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Update on the Americas

The Outlook for Energy Reform in Latin America

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Introduction

The story of the oil industry in Latin America in recent years has been one of both highs and lows, with positive news coming out of countries such as Brazil and Colombia, and less encouraging developments taking place in Mexico and Venezuela. At the same time, we have witnessed a number of important and intriguing changes in the regulatory and contractual frameworks for foreign participation and investment across the region. Whereas some countries have chosen to remain open to the possibility of (or even expand the opportunities for) foreign involvement, a growing trend has been towards a resurgence of oil nationalism and the stifling of opportunities for international oil companies (IOCs).

In July of 2009, the Latin American Program and its institutes on Brazil and Mexico, along with the Global Energy Initiative at the Woodrow Wilson International Center for Scholars in Washington, D.C. convened four experts from the region to talk about their perspectives on the potential for reform in four leading oil producing nations: Brazil, Colombia, Mexico, and Venezuela. At a pivotal moment in the relationship between state-owned national oil companies (NOCs), the IOCs and broader oil services sector, it is clear that there is a need for an objective appraisal of the prospects for further change in the regulatory environment. In the first part of this event, *Christopher Garman* of the Eurasia Group offered his thoughts on the new arrangements concerning the Brazilian pre-salt oil region, and *Duncan Wood* of the Instituto Tecnológico Autónomo de México (ITAM) and the Center for Strategic and International Studies (CSIS) put forward an analysis of the chances of further oil sector reform in Mexico.

In the second session, *Ana María Sanjuán* of the Universidad Central de Venezuela spoke about the outlook for Petróleos de Venezuela (PDVSA), Venezuela's national oil company, and *Roget Tissot* of GasEnergy Latin America presented his thoughts on the challenges ahead for Colombian oil.

This paper provides a summary of the Woodrow Wilson Center event, and in doing so evaluates the current climate for significant reform in these four Latin American nations.

Recent History

In 2002 global oil prices began a sustained march upwards as demand and constricted supply drove markets. As this tendency intensified after 2005, both governments and oil companies (national and international, public and private) embarked on an ambitious search for new oil supplies. The issue of energy security re-emerged after a long period where cheap and easy oil had been taken for granted. Throughout the world, oil and oil prices once again became a topic for discussion in policy and business circles.

In Latin America a number of important changes took place. The region remained one of the world's most important sources of oil, particularly for the U.S. market, but as prices rose and global supplies tightened, certain areas of Latin America became problematic for different reasons. In Mexico, after 2005, the problem of declining reserves, rapidly falling production, and political stagnation over the question of oil policy reform raised fears of impending collapse of both Petróleos Mexicanos (PEMEX) and the nation's finances. In Venezuela, the rise of Bolivarian oil nationalism under Hugo Chávez brought with



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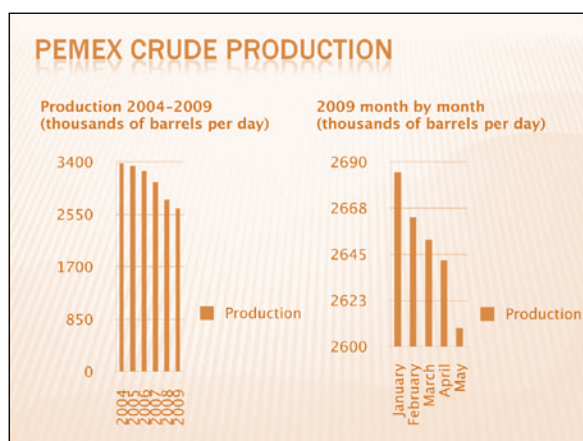
it a process of renegotiation with IOCs over access to the country's massive reserves. At the same time, the Venezuelan NOC, PDVSA, saw declining production and internal management issues emerge. A less negative scenario was emerging in other countries in the region, however. In Brazil, the news seemed to be unfailingly positive, as new discoveries, healthy corporate finances, and an open attitude to foreign investment helped the NOC, Petróleo Brasileiro (PETROBRAS), establish itself as a global leader in the industry. In Colombia the news was also positive, as the government brought in a new regulatory framework and the NOC, Empresa Colombiana de Petróleos (ECOPETROL), increased its reserves and production.

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Mexico: Decline and Fall

The headlines from the oil industry in Mexico in recent years have been predominantly negative. Falling production, the unstoppable decline of the Cantarell giant oil field, the failure to find alternative reserves, and the uninspiring reforms of the fall of 2008 have pointed towards a less than shining future for Mexican oil companies. PEMEX's constitutionally mandated monopoly position in oil production remains unaltered and is unlikely to be modified in the near future. These factors are viewed as major threats to Mexico's oil independence.

In 2004 Mexican output reached its historic peak, producing 3.38 million barrels of crude petroleum a day. This peak was driven by the huge amounts of oil coming out of Cantarell, a mature field that was being injected with nitrogen to increase flow and compensate for falling pressure in its wells. But from 2004 onwards, the numbers began to fall at an increasing rate as Cantarell's pressure dropped even further. Although other fields were being developed, none had the potential capacity of Cantarell,



and furthermore, even if combined, they could not replace the mature field's falling production.

Unable to replace Cantarell's production with oil from other fields, Mexico was faced with the prospect of losing its position as a leading oil exporting nation. In order to address this dilemma, the Mexican government in 2008 began a concerted political campaign to reform the oil sector to allow private and foreign participants to partner with PEMEX, the ultimate goal being bringing in new technologies and know-how to PEMEX to allow the company to successfully explore and produce in the deep waters of the Gulf of Mexico (to date PEMEX only has the capacity to produce in shallow waters).

This campaign was doomed to failure. Mexican social power elite and general public opinion were still not ready to accept a substantial change in the status quo regarding the oil sector, particularly on the sensitive issue of relinquishing PEMEX's monopoly. Although a reform package was passed through the Congress in the fall of 2008, it did little to free

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PEMEX's hands or permit the company to address its major challenges.

The one area of hope that emerged from the reforms of 2008 was the possibility of new, private sector services contracts that would be issued by PEMEX in 2009. These incentive-based contracts were intended to provide bonuses to service providers that delivered on their obligations ahead of time, while respecting environmental standards, and to those who found wells that produced more oil than was expected. It was hoped that these contracts, when they were finally announced, would spur great interest in exploration among service providers who possess the technology and technical knowledge to explore in the deep waters of the Gulf.

Sadly, though the contracts were due to be announced in the summer of 2009, by the middle of September they still had not appeared. This has raised questions in both political and business circles as to whether the Calderón government is truly serious about change in the oil sector.

More importantly, in the summer of 2009, the midterm elections in Congress overturned the Partido Acción Nacional (PAN) majority and gave the Partido Revolucionario Institucional (PRI) control of the *Cámara de Diputados*. This will greatly complicate the legislative agenda for President Calderón in the second half of his administration, and will directly impact the prospects for reform of the oil sector.

Brazil: Southern Hope

Brazil's turnaround in its oil and gas sector in recent years has been nothing short of stunning. From being a minor oil producing nation almost entirely dependent on imported oil for its industrial and economic development, Brazil has become independent in oil production, has begun to export oil, and has built up PETROBRAS, the Brazilian NOC into a world leader in the sector.

Through corporate reorganization, successful international alliances, and a healthy relationship with the Brazilian government, PETROBRAS has become a model of new thinking in the oil business and has succeeded in raising Brazil's oil production and reserves dramatically. Off-shore deep-water exploration has been highly successful, with major discoveries in the Espirito Santo, Campos and Santos basins, and now further offshore in the pre-salt region.

Although PETROBRAS lost its monopoly position in national oil production in 1997, this in fact spurred the company on to greater competitiveness and it has continued to dominate the sector. In 1999 oil production passed the one million barrels per day mark for the first time; by 2006 that rate had been doubled. In both 2007 and 2008 PETROBRAS announced major oil discoveries in the Tupi and Jupiter fields. Nationally, it is estimated that Brazil will produce more than 2.5 million barrels a day by 2010 and may even reach over 3.5 million by 2016, with an ambitious goal of produc-

ing 5.7 million barrels a day by 2020. As for proven reserves, Brazil has confirmed 14.4 billion barrels, but estimates suggest that the country may have between 40–70 billion barrels in the pre-salt region.

It is, however, precisely in this region of the pre-salt deposits that controversy has emerged in Brazil. In 2009 the Lula government announced a proposal for a new regulatory framework to govern oil exploration and production in the remaining blocks of the pre-salt region. A new national oil company, Petrosal, is to be created that will have a monopoly ownership of the reserves in the remaining pre-salt blocks. It will then work with existing oil companies, with preference given to PETROBRAS, to extract the oil through production sharing agreement contracts. Opportunities for international oil companies to develop Brazil's vast new oil reserves, however, would be much more limited than the current exploration and production (E&P) framework. PETROBRAS will not only have the right to hold a 30 percent stake in all new production sharing agreement contracts struck by Petrosal, but it would also be the lead operator for all new development. The logic behind this new framework is that there is relatively little risk involved in the pre-salt region, and Lula wants to ensure that the resulting profits from production fall mainly into the hands of the Brazilian government. The end result, however, will most likely be a slower development of Brazil's vast new oil reserves. Congress may very well alter the government's proposal in manner that will give international oil companies more opportunities, but if Lula's preferred candidate and chief of staff Dilma Rousseff wins the presidency in 2010, Brazil will most likely head toward a more state-centric development if its oil reserves.

Venezuela: Politics, Power, and Oil

With its massive reserves, Venezuela plays a dominant role in regional energy relations. Counting both conventional and unconventional reserves, Venezuela holds around 320 billion barrels, making it one of the world's most important oil nations. What's more, its gas reserves are of great importance in the southern cone. Due to its low levels of consumption, Venezuela is able to export large amounts of oil (around 2 million barrels a day) and is a major supplier to the United States.

Since coming to power in 1999, Venezuelan President Hugo Chávez has ushered in an era of intense oil nationalism and has used the nation's oil and the national oil company, PDVSA, as a source of influence, power and financial resources for domestic and foreign policy goals. In 2001 a new hydrocarbons law authorized the state to almost double royalties on oil production from 16.6 percent to 30 percent. At the same time, the Venezuelan state took effective control of the most lucrative elements of the oil business by taking at least a 50 percent stake in major oil plays. At the same time the government encouraged the participation of other Latin American NOCs in the Venezuelan oil sector, to promote regional energy integration.



With Chávez using PDVSA as a cash cow that can be milked to finance political, social, and foreign policy programs, the NOC has seen its reputation and its financial and economic stability come under attack. Production has declined by as much as 25 percent according to some estimates, and most oil has been sold at a discounted price or bartered for such things as health care services.

Another serious problem has been the growing tension between the Venezuelan government and IOCs in the country who have seen their tax regime fundamentally altered and now the effective nationalization of their assets. The project of “True Nationalization” in Venezuela has been driven by wide-spread public disillusionment with the misuse of Venezuela’s oil wealth. The new hydrocarbons law of 2006 once again modified the fiscal regime for oil by raising taxes on oil from 1 percent to 33 percent. In 2007, the Chávez administration ordered that oil exploration in the Orinoco belt region would from that point on be controlled by PDVSA, forcing foreign companies to accept a junior partner role in projects that they had previously controlled, wholly or in part. In 2009 Chávez pushed the oil nationalization even further, announcing the nationalization of oil

emphasis on regional energy integration, and on diversifying oil exports away from the United States.

Colombia: The Urgency of Pragmatism

As a significant oil producer, and with large potential reserves, Colombia has traditionally maintained an open approach to foreign investment. Although resource nationalism has surfaced in Colombia’s relationship with foreign oil firms at times, as Roger Tissot has argued, its more modern approach to the sector has been driven by the desire to avoid importing oil. The early days of oil exploration were driven by U.S. firms that produced for export to the U.S. market, with little local development of the sector. In 1974, at the height of the Organization of the Petroleum Exporting Countries (OPEC) oil price hike, the Colombian government passed Decree 2310, which forced foreign firms to share production with the state and with ECOPETROL through the “50-50” arrangements. After large discoveries in the 1980s in the Caño Limón and Cusiana fields, the state tightened the “R-factor” formula for determining royalties, and as time went on, this led to an exodus of foreign firms, stymied exploration and led to a precipitous decline in production and reserves.

Colombian NOC ECOPETROL was a forced bride in all exploration and production under the association contracts which forced IOC to partner with ECOPETROL. These allowed ECOPETROL to show some positive results which in reality were mostly the result of IOC’s activity. The NOC also faced significant limitations on its spending, particularly after the fiscal crisis of 1991, being unable to secure the country’s oil

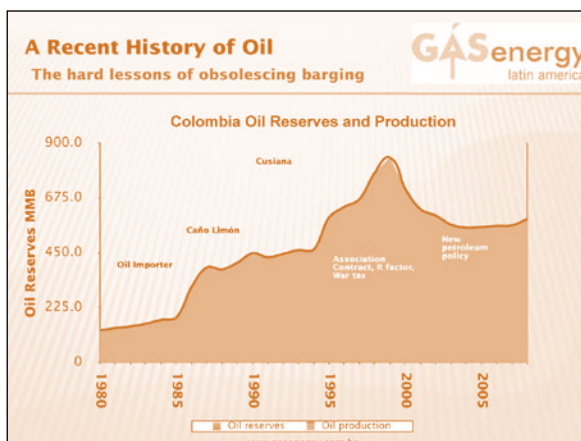
PDVSA Old and New

- Two periods in energy policy: 1999–2003; 2003–2009
- 1999–2003: Recovery of OPEC, stabilization of prices, reversal of the *Apertura*, new legal and fiscal framework for oil
- 2003–2009: The new PDVSA, change in the fiscal framework for companies, two stages of nationalization (2007, 2009), additional roles for PDVSA in social and economic development

services companies after the national congress approved legislation that extended the state’s control of oil.

The nationalization process has not, of course, been without problems for PDVSA itself. Foreign firms have challenged the moves, with the highest profile case being that of Exxon Mobil, who took the Chávez government to a number of international investment dispute arbitration panels and won compensation and punitive charges against PDVSA. As noted above, oil production has continued to decline, and in the summer of 2009, workers in the oil industry in Ciudad Ojeda protested over lack of pay.

Because of the overwhelming importance of the oil industry in Venezuela’s economy and its international trade, energy relations with other countries in the Western hemisphere drive its overall foreign relations. The creation of Petrocaribe in 2000 and a series of new Energy Security Treaties in 2007 (signed with Argentina, Uruguay, Bolivia, Ecuador and Petrocaribe) are all examples of Chávez’s



needs. The declining interest from foreign firms meant that little was done domestically to turn around the fall in E&P activities.

A number of other factors limited foreign interest in this period. The weakness of the oil ministry meant that ECOPETROL was not only an operator, but also in effect a regulator of the oil industry in Colombia, and this served to dissuade some potential investors. The worsen-

ing security situation in Colombia in the 1990s in particular, raised the cost of doing business there and again deterred greater foreign investment.

However, the story of Colombian oil exploration and production over the past 10 years has been highly encouraging. In 1999, faced with peaking production and declining reserves, the government took a number of steps to make the oil sector more attractive to foreign investment and to free the hands of ECOPETROL. As the situation worsened, and Colombia faced the possibility of becoming an oil importer, further changes were implemented in 2004 with a wholesale revision of the oil sector. First, with the creation of the *Agencia Nacional de Hidrocarburos* (ANH), a new regulatory framework that has offered a highly competitive contractual environment for private and foreign oil companies. This has helped to more clearly define roles between the government and the NOC. In addition to this positive regulatory change, the terms of E&P improved with royalties being lowered to offer one of the most attractive tax and royalty regimes in Latin America. The government offered new concessions, further encouraging interest from abroad at a time when the majors corporations were all looking to secure new reserves. IOCs were no longer required to associate with ECOPETROL, and thus have complete control over their operations. Great strides were also taken in improving the security situation, lowering the costs of

reliable partner by foreign firms. Finally, ECOPETROL has been encouraged to expand its activities abroad, investing in E&P in Peru, Brazil, and the Gulf of Mexico.

The Outlook for Reform

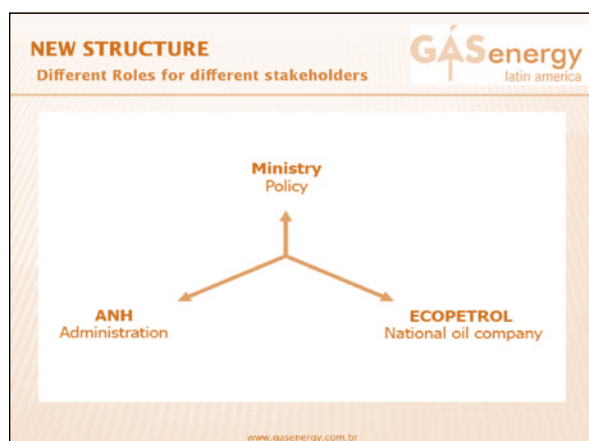
Just as the recent history of these four Latin American nations is a checkered one, the outlook for reform in their oil sectors presents significant variation. Whereas Mexico is moving through an uncertain period in which it is trying to defend its position as a major oil producer and exporter, Brazil is restructuring its relations with foreign oil companies in order to maximize the government's take of oil revenues. And although Venezuela is looking to consolidate state control of the oil sector in the face of rising problems, Colombia is hoping to reap the rewards of liberalization of its oil industry through significant new oil discoveries.

Mexico: Approaching the Precipice

The energy reforms of 2008 did little to improve the prospects for oil production in Mexico. Changes to the administrative structure of PEMEX, a new regulatory framework, citizen bonds, and the possibility of new contracts for service providers are unlikely to have a profound impact on either production numbers or reserves in the short term. What's more, the government has been very slow in implementing the reforms, leading the PRI to call for political action against Calderón if he fails to execute the reforms in full before the fall of 2009.

However, although the reforms of 2008 are largely viewed as inadequate and “*asfixiadas*” (suffocated), there is little enthusiasm for taking up the issue again in the short term. First, the political agenda in Mexico at present is dominated by two main issues: security and the economy. The war on drugs in Mexico has occupied the executive branch and is consistently identified in public opinion polls as by far the most important issue facing the country. The economic crisis in the country has reached a level where the impact is deeper than that of the 1994/5 peso crisis. This combined with the hangover from the H1N1 flu epidemic, means that the question of energy is hardly viewed as a priority in most political circles at the moment. Public opinion polls reflect this too. In June 2009, a Simo poll highlighted this: whereas 44 percent of people surveyed believe that the recent reforms did not resolve the problems facing PEMEX, only 36 percent believe another round of reforms is necessary in the near future.

As noted above, the prospects for further energy reform in Mexico were dramatically altered by the mid-term elections in the summer of 2009. The PRI victory in the Congress in July meant that the PAN government now has to find an even closer mode of cooperation with the PRI leader in the *Cámara de Diputados*, Beatriz Paredes, than was necessary before. This will be made particularly



doing business in Colombia. Timing was also important, as the changes took place at a time when oil companies were flush with capital and looking for investment opportunities.

National oil production since then has recovered somewhat, reversing the production decline observed during most of the decade.

One of the most interesting changes of the new petroleum environment in Colombia is the transformation of ECOPETROL, from a formerly sleepy and highly bureaucratic NOC into a much more efficient and business-driven corporation. In fact ECOPETROL saw its production increase by 12 percent in 2008 and has set a goal of doubling current production figures by 2015. The NOC has become a more efficiently-run enterprise and is now seen as a more



difficult by the tense and problematical relations between Paredes and the PAN leader in the *Cámara*, Germán Martínez, which will necessitate President Felipe Calderón directly engaging with Paredes on most major issues.

Whether or not the PRI is willing to meaningfully consider a new round of energy reform will largely depend on how they view their prospects in the 2012 Presidential contest. If the party continues to do well in the polls and has a candidate who can realistically win the election, there is the possibility that the PRI will agree to meaningful reforms of PEMEX. Additionally, constitutional restrictions on private and foreign investment in the oil sector could pave the way for a PRI president to govern without having to worry too much about a crisis in oil revenues.

Duncan Wood put forward three scenarios relating to the prospect for further reform in the Mexican oil sector. The first, titled “The Precipice” envisions Mexico reaching a crisis point in terms of catastrophic drops in production and reserves (probably around 2015), causing balance of payments problems and further fiscal imbalances, before the political elites are ready to tackle the issue effectively and open up the oil sector to private investment and meaningful international cooperation. The second scenario, “Paving the Way” is more optimistic and suggests that the PRI-dominated Congress will be willing to enact meaningful reform before 2012 in order to diminish the

impact of the coming crisis in oil on the next, presumably PRI, president. The third scenario, “Titanic Deckchairs” suggests that further reforms will be passed in the second half of Calderón’s presidency, but these will be minor and will not significantly change the shape of the sector. Dr. Wood argued that the first scenario remains the most likely, given the current array of political forces in Mexico and the predominance of other issues on the policy agenda.

In his state of the union address in September, President Calderón did not emphasize energy as a priority issue, although there has been increased government media activity over PEMEX, with a number of high level references (by Energy Minister Georgina Kessel among others) to the need to emulate the PETROBRAS experience. Calderón himself has stressed that PETROBRAS is a model for PEMEX, stating that it is “paradoxical” that PETROBRAS is drilling ten thousand feet deep in the Gulf of Mexico (in U.S. waters), while Mexico only has the organizational and operational capacity to drill three thousand feet.

What has occurred in recent weeks is that there has been reorganization at PEMEX, with Jesus Reyes Heróles being replaced by Juan José Suárez Coppel as director of the company. The change is seen by some experts as trying to appease the PRI in preparation for another attempt at meaningful reform. Suárez Coppel was PEMEX finance director in the late 1990s and early 2000s and was involved in the government’s attempts to smooth over the PEMEX-gate scandal in the early 2000s when it was discovered that the PEMEX union had donated as much as US \$170 million to the PRI candidate’s presidential election campaign in 2000. It remains to be seen whether this new appointment means that the government is about to embark on a new push for reform in conjunction with the PRI.

Brazil: Killing the Goose Before it Lays the Golden Egg?

In August 2009, President Lula announced the creation of a new state owned enterprise (SOE), PETROSAL, that would be the owner of all the oil reserves in the pre-salt

SCENARIO 1: THE PRECIPICE

- ❖ The PRI refuses to collaborate with the PAN
- ❖ Minimal achievements on modernizing PEMEX
- ❖ Protest against new service contracts
- ❖ Production falls further
- ❖ Mexican crude exports decline
- ❖ Meaningful reform happens in 2013

SCENARIO 2: PAVING THE WAY

- ❖ Intense negotiation with Calderón
- ❖ Transitional measures to open the way for private/foreign participation
- ❖ Risk contracts?
- ❖ Redefining “de propiedad del Estado y dominio de la Nación de los hidrocarburos”

SCENARIO 3: TITANIC DECKCHAIRS

- ❖ Calderón initiative post-Copenhagen
- ❖ Changes to renewables sector and energy saving
- ❖ Some further reorganization of PEMEX included in package
- ❖ Minor impact on production

region, and would then contract out E&P activities to other operators. PETROBRAS would be expected to play a leading role in this arrangement and would likely receive preferential treatment in the awarding of contracts.

Christopher Garman of the Eurasia Group focused specifically on the new regulatory framework in Brazil's pre-salt region. Garman argued that the new arrangements reflect a number of concerns, business, economic and political, on the part of the Lula administration. First, the administration wants to ensure that it can take full advantage of the pre-salt fields in terms of increased revenues for the state. This requires two things. First, the creation of a new SOE would unitize the reserves and give the government more control. Secondly, encouraging the involvement of both IOCs and PETROBRAS, under the right conditions (meaning giving PETROBRAS preferential treatment) will allow PETROBRAS to take a leading role while at the same time not having to invest all of its capacity in this one endeavor. Equally important, however, are political considerations. The government has shown a desire to emphasize the control of the state over these resources, and to "plant a political flag" in order to gain greater control, according

Four Debates that will Frame the Government's Proposal

- **PSA contracts, new SOE, and ability to favor Petrobras**
 - Appeal of a PSA framework derives from its flexibility: allows government to keep terms attractive, gives greater control, hits ideological "chord", and centralizes revenue in federal government.
 - Debate rests in how to favor Petrobras in allocation of "strategic reserves"
- **How to unitize reserves in Santos and capitalize Petrobras**
 - Legal uncertainty means legislation is necessary to move forward with unitization; largest concern within government
 - Petrobras proposal to use reserves as a means to capitalize the company still alive
- **Tax hikes on existing concession**
 - Government still sees room to hike taxes on existing concession, but won't propose a hike at a first stage
- **What to do with the money**
 - Project will prioritize education, but "inter-generational" component will be there
 - Industrial policy will grow in coming years; government picking which sectors can be developed.

to Garman. Furthermore, the federal government wants to centralize revenues from oil production in order to consolidate its control of the industry and strengthen its position vis-a-vis the states.

This fiscal control is of particular importance, Garman stressed, when we consider the spending priorities of the current administration and the desire to set aside considerable amounts of the new revenues for specific projects, with a primary focus on education, technological development and poverty reduction. The government's proposal offers the advantage of bringing together all of the new reserves in the new SOE, and encouraging production sharing agreements (PSA) that would give the SOE oil rather than taxes as payment. This holds the benefit of centralizing federal control over the revenue without having to go to the states to determine how tax revenue should be spent.

The new arrangements are contingent on approval by the Brazilian congress. Although they should hold a broad

appeal for legislators, given their focus on increasing the share of revenue for the state and the promise of more funds for social programs, the recent corruption scandal affecting PETROBRAS may yet make this a more complicated process. The outcome of parliamentary

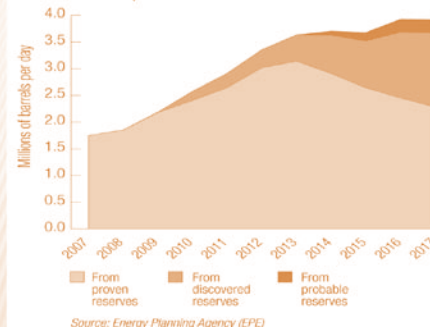
Three Scenarios

- **Scenario #1 (45%): government approves everything**
 - But accepts higher taxes on existing concession to facilitate approval
 - New bid rounds for pre-salt possible in 2010, but still unlikely.
- **Scenario #2 (35%): Government approves watered down version of reform**
 - Pre-election debate, Petrobras CPI, and overcoming distributive fight makes approval of reform difficult.
 - Government doesn't approve PSA, but approves SOE to unitize reserves; most issues punted to 2011.
- **Scenario #3 (20%): Government approves nothing**
 - Pre-election debate, Petrobras CPI makes approval of SOE difficult.
 - Government tries to overcome impasse on unitization without new laws, but runs legal risks of challenges; all issues punted to 2011

investigative committee (CPI) examinations of the scandal will impact directly on the political process. What's more, the electoral cycle will complicate matters further, with presidential elections coming up in 2010.

Chris Garman offered three scenarios for congressional approval of the Lula administration's proposals. The first scenario, in which the Congress approves the government's entire proposal, is seen as the most likely, although far from certain with a 45 percent probability. That, according to Garman, would be the best outcome for all concerned, and would likely result in a surge of interest in the pre-salt region. The second scenario, in which the opposition refuses to approve the entire package, and in which the CPI on PETROBRAS finds cause to support the charges of corruption, would likely push the government to water down its proposal and seek support from the states by agreeing to raise taxes on existing concessions, something not contemplated in the recent articulation of the legislation. This would have the negative impact of delaying the legislation's approval, and of making the new arrangements less attractive to

EPE oil production forecast

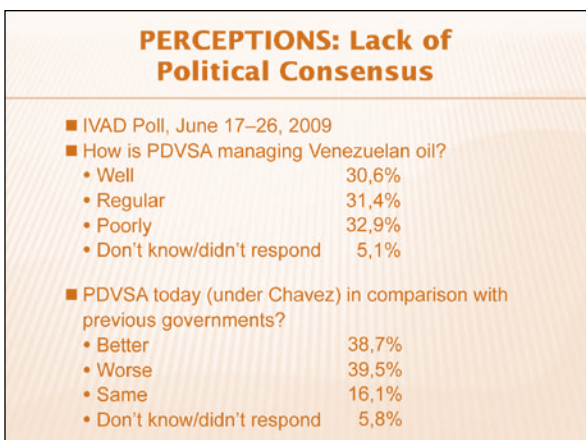


private investors. The third scenario, in which nothing gets approved before the election of 2010, means that the reforms would have to be pushed back to 2011, further delaying the development of the pre-salt.

In the period following this conference, the Brazilian Congress has started to vote on the four bills that make up the new regulatory framework. The votes are and will continue to take place in an electoral campaign environment that tends to help the more nationalistic and statist approaches proposed by the executive for the pre-salt. This pre-salt legislation has become a vehicle for important industrial policy initiatives; nevertheless, legal challenges are expected on constitutional grounds, which could delay the final adoption of the new regulatory framework for quite a while.

Venezuela: The Challenges of Consolidating State Control

Although the drive towards “authentic” nationalization and true oil sovereignty has been advanced in recent years by the Chávez administration, the fruits of this process



remain to be seen. In her presentation, Ana María Sanjuán argued that the Chávez administration and PDVSA face significant challenges in the near future as the impact of nationalization is felt in the oil sector.

First Dr. Sanjuán emphasized the impact of the oil price collapse of 2008–2009 on oil nationalism and on the use of energy policy as a central axis of foreign relations. As oil prices have come down, nationalist rhetoric in oil policy has been somewhat moderated and providing subsidized oil exports is less attractive as a tool of foreign policy. However, at the same time as oil prices have been depressed, Venezuela has continued to develop its policy of energy alliances with China, Russia and Iran, and through PETROCARIBE at the regional level. Another factor shaping Venezuela's oil-based foreign relations is the quality of Venezuelan oil: given the fact that the country's oil is overwhelmingly heavy in nature, and that heavy oil refining capacity at the global level is limited, Venezuela has found it more difficult to sign

supply agreements with countries outside the hemisphere.

It is important to point out that public opinion over PDVSA and the Chávez government's administration of Venezuelan oil has become polarized. A recent opinion poll conducted by IVAD, the first time Venezuelans have been asked what they think of the NOC, showed that the people of Venezuela are evenly split over PDVSA, with equal shares saying that the company is managing Venezuelan oil well, regularly or badly. Venezuelans are just as divided over their views of Chávez and his control of PDVSA compared to previous governments. This polarization reflects not only divisions within Venezuelan society over Chávez himself, but also over such controversial issues as declining production capacity at PDVSA, declining oil reserves and the growing debt of the company.

On the production issue, although the government maintains that production is still good and that the goal of raising production to 5 million barrels a day is still a government priority, most experts maintain that production has fallen significantly in recent years. After reaching almost 3.2 million barrels a day in 1997, by 2008 it had fallen to 2.36 million barrels a day, according to the International Energy Agency (IEA). With regard to reserves, although



no one doubts that the country has enormous reserves in the Orinoco belt, the full amount is not yet confirmed and the process of certification of reserves will still take some time to complete.

More worrisome in the short term is the growing debate over PDVSA's indebtedness. In addition to the money owed to former service providers and suppliers (which led, in part to the second round of nationalizations in 2009), PDVSA owes money to the national treasury. Its total is estimated to amount to over US \$14 billion. Critics of the company and of Chávez argue that this approach compromises the future financial health of the company and will limit its ability to invest in the future. The government, on the other hand, makes the point that if the financial situation was as bad as the critics claim it is, no one

would be willing to lend money to PDVSA, whereas Japan has lent the company \$1.5 billion to build refineries in El Palito and Puerto La Cruz. An important footnote here is that the Japanese are considering cancelling that loan after Japanese assets were seized in the nationalization of 2009. The financial situation of PDVSA is particularly crucial when we consider that it is estimated that in the next six years PDVSA needs \$79 billion in investment in the Faja and for old wells, and for the development of the gas industry.

Other important challenges for the company include dealing with its vastly increased payroll. With the nationalization of 79 services and petrochemical companies this year, PDVSA's payroll has grown from 28,000 employees to 75,000. This has occurred at a time when cash flow is limited because of the depressed oil price. Other commitments include the growing social role for PDVSA. In recent years it has acquired a role in both food security and education, with significant resources being diverted from the business to agricultural programs

Challenges Ahead For PDVSA

- Satisfy financing requirements (\$79 billion over 6 years)
- Cutting commitments in social development
- Financing the state
- Foreign commitments in refining
- Relation with the private sector both national and foreign
- Management of geopolitical tension in the search for new strategic partners in oil

and misiones. What's more, PDVSA continues to be the foundation of state finances, and if production declines further, or if the oil price remains low, there will be even less funds available for business development.

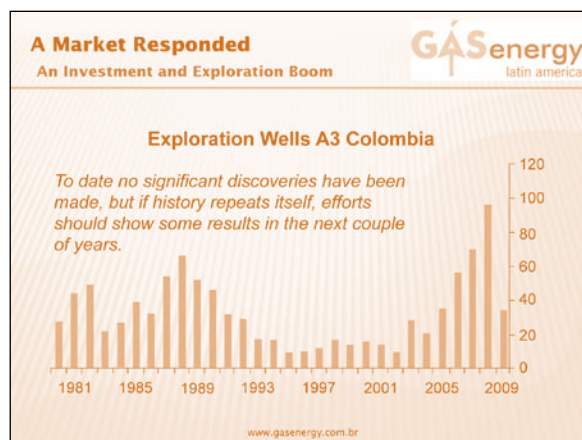
There is then the international role of PDVSA to consider. It has significant foreign commitments in refining, both as business ventures and as part of Chávez's Bolivarian foreign policy. PDVSA needs to seek out strategic partners in the oil sector both domestically and internationally to improve efficiency and to increase capacity, but this is increasingly complex as the company's reputation suffers.

Lastly, Dr. Sanjuán pointed to a fundamental problem posed by deals signed with foreign nations. Venezuela has committed itself to provide oil to a number of nations, but probably will not be able to raise capacity to meet

those commitments. Looking, for example, at the deal signed recently with China, PDVSA has promised to export 1 million barrels a day to that country by 2010, up from only 360,000 barrels a day in 2009. The extra oil can only come from either increasing production (unlikely given current conditions), or by diverting oil exports already promised (probably at a preferential price) to other states.

Colombia: Work Left to Do

Roger Tissot argued that despite successful change in the Colombian oil sector since 2004, the outlook for positive growth is contingent on a number of factors and significant challenges if an integral development of Colombian oil is to be achieved. First we must consider the results of increased investment in E&P in the country. 2008 was a bumper year with record levels of investment in the oil



sector (particularly in heavy oil), although this has not yet produced significant new finds.¹ If the investments pay off, however, and the oil price recovers, then Colombia stands to benefit significantly.

A second challenge is the concentration of the oil sector, with the overwhelming dominance of ECOPETROL and a few other large players. Despite the fact that there are a large number of smaller companies invested in the country's oil industry, the government should work harder to secure more local investment in the sector, and to encourage more local junior oil companies to participate.

Security continues to be a concern, despite impressive steps forward by the government. Specially created mobile units now exist to respond to specific threats against oil and energy targets. However, the Revolutionary Armed Forces of Colombia (FARC) continues to cause problems in the Arauca region, with ongoing fighting against government forces, and in Putumayo, the political and social fallout from the Ponzi scheme caused by a financial firm

¹ At the time of writing, PetroRubiales had not announced its recent discoveries which led the Minister of Energy to suggest Colombian oil reserves could increase by 1.5 billion barrels. Such a claim is also speculative and would require economic and technical confirmation as exploration and development work proceed.



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 - Improve pipeline integrity;
 - Increase social development (education, infrastructure and employment) in rural regions

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known as DMG, is causing new security problems. The government also needs to work on pipeline integrity to ensure the transportation of oil and to prevent further environmental problems.

Lastly, Tissot identified room for improvement in the issuing of environmental permits for seismic mapping and drilling. The process at present is unnecessarily slow. At the same time, Tissot stressed the need to stay vigilant about the environmental and social impact of E&P in Colombia, which up to now has attracted less attention because there have been no “big name” oil companies involved.

Conclusions

Reviewing all of the insights offered at the Woodrow Wilson Center event, it can be shown that Latin American nations continue to present enormous variance in their management of oil resources and wealth, and that resource nationalism continues to be a factor across the region. An important observation is that resource nationalism takes

many different forms, serves different purposes, and impacts the country concerned in diverse ways. In Brazil the appeal to nationalism is seen in the creation of a new SOE that will control the newly discovered oil reserves in the pre-salt region. This serves domestic political purposes, helping to secure political approval from Congress. It also serves to centralize income and control of the pre-salt revenue in the federal government. Lastly, it favors PETROBRAS over foreign firms in the E&P bidding process. In Mexico, the ongoing restrictions on foreign and private sector involvement in the oil industry mean that PEMEX is in a disastrous decline. This trend is unlikely to be turned around until there is a willingness to confront nationalistic attitudes and overturn the constitutional protection of PEMEX’s monopoly. Until this change in attitudes occurs, however, meaningful reform in Mexico is unlikely. In Venezuela, Chavista resource nationalism threatens the financial and economic health of PDVSA, and seems to have overextended both the company and the nation’s capacity to produce oil for export. Lastly, in Colombia the government has been prompted by the threat of having to import oil to accept that openness and fair-dealing with foreign and private firms is necessary to develop the country’s oil. On a less positive note, little has been done to develop a national capacity on oil E&P or services outside of the NOC, ECOPETROL.

In each of these four countries, a sophisticated appreciation of the political, economic and business climates is fundamental to understanding the prospects for reform in the oil sector. A grasp of the history of oil in the national context is obviously fundamental, but the evidence presented above shows that it is vital to stay abreast of contemporary trends and current events if a clearer picture of their oil sectors is to emerge.

About the Authors

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Previously, Chris worked as a senior political analyst at Tendencias Consultoria Integrada, Brazil's largest economic and political consulting firm, from 2001 to 2005. Prior to that, he held fellowships at Instituto de Estudos Econômicos, Sociais e Políticos de São Paulo (IDESP), where he researched central bank politics in the region, and Centro de Estudos de Cultura Contemporânea (CEDEC), where he conducted field research on Brazilian federalism.

Garman is a dual citizen of the United States and Brazil. He is fluent in Portuguese, and proficient in Spanish. He earned a Master's in political science from the University of California, San Diego (UCSD), and is also a PhD candidate there.

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Before PFC Energy, Roger worked for EnCana Corporation, a Canadian oil and gas company. There he developed the tools for above ground risks analysis which the company implemented for their investment strategies in Latin America and Africa. Roger started his career at the Canadian Energy Research Institute, where he co-authored two books *Petroleum Industry in Latin America* and *Natural Gas Industry in Latin America*.

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In 2007 he was a non-resident Fulbright Fellow. Between 2007 and 2009 he was technical secretary of the *Red Mexicana de Energía*, a group of experts in the area of energy policy in Mexico. From August 2009 to July 2011 he is a Senior Associate at the Center for Strategic and International Studies (CSIS) in Washington D.C., writing his next book on Mexican, Venezuelan, and Brazilian energy policy, to be published by Lynne Rienner Press in 2010. He is a member of the Mexican National Research System (level 2), a member of the editorial board of Foreign Affairs *Latinoamerica* and has been an editorial advisor to *Reforma* newspaper. He studied in the UK and Canada, receiving his PhD in Political Studies from Queen's University, Canada in 1996.



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