

**IN THE LIGHT OF INTERNATIONAL PRACTICE IN THE  
PETROLEUM INDUSTRY, WHICH ELEMENTS OF A LEGAL  
AND REGULATORY FRAMEWORK WOULD BE  
APPROPRIATE FOR ATTRACTING INVESTMENT IN THE  
DEVELOPMENT OF THE BRAZILIAN PRE-SALT  
DISCOVERIES?**

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**ABSTRACT:** As a result of the recent discovery of petroleum in Brazil's pre-salt layer, the Government aims to construct a new regulatory framework to support the new challenge. This includes the need to attract vast investments and, likewise, to take into account the superlative expected profits, so that the national economy is protected. Important discussions among the key players in the petroleum sector, organized civil society and policy makers had been concluded before the Executive Branch sent some draft bills to the Parliament that shift the current legislation of concessions to production-sharing agreements; create a new state-owned company to manage the contracts; and enable Petrobras to capitalize itself and create a social fund to carry a percentage of the profits to the Brazilian health and educational systems. This paper examines the structure of the new legislation in the light of international practice in the petroleum industry, concluding with the pertinence of the switchovers to attracting investments in the development of the discoveries.

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## ABBREVIATIONS

<b>ANP</b>	National Agency of Petroleum (Agência Nacional do Petróleo)
<b>CF</b>	Federal Constitution (Constituição Federal)
<b>E&amp;P</b>	Exploration and Production
<b>PSC</b>	Production Sharing Contract
<b>PL</b>	Draft Bill (Projeto de Lei)
<b>SDFI</b>	State's Direct Financial Interest

## 1 INTRODUCTION

Owning a diversified and, at the same time, clean energy matrix, Brazil stands out as a promising supplier of petroleum to the world. Almost all of the electricity consumed in the country comes from hydroelectric power stations, biomass power, aeolian energy and, residually, nuclear and thermoelectric gas.

Part of the fuel consumed in the country is also environmentally friendly, with low emissions of carbon dioxide and with its production originating from sources of high energy balance, such as alcohol from cane sugar and biodiesel from castor oil. Associated with the electrical power, this is another factor that makes the largest Latin-American country have a relatively low consumption of oil.

In spite of this, Brazil invests heavily in the research into new oil reserves. Consequently, a vast amount of oil and gas was discovered in 2007 offshore in the pre-salt layer. Large multinational companies, such as Royal Dutch Shell<sup>1</sup>, have shown an interest in competing with the state oil company, Petrobras, for the exploitation of the new reservoirs.

The Brazilian Government, in turn, has decided to make substantial changes to the regulatory framework for exploration. Such changes have great importance not only to the future of the country but also to the supply of petroleum and oil products to the world. The developed countries that are heavily dependent on oil will be directly influenced by the decisions made in Brazil. The U.S. Government<sup>2</sup> is paying particular attention to the construction of this new legal framework.

The four draft bills sent by President Luis Inácio Lula da Silva to Congress dealing with new rules for the pre-salt petroleum will be analysed individually. What they

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<sup>1</sup> Radowitz, B., Brazil Pre-Salt Layer Oil Find Encouraging. at [http://www.rigzone.com/news/article.asp?a\\_id=44086](http://www.rigzone.com/news/article.asp?a_id=44086) (last visited on November 22<sup>th</sup>, 2009)

<sup>2</sup> Abrantes, D., US eyeing Brazil's changing oil rules and international activities. World Oil, Sep2009, Vol. 230 Issue 9, p8-8, 1p.

mean for current investors and for those who will participate in new enterprises will be surveyed in the light of international practice in the petroleum industry.

Basically these changes are aimed at building one new state-owned company to manage the contracts signed; creating a social fund to carry a percentage of the profits to the Brazilian health and educational systems; changing the regime for exploration and exploitation, shifting the current legislation of concessions to adopt production-sharing agreements (PSCs); and enabling Petrobras to capitalize itself to compete with multinationals in the production.

Moreover, it must be emphasized that the country has acquired respectability in the international community with regard to the contracts signed and their transparency to investors<sup>3</sup>.

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<sup>3</sup> Encarnação, G., State Petroleum Monopoly Revisited. at [http://ecen.com/eee35/petroleum\\_monopoly.htm](http://ecen.com/eee35/petroleum_monopoly.htm) (last visited on November 22<sup>th</sup>, 2009)

## **2 PRODUCTION-SHARING REGIME**

The major change proposed by the Federal Government in the regulatory framework is the end of concession agreements and the beginning of production-sharing contracts. This change does not alter the existing contracts, which will be enforced in the same way as when they were agreed upon during the bidding rounds promoted by the National Petroleum Agency.

According to the Federal Constitution, any law can abrogate acquired rights and perfect legal acts, i.e., contracts signed in the past, being in accordance with the standards of that time, can not be broken and all rights and obligations should be preserved as if nothing in the law had been changed.

This rule is in Article 5, XXXVI, in the chapter on fundamental rights and guarantees. Article 60, paragraph 4, lists the immutable clauses, which are the rules of the constitutional text that can not even be subject to deliberation that attempts to amend them. Among them are the rights and guarantees.

This means that if a law proposes a revision of contracts, it shall be declared unconstitutional and excised from the legal system. On the other hand, it prevents Congress from even voting for a constitutional amendment to allow such a practice in Brazil. Despite the country's political stability, expressing respect for contracts in such a way indicates to investors a trustable scenario that is favourable for medium- and long-term projects, as in the E & P industry.

The political decision not to apply rules of concession in the bidding of the new enterprises that will be held for the pre-salt petroleum passes through the property of hydrocarbons, the mechanisms of governmental return and the responsibility of the parties (companies and state). Countries like the United States of America, the United Arab Emirates and Norway use the concession scheme and Angola and Indonesia use a PSC.

In the first one, the ownership of oil *in situ* is exclusive to the state and, after the concession of blocks, the entitlement moves to the oil company, which can give the oil destination that it chooses, subject in some cases to internal market supply quotas. The accord takes the form of a concession contract, license or lease, signed by the parties after direct negotiation or competitive bidding.

The remuneration of the government is achieved by the collection of royalties and taxation that the government takes on exploration and production. Concerning the responsibility of the parties, it is common for standards and guidelines to be made by regulatory agencies, which besides having the government mandate to grant rights have the scope to monitor the activities of concessionaires.

If on one hand the concession regime takes ownership of the oil state, on the other it transfers to the dealer all the exploration and commercial risks and the necessary investments in the activity. In addition to stabilization clauses, in a scenario of scarce resources where there is great competition for attracting foreign direct investments, institutional stability itself is a key factor in decision making. The lower the political, legal and economic risks, the greater are the chances of participation of international companies in the E & P sector.

In the production-sharing system, the owner of oil is the state, which pays the oil company for E & P activities, in a situation diametrically opposed to the concession system. The accord is established on the company's right to conduct the activities within a block exclusively, without any transfer of ownership.

The oil company's remuneration is made by the cost oil, which restores investments, and the profit oil, which is the remaining portion of output to be shared with the state. The risk of failure in a reserve operation is all on the company, which also bears all the costs of the project. Unlike concessions, in a PSC the state assumes the commercial risks, since it will deal with market price-fixing of its portion of profit oil.

For the oil company profit oil should also bind taxes and, in some cases, royalties. The choice of an oil company is through direct negotiation or competitive bidding and the contract is reviewed by regulatory agencies, the participation of the national oil company in the planning and execution of the contract also being very common.

## **2.1 Angola**

With estimated<sup>4</sup> reserves of 9 billion barrels and daily production of 1.7 million barrels, Angola predominantly adopts production-sharing contracts and its state oil company Sonangol (National Oil Company of Angola) has exclusivity in the exploitation of resources, but may be associated with other oil companies. As in Brazil, the ownership of oil *in situ* is with the state.

Such associations formed by PSCs place international companies generally as block operators, with specific obligations in the operational phase and production phase. First, the operator must perform studies and drilling to verify the existence of commercially viable wells, and in the case that they are not found, no duty of indemnification by the state exists.

After certifying the viability of a well, the oil company and Sonangol prepare a development production plan and submit it to the scrutiny of the Petroleum Ministry. If the plan is approved, the Government assumes the responsibility for carrying out all the production measurements. The oil company income comes from cost oil and profit oil, the percentages of which are established in each contract.

Article 44 et seq. of the Petroleum Activities Law<sup>5</sup> set out how the oil companies are chosen: through bidding, or if this is unsuccessful, through direct negotiation.

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<sup>4</sup> Bain, C. and Tozzini, F., Regimes Jurídico-Regulatórios e Contratuais de E&P de Petróleo – Relatório 5 I, 1<sup>st</sup> ed., 248, (Brazil, Brasília: BNDES, Jun. 2009)

<sup>5</sup> Law N° 10/2004, 2004 (entered into force 12 Nov. 2004)

The governmental income comes from the participation of the state-owned company in the PSC, bonuses, surface rates and income tax, in addition to its share in the profit oil. There is also the obligation of both state and enterprise to allocate a certain quota of oil to the Angolan market.

After the contract, Article 57 of the Petroleum Activities Law<sup>6</sup> establishes the extent of goods and installations reverting to the benefit of Sonangol:

Upon extinguishment of a concession in any of the cases provided for in Article 51, and without prejudice to the provisions of Article 75, the equipment, instruments, facilities and any other goods acquired for carrying out the Petroleum Operations, together with all information of a technical and economic nature obtained during such operations shall revert to the National Concessionaire, at no charge to the same.

Seeking to give greater transparency to potential disagreements between the parties, the Angolan legislation points to consensus in the limits of the contract and, if there is no satisfactory balance, arbitration in a tribunal located in the country.

## **2.2 Indonesia**

Indonesia was the first country to use the production-sharing regime, in force since 1971. After the initial decades of the use of PSCs, foreign investment began to wane, because Pertamina (the National Oil and Natural Gas Company), the state in charge of regulating and acting economically in the oil sector, bureaucratized it in a manner that scared multinational companies. In 2001, the regulatory framework was substantially modified by separating the economic activity from the regulatory action that the national oil company had.

With reserves estimated<sup>7</sup> at 4.4 billion barrels and daily production of 1 million barrels, the Indonesian state owns the oil and delegates its holdings as occurs in

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<sup>6</sup> Id.

<sup>7</sup> Bain, C. and Tozzini, F., Op. cit., p 289.

Angola, in a form of bidding or in a form of direct negotiation. The latter, however, can be used more often than in the Angolan model; therefore, companies can offer directly to the Government to undertake an area.

Note that after performing the operation, if there is no economic viability in production, the investment risks are borne solely by the participating oil company in the contract. In the case of feasibility and if there was a sub-evaluation at the time of signing the PSC, the production area may not exceed 20%, which was established a priori.

The return on investment of the oil company is through cost oil, which also includes investments in relinquishment and restoration, as well as profit oil. It is also responsible for selling both the state quota and the private production quota. The state income can be given by the minority (up to 10%) in groups of PSCs, bonuses, royalties, profit oil, income tax and other regional taxes.

In contrast to the transfer of assets and facilities in the legal regime in Angola, which is achieved by the end of the contract, in Indonesia the transfer of ownership occurs when the goods and installations come to work<sup>8</sup>. The method used for the resolution of disputes is stipulated in the PSC itself.

### **2.3 Brazilian Draft Bill**

Currently Brazil has reserves estimated<sup>9</sup> at 14.4 billion barrels and daily production of 2 million barrels. These numbers, according to estimates from Petrobras, may reach 3.9 million barrels produced daily and reserves rising to over 30 billion in 2020. Regardless of future projections, the findings in the pre-salt layer in 2007 have put the country in a remarkable position in the global oil scenario.

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<sup>8</sup> Bain, C. and Tozzini, F., Regimes Jurídico-Regulatórios e Contratuais de E&P de Petróleo – Relatório 7 Consolidado, 1<sup>st</sup> ed., 54, (Brazil, Brasília: BNDES, Jun. 2009)

<sup>9</sup> Forero, J., Brazil girds for massive offshore oil extraction, The Washington Post, December 7, 2009.

The Brazilian Draft Bill 5938/2009, proposed by the executive branch to congressional appreciation, addresses the exploration and production of oil, natural gas and other fluid hydrocarbons under the regime of production sharing, in pre-salt areas and strategic areas.

According to the draft<sup>10</sup>, the pre-salt area is a region of the subsoil formed by a vertical prism of indeterminate depth, with a polygonal surface defined by the geographical coordinates of its vertices set forth in law, along with other regions that may come to be delimited according to the evolution of geological knowledge. Likewise, a strategic area is a region of interest for national development characterized by low exploratory risk and high potential for the production of oil, natural gas and other fluid hydrocarbons.

Thus, other areas that do not fit into these categories continue to be operated by concession contract. Petrobras, a Brazilian oil company controlled by the Federal Government but with publicly traded securities, will be the operator of all the development agreements signed under the new contractual modality of PSC.

As in Angola, the exclusivity is only for the operation, with the possible formation of consortia with minimal involvement of the state, and the Government assumes no exploratory or production risks. An aside to this issue must be made: because of the low risk posed by the discoveries made in 2007 Brazil seeks to change the concession regime to a production-sharing regime. The geological risk is much lower in the pre-salt area compared with other offshore developments in the country. Where there is considerable risk concession contracts remain, and where the risk is low the Government adopts production-sharing contracts.

The choice of oil companies will occur through bidding or through direct contracting. This, however, will be allowed only when the company contract is Petrobras and the area to be explored is considered strategic to the preservation of national interest.

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<sup>10</sup> Art. 2, IV and V, Draft Bill No. 5938/2009, Chamber of Deputies of Brazil (published in the Official Gazette of the Union on September 01, 2009).

The bids should be referred to an auction organized by the National Petroleum Agency (ANP), in which the oil company that offers the greatest amount of profit oil to the Government wins. After the auction, the consortium or the oil company must sign a production-sharing contract, which will clearly divide the stages of exploration and production.

Concerning the Government revenues, the bill proposes the payment of, besides profit oil, royalties and signature bonuses. According to Article 42:

1<sup>st</sup> Paragraph – Royalties correspond to financial compensation for the exploitation of oil, natural gas and other fluid hydrocarbons addressed in the 1<sup>st</sup> paragraph of art. 20 of the Constitution, with their inclusion in calculation of the cost in oil forbidden.

2<sup>nd</sup> Paragraph – The signature bonus is not part of the cost in oil, and corresponds to a fixed amount owed to the Federal Union by the contractor, will be set in the production sharing agreement, and paid at the time of its signature.

The sale of profit oil for the Government will be held under the rules of the market and will be responsible for marketing the state company created to represent the Union in PSCs.

### 3 PETRO-SAL STATE-OWNED COMPANY

#### 3.1 Norway

Taking Norway as a successful example of the exploration, production and management of offshore oil, the Brazilian Government is inspired by the state company Petoro to create a company with similar functions.

Based in Stavanger (Rogaland), the state company created in 2001 has the function<sup>11</sup> of managing the state's direct financial interest (SDFI) in partnerships; monitoring the sale of oil that the state receives as a form of participation; and auditing the accounts of the SDFI. Unlike StatoilHydro, which is also under state control, Petoro does not act as an operator in developments of oil and gas in Norway.



Source: Petoro AS<sup>12</sup>

An example of a successful management model, the company has an extremely small organization chart, limiting its staff to 60 people<sup>13</sup>.

<sup>11</sup> Bain, C. and Tozzini, F., *Op. cit.*, p 204.

<sup>12</sup> Petoro, *Organization*, at <http://www.petoro.no/organisation/category181.html> (last visited 10 Jan. 2010)

<sup>13</sup> Ministry of Petroleum and Energy, *Petoro AS*, at <http://www.regjeringen.no/en/dep/oed/The-Ministry/Associated-offices-and-agencies/Petoro-AS.html?id=449186> (last visited 25 Jan. 2010)

### 3.2 Brazilian Draft Bill

To coincide with the change in the legal regime for the exploitation of the new oil reserves discovered in the pre-salt layer, the Government proposes to create a public company wholly owned by the state. Along the lines of Petoro, it would be responsible for representing the Union in the contracts concluded with the oil companies and making the sale of profit oil for the Government.

Bill 5939/2009, which contains the proposal to create Petrosal (Empresa Brasileira de Administração de Petróleo e Gás Natural SA), determines its purpose as the management of the production-sharing agreements entered into by the Ministry of Mines and Energy and the management of contracts for the sale of the Federal Union's oil and natural gas<sup>14</sup>.

The management of the production-sharing contracts covers<sup>15</sup>: representing the Government in the consortia formed for the performance of PSCs; making evaluations of plans for exploration, development and production; monitoring and auditing the projects of exploration, development and production; monitoring and auditing the costs and investments related to the PSCs.

Acting as a commercial company of the profit oil and holding such a responsibility in the management of PSCs, a major concern of the Government and society is the bureaucratization of the industry and the use of non-professional criteria for hiring the staff of the new state-owned company.

In order to prevent possible inefficiencies resulting from excessive bureaucracy surrounding government administrative acts, the company will be under private law rules. As specified in the bill:

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<sup>14</sup> Art. 2<sup>nd</sup>, Draft Bill No. 5939/2007, Chamber of Deputies of Brazil (published in the Official Gazette 11 of the Union on September 01, 2009).

<sup>15</sup> Art. 4<sup>th</sup>, I, *Id.*

Art. 3. PETRO-SAL will be subject to the legal regime specific to private companies, including civil, commercial, labor and taxation rights and obligations.

Also seeking increased professionalism and efficiency in management, the staff will be compact, and the employees will be hired through tests and titles competition, which also may require minimal experience of candidates.

## **4 OTHER DRAFT BILLS**

Compounding the block of draft bills that seek to alter the oil regulatory framework in Brazil are the capitalization of Petrobras and the creation of a social fund to which will be channelled the proceeds from the share in profit oil representing some political decisions that will greatly influence the economy and society in the near future.

### **4.1 Capitalization of Petrobras**

Bill 5941/2009 brings with it two proposals for strengthening Petrobras. The first authorizes the Federal Government to cede to the company rights of unitization in areas adjacent to blocks already operated by the company, to a maximum of 5 billion barrels. The second authorizes the Government to increase its participation in the company.

Some reserves currently operated by the company spread out beyond the limits of its granted blocks. Since many of these areas have not been subject to unitization, the entitlement rights over such areas remain with the Union and this allows the Government to give any destination in a manner to follow national interests.

In the Brazilian Government opinion, against the scenario of the international credit crunch and the huge volume of resources required by Petrobras to operate competitively in the new areas of pre-salt oil, granting the company with these areas with low exploration risk and without more investments required enables the national oil company's strengthener. According to Article 8 of the project, this authorization is valid for a period of twelve months, which means a secure source of revenue.

The other way to strengthen the company is the authorization given to the Government to subscribe to shares of the capital stock of Petrobras and to pay for them with public-security federal debt titles. Currently the Government shares are 32.2%, with the remaining shares owned by Brazilian and international investors, as<sup>13</sup> the company is listed on both the São Paulo Stock Exchange and the New York Stock

Exchange. This capital injection will significantly increase the Petrobras competitiveness in front of international oil companies, in an open and free market such as Brazil.

## **4.2 Social Fund**

The creation of a social fund, which will use the profits arising from oil exploration in the pre-salt layer and strategic areas, represents a pro-active governmental position concerning the healthiness of the Brazilian economy.

This fund should not be confused with the Sovereign Fund<sup>16</sup> created last year by the Brazilian Government, which seeks to finance investments abroad, create public savings and protect the economy during economic downturns. Its resources are provided by the country's fiscal surpluses.

The social fund proposed by the Draft Bill 5940/2009 will receive signature bonus, royalties and profit oil provided by PSCs established in the development of pre-salt oil. According to its Article 1, the fund has the purpose of constituting a regular source of funding for the performance of projects and programmes in the area of fighting poverty and the development of education, culture, science and technology and environmental sustainability.

As occurred in Norway, where the creation of a sovereign fund to carry the billionaire revenue proceeds from the oil and gas industry has been fundamental to preserving the economy and to distributing resources rationally, Brazil seeks to solve first the problem of capital abundance in the economy, which can generate inflation. On the other hand, it seeks to mitigate perhaps its biggest problem: social inequality.

Allocating resources to combat poverty means rescuing a portion of the population from a situation of homelessness and even starvation. Investing in education and

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<sup>16</sup> Law No.11.887/2008, Brazilian Sovereign Fund, Federal Republic of Brazil, Dec 24, 2008 (entered into force 26 Dec. 2008)

culture seeks to empower the members of the population and give them full citizenship rights, in a manner that means they do not need to rely more heavily on government resources to survive.

Investing in science and technology means a long-term decrease in the country's dependence on the primary export sector (commodities) and investing in projects of environmental sustainability is a way to internalize the negative externalities due to activities in the oil and gas production chain.

## 5 CONCLUSION

In light of international practice in the oil industry, as well as the observation of examples of successes and failures in other countries in an analogous situation, the Government seeks to create an enabling environment for the sustainable development of the country, which has hereafter a strategic asset of oil and gas.

The change in the concession for the production-sharing regime only within the pre-salt area shows an appreciation of the country by the respecting of contracts at the same time as ensuring greater government revenues in developments of E & P in an area of low geological risk. The use of a modern instrument such as the PSC creates a horizon of stability, propitious to the international oil companies' participation.

The creation of Petrosal, following the example of Petoro, will serve to provide greater agility and governance in the management of new projects. With the capitalization of Petrobras, which has the expertise to exploit oil and gas in deep areas, the international investor has a long-standing partner in the formation of consortia. Finally, the social fund provides redemption from some national illnesses, such as social inequity, and furthermore ensures economical stability. These factors therefore become attractiveness factors for international productive capital, which is averse not only to legal, economic and political risks but also to social risks.

In conclusion it is possible to say that the changes in the legal and regulatory framework in Brazil represent an advance in terms of balancing the justifiable national interest with the international investor's confidence.

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