asset critically important to their energy security and economies. NOCs thus find their assets jealously guarded and their activities steered into policy realms – bilateral trade, security of supplies, and energy self-sufficiency – that most oil companies would consider outside their corporate jurisdiction. As a result, Latin American NOCs become the "national prize," serving broad political and socio-economic goals rather than simply maximizing shareholder profits. Regime changes, then, too often translate into corporate turnover – NOC executives who develop productive long-term projects find themselves ousted the day after elections while moratoria clamp down on business as freshly elected politicians plan new oil strategies. The outcome has ramifications, too, for foreign partners who abruptly lose not only their executive champion in the NOC but sometimes their projects, as well.

Populism and other politics – Moves to nationalize (or, in some cases, renationalize) hydrocarbons assets can have similarly weighty results. In April 2012, Argentina President Cristina Fernandez de Kirchner announced plans to nationalize local oil assets controlled by its Spanish partner in a move to recover sovereignty over its hydrocarbon assets. Spanish authorities responded with lawsuits, and some suggest the move will scare off foreign investment needed to develop the country's newly discovered shale oil and gas reserves. Not all protectionist policies are directed outwards. Despite astronomically high costs, many of the region's governments continue to sell oil products at subsidized rates to curb inflation and avoid politically costly fuel price hikes – programs created to assuage citizens who feel a strong sense of entitlement to cheap hydrocarbons but at crippling costs.

Strengthening domestic expertise and capacity – While Latin American NOCs appear to dominate their local resources sectors, the complexity of many of the resource challenges – particularly in heavy oil, unconventional gas, and even offshore drilling where NOCs have deep expertise – is increasingly requiring productive joint ventures and partnerships. Brazil in particular faces pre-salt reserves that are technically challenging and may benefit from collaboration with experienced firms to accelerate its production, including building extra process facilities to accommodate the high amounts of natural gas expected from the Santos basin.

Onto the green

While some countries have moved toward greater state involvement, others have pursued market-based energy policies. Deloitte believes the countries whose NOCs have adopted a more hybrid operating model (shared public and private ownership; operations both within and outside their borders) will be better prepared to balance the needs of government – money for the treasury and jobs for the local population – with traditional business requirements of capital investment and operational efficiency.

Brazil has long been held as an example of the benefits of opening the country for energy competition; its largest oil producer has engaged in energy partnerships with foreign investors since 1997 and is now considered a leading global energy company.

Colombia has since followed Brazil's lead. Colombia's current and previous administrations understand that, to achieve long-term economic and social sustainability, it needs both to diversify its energy portfolio and, in order to do that, to attract investment. Recent free trade agreements with its main trading partners, the United States and the European Union, have assembled an impressive range of trade and investment-related agreements, as well as a commitment to sustainable development. Colombia's NOC also underwent a substantial institutional change in 2003, providing it corporate governance reform, increased international trade and, five years later, trading its American Depositary Receipts (ADRs) on the New York Stock Exchange.

> "The relationship of governments and NOCs in Latin America is extremely complicated, and the debts that each have, one to the other, are intertwined in complex ways. Some NOCs here do a great deal to support their country's infrastructure, while others are less committed to programs of corporate social responsibility. The most that can be said is that it's a slow process and in no way a simple matter to decide what makes for a best practice."

Omar Itcovici, Americas Oil and Gas Consulting Leader, Deloitte LATCO (Argentina)

Looking outward

The key to reform and revival

No longer the poor cousin to the Middle East, Latin America has come into its own as a significant player on the world energy stage. Globalization has posed the region numerous challenges, some cleared with ease and others with more effort – but all with obstacles highlighting the need for ongoing business reform.

Whatever the hurdle, this culturally rich, progressive and emerging entrepreneurial region has generally learned from its mistakes and adopted new frameworks for business, social, and environmental policies.

By most accounts, the progress of Latin America toward environmental, economic, and social sustainability has been impressive. Over the past decade, the region sidestepped the financial collapse of 2008, focused its efforts to provide its citizenry with greater healthcare and educational services, and began to outline its plan for renewable energy.

The transformation bodes well. The region is also an emerging leader in new energy models and technologies, with Brazil meeting almost 50 percent of its vast and expanding electricity demands through renewable energy sources, including hydro, wind, and biofuels. That country's devotion to biofuels – a 40-year commitment and research track stemming from the oil crises of the early 1970s – remains a template for the world, with 90 percent of vehicles in Brazil running on fuel blended with sugarcane ethanol.[27]

Deloitte believes, however, that when all is said and done, collaboration is the essential element of Latin American growth. The nature and dynamics of globalization and the realities of successfully producing harder-to-get-at hydrocarbons will continue to converge and force evolution in both national and international oil company policies and operations. While this new world order in the petroleum industry is

“Looking back over the past 20 years, we can see that Latin America adopted the right mix of macro-economic policies and succeeded in the process to rein in a phenomenal inflation rate. The region set itself on a comparatively strong financial course, which is why during the last recession the region performed much better than many of its global neighbors – in fact, it hardly felt the full impact of that crisis. Policies adopted by governments in Latin America are helping companies make the right decisions.”

Pierre Pettigrew, Executive Advisor, Deloitte Canada

apt to involve some short-term pain and turmoil for the traditionally centralized NOCs as they grapple with new and very visible roles on the world stage, the long-term prospect is for a more coherent energy sector enjoying greater transparency and level playing fields on which to conduct business. After all, the well-being of more than 580 million people depend upon the willingness of both international and regional interests to join forces to further build this vibrant new global power.

Let’s talk.

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