

SENATE COMMITTEE ON FOREIGN RELATIONS
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I. BACKDROP

As a result of the tightness of the oil market during the last four years, the world as a whole, and certainly the USA, has been affected by extremely high oil prices. This has a detrimental effect on our day to day, reflected by the prices we pay for gasoline and diesel at the pump, as well as heating oil and gas for our homes.

As a result, the discussion about oil independence has taken center stage in this country. But that independence (understood as self sufficiency) is not the real issue. Not only because it is not feasible, but because the business of oil is global. The high prices of recent times result not from the large imports of oil into the USA, but from the fundamentals and perceptions of the global oil market.

It would take much longer than the time assigned to this testimony, to explain why and how got to where we are today. However, it is worthwhile to point out briefly that today crude oil inventories in OECD are at a 20-year high and global inventories are at a 8-year high. The futures market has been in “contango” since October 2004 (meaning that future prices are higher than prompt prices), which has triggered sustained stockpiling. On the other hand, growth in demand for oil has been slowing down (3 million BD in 2004, 1 million BD in 2005, and 800,000 BD in the first half of 2006), indicating that the price is having an effect on consumption. Then, why are prices so high? The most important factor is the erosion of spare capacity. Having been large in the past (15 million BD in 1985, 9 million BD in 1991 and 8 million BD in 2002), it is now down to 2 million BD. A second factor is the tightness of the refining network in a time of strong demand for high quality refined products, which is driving prices up along the whole supply chain.

But, can we expect the future development of new large spare oil production capacity for us to feel comfortable again? Most likely the answer is “no”, because with the exception of Saudi Arabia, nobody is planning to build it. The spare capacity enjoyed in the past was not planned for. It resulted from an overestimation of long-run demand. Inadvertently we developed a “comfort cushion”. Perhaps the world will have to develop a new perspective of the meaning of inventories. Currently global oil stock cover runs at 72 days (commercial stocks), which should be a strong reason for comfort. Maybe a somewhat larger stock cover will replace the absence of spare capacity. Additionally the director of the IEA has gone to great length and efforts to convey the message that strategic stocks of OECD are enough to cover 18 months of an eventual absence of Iranian exports (2.7 million BD), but to little avail. In the event of a major disruption, how much a difference would it make between having say 76 days or 71 days of stock cover? That difference would be immaterial, but it can mark a difference of 4-5 dollars per barrel in today’s oil market.

The conclusion is that the oil market is global and oil is generally fungible. For that reason, in analyzing supply stability it would be shortsighted to look at oil flows from Latin America into this country in isolation, or for that matter any other oil imports from other regions or countries. The USA will continue to be a large importer of oil and those imports can only increase. Stability and security will always depend on the global fundamentals, irrespective of where the imported oil comes from.

II. A BRIEF LOOK AT OIL AND GAS IN LATIN AMERICA

Following is a summarized description of the characteristics of the most important countries in connection with oil and gas in Latin America.

CHILE

Chile has meager oil reserves of 150 million barrels, and its oil production is 18,400 BD, while its consumption is 225,000 BD, the deficit being covered by imports mainly from Argentina and Brasil, but also from Nigeria and Angola.

COLOMBIA

In 1999 oil production in Colombia stood at 820,000 barrels per day. However, as a result of lack of investment production has fallen to 530,000 BD and the country faces a future sustained decline. Proven oil reserves have fallen to a very modest 1.6 billion barrels and proven gas reserves are scarcely 4 trillion cubic feet. Fears have risen that the country will become a net importer by 2010. On the other hand, more than 80% of Colombian territory remains unexplored and its basins hold a large hydrocarbons' potential (possible reserves have been estimated at 47 billion barrels), but for many years the country failed to attract new investment due to the poor internal security environment, coupled with unfavorable energy investment terms. Nevertheless, during the last two years the Colombian government has turned the trend around by putting in place a much more attractive framework for investments in exploration and production. The most important reform was the creation of a regulatory agency (Agencia Nacional de Hidrocarburos), in charge of regulation and administration. A large portion of Ecopetrol's portfolio was carved out and assigned to the agency. This new framework plus a more attractive model for investment, in addition to the much improved political stability and security resulting from the effective policies of President Uribe, have oil companies flocking to the country. It should be expected that very soon Colombia would become a producer of growing importance in the region and perhaps an important oil exporter.

PERU

Peru's oil reserves are very small at 253 million barrels and it barely Produces 100,000 BD, while it consumes 160,000 BD. But it is rich in free gas reserves, with some 16 Tcf . These reserves will be tapped by the Camisea project, the most ambitious project in the history of Perú. Consisting of the extraction, transportation and distribution of natural gas, this project is a fundamental factor of Perú's energy strategy. By tapping into a reliable, low-cost energy source, Camisea will not only provide direct benefits to electricity end-users, but it will also improve the country's competitiveness and increase its technical capacity. The project will help alleviate Perú's trade deficit, by converting the country from energy

importer into an exporter by 2007. Direct investment in the project will be around \$ 2 billion. Part of the gas volumen will go as LNG to the North American west coast.

TRINIDAD – TOBAGO

Unlike the rest of the islands in the Carbbean basin, Trinidad/Tobago is hydrocarbon rich and is the largest producer of oil and natural gas in the region. Oil reserves are a modest 1 billion barrels and oil production is 130,000 BD, but gas reserves are 26 Tcf and current gas production is 2,700 MMcfd. Since the 1970s, Trinidad/Tobago has embarked in several successful initiatives that have expanded its local gas industry as part of a government strategy to promote industrialization. Its large natural gas reserves have enabled the country to become the most industrialized in the Caribbean. The energy sector represents 72% of total exports, and the country's political stability and attractive geology, as well as its proximity to the high demand US, Latin america and Europe, have supported high levels of foreign direct investment. The country has established a large LNG infrastructure and today has 3 liquefaction trains with 10 mtpa, plus a fourth one about to come on stream. Immediate plans contemplate building two additional trains. Together with Nigeria, Trinidad/Tobago dominate the Atlantic LNG market.

BRAZIL

Brazil has a population of 175 million, 5th largest in the world and its economy of \$ 452 billion is the 13th in the world. After years of efforts in exploration, mostly offshore, Brazil has reached an oil production of 2.0 million BD. However, its sustained economic growth has incresed oil demand to a level of 2.2 million BD, with the deficit covered by imports from Africa, the Middle East, and minor volumes from Argentina. Great credit for the large increase in oil production goes to its national oil company Petrobras, which has become a world class oil company and a leader in deep water drilling. In recent years the company has gone international in E&P. Current oil reserves stand at 11 billion barrels. Its gas reserves are a modest 8.8 Tcf, with production of 1,100 MMcfd being less than the 2,300 MMcfd of demand. The deficit is covered by imports from Bolivia and Argentina.

The recent actions by the Bolivian government cast shadows over the longer term gas trading to Brazil, country that will very likely be looking for alternatives, including LNG imports. An additional highlight is that the country is the world's largest producer and exporter of ethanol. Over half of all cars in the country are flex-fuel, meaning they can run on 100% ethanol or on an ethanol-gasoline mixture. Ethanol in Brazil is made from sugar cane, which prospers in the country's tropical climate. The current high prices of oil, natural gas and hydrocarbon products, have prompted the government to mandate all gasoline for domestic consumption to contain 25% ethanol. Also, Brazil has plans for sizeable nuclear developments. Two plants are already in operation and a third one is under construction. There is a large accumulation of stranded gas in the north, in a place called Urucú. The hydrocarbons industry in Brazil is well organized, with a strong institutional framework, including a regulatory agency. Practically every big international oil company has acreage and/or other interests in the country. This has been crucial for supplying the needs of a very large country, although great challenges lay ahead.

ARGENTINA

Argentina has oil reserves of 2.7 billion barrels and it produces 700,000 BD, while oil consumption is 400,000 BD (41% of primary needs). Oil exports are important for the country, but marginal in a worldwide context. They essentially go to Brazil and Chile. The country is long in natural gas, with reserves of 21 Tcf. It produces some 4,400 MMcfd, enough to supply its domestic needs (45% of primary energy) and to export some volumes to Uruguay and Chile. However, it imports some gas from Bolivia, for geographic/logistical reasons, and in recent times its policies have slowed down investments affecting gas exports.

BOLIVIA.

The third poorest nation in the hemisphere behind Haiti and Nicaragua, holds oil reserves of 440 million barrels and produces 42,000 BD. However, it is very long in natural gas with reserves 54 Tcf (30 Tcf proven and 24 Tcf probable). Despite those huge reserves, gas production stands at 1,500 MMCF/d and investment has slowed down to a trickle and some companies

are leaving due to an insecure and arbitrary operating environment. The most recent actions of expropriation of the oil industry may prove to be the last nail in the coffin for the possibilities of a large scale gas development. This can be considered a tragedy. A combination of ignorance and populism has led to a rejection of foreign investments, and there is virtually no credible alternative scenario whereby Bolivia would be able to grow economically without exploration, production and export of its natural gas reserves.

ECUADOR

The country holds oil reserves of 2.5 billion barrels and oil production is 550,000 BD, two thirds of which go to the export market. This is a marginal number in a worldwide scale, but it is of fundamental importance for the future of Ecuador. Gas reserves stand at a meager 0.4 Tcf. This country is also seeing international energy investors depart because an unfair and arbitrary investment climate, in addition to excessive bureaucracy and political volatility.

MEXICO

Mexico has a population of more than 100 million and its economy is the number 10 in the world (\$ 640 billion). It has benefited immensely from its partnership in Nafta. It has the fourth largest oil reserves in the hemisphere (oil 12 billion barrels and gas 15 Tcf) and currently produces 3.5 million BD. It is the third supplier of crude to the US, behind Canada and Saudi Arabia. However, its reserves are plummeting and it is forced to import billions of dollars of gasoline and natural gas. Despite having possible oil reserves of 50 billion barrels, the lack of investments is leading the country to a short-term demise as an oil exporter. This is the direct result of a combination of heavy dogmatism and populism, that have dominated the political landscape for decades. The last two governments have struggled to open the energy sector to private investments, with only modest political progress, although the magnitude of the eventual collapse of the oil industry is beginning to change the minds of many politicians.

VENEZUELA

The country remains the most important oil and gas country in the hemisphere, with 78 billion barrels of oil reserves, 150 Tcf of natural gas (although only 15 Tcf are of free gas), and some 220 billion barrels reserves of extra-heavy oil in the Orinoco Belt. After the sustained increase in production capacity to 3.5 million BD during the 1990s, the country has suffered a major setback resulting from political instability and arbitrary management of the oil industry. In addition, frequent changes of the rules and several international arbitration lawsuits have instilled confusion and uncertainty in the international oil companies partnering with PDVSA in Venezuelan territory. As a result, oil production capacity has fallen to 2.6 million BD, despite an increase of 1.1 million BD resulting from the contracts with private companies that were put in place in the previous administration. Unless the prevailing uncertainty and the frequent obstacles posed by the government can be diffused, Venezuela will undoubtedly continue being important, but its growth as an oil exporter will only be marginal (see the following point).

III. RELIABILITY OF SUPPLIES FROM VENEZUELA

Oil production capacity in Venezuela has suffered a severe drop in the past few years. In February 1999 when the current government took office, that capacity stood at nearly 3.5 million BD. At that moment, already some 200,000 BD were operated by private oil companies as part of the new contracts signed for joint operational agreements and strategic associations. Thus, the capacity of PDVSA proper was some 3.3 million BD. Currently, Venezuela's production capacity stands at 2.6 million BD, but since that number includes 1.1 million BD being produced by the private companies that operate the joint ventures, it can be deduced that PDVSA's capacity is 1.5 million BD, i.e. a drop of 1.8 million BD. This is the result of poor management and weak execution capacity, mostly deriving from the dismissal of 18,000 workers.

However, during the seven years of the current Venezuelan government, oil from that country continues to flow to the USA, at a rate of 1.4 – 1.5 million BD, in line with the tradition of many years of trade. I would argue that despite the aggressive political discourse against the USA government, oil

exports to this country seem to have a high priority in the slate of Venezuelan sales.

As part of the political agenda, President Chavez continuously threatens the USA government with suspending exports to the USA, and has indicated that those exports would most likely be diverted to China. But, as you very well know, the USA government does not own terminals, refineries, pipelines or distribution networks. In fact, it does not even buy oil, with the exception of the occasional program of royalties in kind. The 1.5 million BD of Venezuela oil imports into this country are the result of many dozens of contracts with clients in the USA that have been buying Venezuelan oil for decades. Many of those clients have refineries capable of processing sour and heavy feedstock, which constitute the largest portion of Venezuelan oil. The continuity of those exports to the USA is of utmost importance for Venezuela, despite anything that is contained within the political discourse of the Venezuelan government. Exporting that oil to China would be practically impossible, because the refining network in China is mostly primitive and incapable of receiving those volumes of sour and heavy crude. It would take several years of bilateral coordinated joint planning and investments to turn such an initiative into reality (it is not happening), and it would be absurd to build it at the expense of the most profitable option for those exports, which is non-other than the USA market. Add to that the volumes that go to Citgo, a subsidiary of PDVSA, and it is highly unlikely that there would be any disruption of Venezuelan exports to the USA. Nevertheless, in the unlikely event of a suspension of those shipments, Venezuela would have to sell the crude at other destinations, and oil being generally fungible, oil from other places would come to the USA shores. It would naturally generate logistical complications and at least temporary increased costs, but eventually the necessary adjustments would take place and everything would return to normalcy. It is true that imports of Venezuelan oil are very important to the USA, but it is a fact that Venezuela needs badly its oil exports to the USA, and especially the current government in order to finance its huge expenses.

Finally, the threat of a shut down of Citgo refineries, occasionally included in the political speech of the Venezuelan government is empty talk. Citgo operates through a network of some 14,000 retail outlets, but it does not own any of them. It only owns refineries, terminals and pipelines. An arbitrary shut-down of Citgo refineries would imply breaching thousands of contracts

without justification, posing an unmanageable and costly legal situation for Venezuela.

The only real risk represented by the present Venezuelan administration, concerning oil supplies to the USA is not current. It relates to frustrated expectations of building-up new barrels in the future. For the past six years the Venezuelan government and PDVSA have been announcing ambitious (normally not viable) expansion plans of the country's production, but nothing significant happens. This is a direct consequence of the diminished operational and financial capacity of the national oil corporation. In addition, plans and projects of expansion coming from private international companies are losing momentum, as a result of the frequent changes of rules and the difficult surrounding environment they have to face. So a significant increase of that country's production is unlikely

These opinions are entirely consistent with the ones I have expressed in my public writings and interviews, and which I gave to representatives of GAO with whom I met for some 4 hours as part of their work in putting together their report for Senator Lugar.

IV. RESOURCE NATIONALISM IN LATIN AMERICA

The term "resource nationalism" is in hot vogue these days. But what does it really mean? If what we have in mind is the seizing of higher revenues, we should not forget that in the history of oil we will find a secular inclination of oil countries to get a larger share of the revenues. However, attracting the capital required has implied moderating that appetite, in order to allow the oil companies to assume calculated risks and make an attractive profit.

In recent times the price of oil has reached extremely high levels, but most importantly levels that no one would have expected only four years ago (In early 2002 price predictions for the year were 22-23 dollars per barrel, and OPEC had agreed a ceiling of 21.7 million BD in anticipation of a very soft market). These very high prices have generated huge revenues, leading every oil country to consider ways of capturing a larger portion of the windfalls. Even the USA and the UK have discussed the idea of higher or new taxes. Despite the somewhat questionable justification of any actions

aimed at changing taxes and contracts, the initiatives of seeking to renegotiate terms are within the realm of the manageable and acceptable.

What is certainly unacceptable is to take actions like the recent unilateral expropriation of the hydrocarbons industry in Bolivia. I do not intend in these lines to address the implications of that case, which are well known by the distinguished Senators here present. The only other case in which abusive actions have been undertaken by a government is in Venezuela, although it has never gotten to the extremes of unilateral expropriation.

In the case of Ecuador, the government has insisted that the seizing by the government of Block 15, formerly in charge of Oxy, should not be interpreted as equivalent to the Bolivian case. They argue that the affair is purely legal and related to an alleged violation of contract by the international oil company. Despite a very poor sense of timing to say the least, coming in the middle of discussions of a FTA with the USA, and without taking sides, it looks like it could in fact be an isolated case. Time will soon tell.

In Colombia, Peru, Brazil and Trinidad-Tobago, there are no indications whatsoever of anything similar to the case of Venezuela, and much less to the case of Bolivia. Mexico is a special case in its own characteristics. Finally there is Argentina, but I am sure that my friend Domingo Cavallo, will give you an accurate picture of that case.

V. OPPORTUNITIES FOR INCREASED USA – LATIN AMERICA COOPERATION ON ENERGY SECURITY (Governments and Private Sector)

In 1994, as a spin-off from the Summit of the Americas held in Miami, an initiative called “Energy Integration of the Americas” was installed. Its objective was to build an integrated energy data bank, evaluate existing interconnections among the countries, identify barriers for a larger integration (political hurdles, tariffs, quotas, logistics, etc), and eventually undertake reforms and agreements, with the ultimate objective of having a seamless energy platform that would benefit all countries, and in addition facilitate and improve commercial activities. The initiative, which involved the public and the private sectors of each one of the countries of the

American hemisphere, was launched in Washington and was followed-up with working meetings in Santa Cruz, Bolivia and in Caracas, Venezuela. One of the relevant features of the existing network is that while North America has a large deficit of oil, Canada and Latin America have large surpluses of energy resources, which if developed efficiently and effectively, can be a leading engine of regional development and an important contributor to global competitiveness. However, in the next few years the initiative lost momentum and eventually faded out.

The evolution of the energy landscape in the past few years has once again brought to the fore the importance of the subject. In the words contained in a recent report published by the Council of the Americas, if geography is destiny the Americas are ripe for development of an energy partnership benefiting both suppliers and consumers, while linking the economies of the countries and increasing trade. The report continues to argue that the entire Western Hemisphere stands to gain if energy partnership is pursued, assuming the implementation of terms and conditions consistent with a market-based, public-private approach to energy sector development. Beyond politics, the key questions center on the ability to raise and utilize effectively the massive amounts of increased investment required to develop the resources that already exist. Fundamentally, unless investment climates are improved in the energy sector and elsewhere, investors will continue to look to other markets as opportunities with greater interest than the Americas. Without necessary investment, reserves will be depleted, imports into the region will increase, and terms of trade will deteriorate. My view is that salvaging the initiative of 1994 could be an excellent way of having a fresh start that should be in every country's best interest. However, the dialog cannot compromise the basic principles of business, a market-based approach, public-private cooperation, respect for property rights and contracts, and the right balance of policy - regulation – operations/business. Although this would probably mean losing a few significant actors, countries such as Brazil, Colombia, Chile, Perú, Trinidad-Tobago and even Ecuador, could lead the way. Their leaders are thinking creatively and have instituted effective measures to develop their respective resources in productive ways. The presence of Canada would certainly enhance the initiative. There is no silver bullet, but hard work along the described lines could translate into a more balanced and reliable regional energy network.

VI. REFERENCE

Council of the Americas' Energy Action Group, *Energy in the Americas-Building a Lasting Partnership for Security and Prosperity* (Washington, D.C.: Council of the Americas, October 2005), 6–8.