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Petrobras’ challenges in the development of the Pre-Salt reserves: is it the time for Brazil to adopt the International Energy Charter?¹

Os desafios da Petrobras no desenvolvimento das reservas do Pré-Sal: seria o momento de o Brasil adotar a Carta Internacional de Energia?

Guilherme Baptista Schwartsmann²
Pontifícia Universidade Católica do Rio Grande do Sul (Brasil)
guilherme.schwartsmann@gmail.com

Abstract

According to the International Energy Agency, Brazil plays a central role in meeting the world’s oil needs through to 2035, accounting for one-third of the net growth in global supply. At the centre of the country’s efforts to become one of the world’s largest oil producers is a highly complex and capital-intensive deep-water project to develop its pre-salt...
basin oil reserves. The purpose of this paper is to briefly present the pre-salt project and its production challenges – both economical and political – demonstrating the potential benefits of the adoption of the International Energy Charter for its development.

**Palavras-chave:** pre-salt; Petrobras; oil; FDI; investment promotion.

**Resumo**

De acordo com a Agência Internacional de Energia (IEA), o Brasil tem um papel central no atendimento das demandas mundiais de petróleo até o ano de 2035, sendo responsável por um terço do crescimento líquido do fornecimento global. No centro dos esforços do país em se tornar um dos maiores produtores de petróleo do mundo está um projeto altamente complexo e de capital intensivo para desenvolver as reservas de águas profundas localizadas na bacia do pré-sal. Este artigo busca apresentar brevemente o projeto do pré-sal e os seus desafios – tanto econômicos quanto políticos – demonstrando os potenciais benefícios da adoção da Carta Internacional de Energia para o seu desenvolvimento.

**Keywords:** pré-sal; Petrobrás; petróleo; FDI; promoção de investimentos.

1. The pre-salt discoveries: Petrobras special regime

In 2009, Brazil enjoyed a long economic boom which had been recently crowned by the discovery of the pre-salt basin oil reserves, an area of 149,000 square kilometres located 300 km from the Southeast region. The initial forecast for production was 5 to 8 billion barrels, however it did not take long until researchers concluded that it contains at least as much oil as the 60bn barrels of the North Sea. The country was enthusiastic re-

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5 “At the beginning, with the discovery of the Tupi field, there was a forecast of 5 to 8 billion barrels (recoverable). Afterward, with the discovered of the other fields that evolved to a minimum of 12 and a maximum of 70 billion boe.”, Harold Lima, Director-General of the National Petroleum Agency in a statement to the press, 8 November 2008, available at http://economia.estadao.com.br/noticias/geral,pre-sal-pode-ter-80-bilhoes-de-barris-diz-diretor-da-anp,274473.

6 Brazil to ease Petrobras pressure with offshore oil bill, *Financial Times*, 5 July 2015, available at: http://www.ft.com/intl/cms/s/0/fc8c8ade-21d2-11e5-aa5a-398b2169cf79.html#axzz3mYGl7Ym
garding the perspective of becoming one of the largest oil producers in the world. Amid the great nationalistic fever fuelled by the oil optimism, Brazil’s then president, Luiz Inácio Lula da Silva, used the official television broadcast at Independence Day to announce a set of legislative bills to guarantee that the “the giant oil and gas deposits discovered in the depths of our sea (...) will be correctly used for Brazil and for the well being of all Brazilians”.

That meant that the model for the development of the Pre-Salt reserves would be different from the oil and gas exploration and exploitation model established by the Constitutional Amendment No. 9/1995 and would differ from the concession regime adopted in 1998 by the Oil Law (9,478/1997).

The Constitutional Amendment No 9/1995 broke the state monopoly on oil and gas and allowed the Federal Union to enter in agreements with private and state-owned companies for the performance of upstream, midstream and downstream oil and gas activities. Following that, in 1998, the Oil Law (9,478/1997) regulated the exploration and exploitation of oil and gas blocs in Brazil, which would be developed through concession agreements preceded by public biddings organized by the National Petroleum Agency (ANP). National and international companies would compete, provided that if successful, they would locate headquarters and management in Brazil. Petrobras, a publicly traded energy company that has the Brazilian Federal Government as the majority stockholder, competed in a free competition basis with other energy companies.

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8 For an overview of the Brazilian Petroleum Regimes, see L.A. Lemos; L.A. Menezes da Silva; "Overview of Brazilian Petroleum Regimes" OGEL 5 (2013), www.ogel.org URL: www.ogel.org/article.asp?key=3403
9 According to the Article 18 of the Constitution of the Federative Republic of Brazil, The political and administrative organization of the Federative Republic of Brazil comprises the Union, the states, the Federal District and the municipalities, all of them autonomous, as this Constitution provides. Article 20, IX provides that the Federal Union has the property of the mineral resources, including those of the subsoil.

The Constitutional Amendment No. 9/1995 inserted Article 177, Paragraph 1º, which allowed the participation of private enterprises in the prospecting and exploitation of deposits of petroleum and natural gas and of other fluid hydrocarbons; refining of domestic or foreign petroleum; import and export of the products and basic by-products resulting from the previously referred activities; and ocean transportation of crude petroleum of domestic origin or of basic petroleum by-products produced in the country, as well as pipeline transportation of crude petroleum, its by-products and natural gas of any origin.

10 In fact, the Law 9,478/1997 provides privileges to Petrobras, for instance Article 42 states that in case of a tie in a public bidding procedure between Petrobras (when not competing in a joint-venture) and other energy company, the bidding would be decided in favor of Petrobras.
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Under the Oil Law, the concession agreements are divided in two phases: exploration and production\(^{12}\). The concessionaire has the duty to explore the area at its own risk and, in case of success, has the right to extract oil and gas, having ownership of all the production, deducting taxes and corresponding legal or contractual participations\(^{13}\).

However, according to senior officers of the Brazilian government\(^{14}\), the concession model described above was incompatible with the nature of the new pre-salt findings. The newly discovered area presented extremely low exploration risks and great profitability, which demanded a new legal framework that would better preserve the national interest, increasing the control of the potential wealth by the Federal Union.

This is the background of the Law 12,351/2010, the Pre-Salt Law. Production-sharing agreements (PSAs)\(^{15}\) replaced the concession regime in all the unlicensed pre-salt areas (72% of the exploration area) as well as areas to be discovered on the grounds of the ‘national strategic interest’ by the National Energy Advisory Council (CNPE).

Under the PSAs the contractor carries at its own risk the activities of exploration, evaluation, development and production. However, in case of any commercial discovery, the contractor has the rights of ownership of the volume corresponding to their exploration costs in oil\(^{16}\), the volume of production corresponding to the owed royalties\(^{17}\), as well as a share of the surplus in oil in line with the proportion, conditions and deadlines established by contract\(^{18}\). The Federal Union is represented in the PSAs by the fully state-owned company Pré-Sal Petróleo S.A. (PPSA), which was created by the Pre-Salt Law to be responsible for the management of the PSAs con-

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11 Article 61, caput, and Paragraph 1\(^{9}\) of the Law 9,487/1997.
12 Article 24, Law 9,478/1997. The exploration phase comprehends also the activities of evaluation of possible oil and gas discoveries in order to determine its marketability; and the production phase includes developing activities.
15 For an analyses of the production sharing agreement adopted by Brazil to govern the contractual relations under pre-salt and strategic areas, F. Martins Reis; “Brazilian Production Sharing Agreements: A Critical Approach” OGEL 5 (2013), www.ogel.org URL: www.ogel.org/article.asp?key=3405
16 Article 2, II of the Law 12, 351.
17 Article 2, XIII of the Law 12, 351.
tracts but not for the execution of the activities of exploration, developing, production and commercialization of the oil, gas or other fluid hydrocarbons\textsuperscript{19}.

One of the main changes introduced by the pre-salt regime was a set of privileges established in favour of Petrobras. The publicly traded energy company, owned by the Brazilian Federal Government, became the sole operator in all the pre-salt oil blocs, being responsible for conducting, directly or indirectly, all the activities related to the exploration, evaluation, development, production and deactivation of exploration and production facilities. In addition, Petrobras has a mandatory minimum of 30 per cent participating interest in every consortium to be awarded the PSAs\textsuperscript{20}.

Therefore, the public biddings for the production-sharing agreements for the pre-salt blocs have a mandatory participation of the Pré-Sal Petróleo Brasileiro S.A, representing the Federal Union, Petrobras, as operator and owner of a minimum participating interest of 30 per cent, and may have the participation of a third company. In each alternative, a consortium is constituted among the participants. The public bidding procedure may be waived in case the National Energy Advisory Council (CNPE) understands that the direct contracting of Petrobras would preserve the national interest and service the objectives of energy policy.

Besides, Law 12,276/2010 provides a third regime. It authorizes the Federal Union to directly transfer the rights of exploration and production activities in areas of the pre-salt, which were not previously under concession, to Petrobras – limited to a maximum of 5 billion barrels of oil and natural gas\textsuperscript{21}.

Thereby, Petrobras acquired the main responsibility for the development of the pre-salt reserves, whose actual size is still not fully known and is the subject of growing speculation. Recent estimates regarding the size of the pre-salt reserves reach at least 176 billion barrels of oil equivalent (boe) of undiscovered, recoverable resources of oil and natural gas\textsuperscript{22} –

\textsuperscript{19} Article 8 of the Law 12,351/2010.
\textsuperscript{20} See Articles 4, 10 and 20 of the Law 12,351/2010.
\textsuperscript{21} See Article 1 of the Law 12,276/2010
\textsuperscript{22} A new reserve estimate was presented at a conference in Rio de Janeiro by Professor Cleveland Jones and Dr Hernani Chaves of the National Institute of Oil and Gas at Rio de Janeiro State University. Presentation available at: http://www.researchgate.net/publication/236894228_Assessment_of_yet-to-find_oil_in_the_Brazilian_Pre-Salt_region
more than doubling the unofficial volume predictions by the National Petroleum Agency (ANP)\textsuperscript{23}.

It should be noted that the production of the pre-salt oil fields has been increasing significantly. According to official data released by Petrobras, from 2010 to 2014 the average annual daily production in the pre-salt was 492,000, almost 12 times the average of 42,000 barrels per day in 2010. This represented approximately 20 percent of the company’s total production\textsuperscript{24}. In August 2015, the production peaked to 896,000 thousand barrels per day, with a monthly average production of 859,000 thousand barrels\textsuperscript{25}. The production of the pre-salt fields is expected to amount to 52 percent of Petrobras’ oil production by 2018\textsuperscript{26}.

Figure 1 – Source: Petrobras

\textsuperscript{23} Haroldo Lima, note supra no. 3.


2. Petrobras unexpected challenges

However, the exploration of such an enormous area comes at a time when Petrobras is experiencing technical, financial and reputational issues, which harm the company’s efforts to sustain the huge volume of investments required to develop it.

First, the company faced an unexpected cost escalation in the exploration of the pre-salt reserves, which had an estimated breakeven production cost of US$45-55 per barrel—without considering the necessary gas transport infrastructure—and had estimated a US$100 oil price in the longer term. The recent plunge in oil prices has upset the company’s estimations and put at risk the viability of the exploration of the reserves, even though Petrobras’ officials affirmed recently that the exploration costs of pre-salt reserves have fallen to US$9.1 per barrel thanks to an increase in the production scale and investments in technology.

Second, Petrobras’ market value has plummeted 87 per cent since 2010, which represents a loss of US$163 billion in value (the company was valued at US$24 billion on 24 September 2015). During the same period, the company’s net debt rose 600%, from R$57 billion to around R$400 billion. In reflection to this spike in debt, on 10 September 2015 the rating agency Standard & Poor’s (S&P) announced the revision of Petrobras’ corporate debt rating from BBB- to BB. With this grade Petrobras is no longer an Investment Grade company for this agency. Likewise, the agency downgraded Brazil’s foreign-currency government debt to junk.

Last but not least, Petrobras is at the centre of Brazil’s biggest-ever corruption scandal, involving former top officials of the company, numer-

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ous high ranking politicians from all the Brazilian political spectrum and the largest engineering firms of the country. The scandal involved bribes and the formation of a cartel among engineering firms to obtain contracts related to Petrobras’ operations.

These three challenges – in the technical, financial and reputational fields – put at risk the continuation of the exploration of the pre-salt reserves. Brazil and its state-owned champion will need to regain international credibility but are expected to maintain the investment necessary for the development of the fields.

With reference to that, there is already a response from Petrobras. The company has been cooperating with the Brazilian authorities in the ongoing corruption investigations of the Federal Department of Justice and has set up a Special Independent Committee to collaborate with hired independent internal investigation firms. Besides, Petrobras is introducing a new management model, focusing on financial management – cutting back on investments, increasing divestitures and studying cash flow possibilities –, governance and compliance.

This posture is reflected in Petrobras’ business plan for 2015-2019. With a strategy of reducing leverage and capital discipline, it forecasts a divestment of US$ 57.7 billion through business restructuring, selling of assets and additional divestments.

As a result, Petrobras started to announce measures to ease financial pressure. In September 2015 the company announced that it was in final negotiations with Mitsui Gas & Energia do Brasil Ltda to sell a 49 per cent stake of the gas distributor holding company Gaspetro, in Brazil. Early this year the company announced the disposal of all of its assets located in the Austral Basin, in the Santa Cruz province, Argentina, for US$ 101 million to


34 Operation Lava Jato: So as to keep moving forward, we are sparing no efforts to clarify the facts and overcome our hurdles through work and results. Available at: http://lavajato.hotsitespetrobras.com.br/en/


Companhia General de Combustibles S.A. (CGC)\(^\text{37}\); and later announced the selling of 20 per cent of its interest in the concessions of Bijupirá and Salema fields, offshore Brazil, currently operated by Shell for US$ 25 million\(^\text{38}\). Rumours of planned sales of Petrobras’ operations or its search for partners are numerous in the media, and the company has announced that a list of opportunities for sale is being studied according to market conditions and ongoing analysis of the company’s business\(^\text{39}\).

Nevertheless, the company still plans to invest a total of US$ 108,6 billion in exploration and production of oil and gas between the years 2015-2019, prioritizing exploration and production projects in Brazil – with emphasis on the pre-salt area\(^\text{40}\). The company seeks to produce a total of 2,2 million bpd in 2016 (including pre and post-salt) and a total of 2,8 bpd by 2020\(^\text{41}\).

3. Towards a new legal framework for the pre-salt?

The above-mentioned context has fuelled a political debate in Brazil regarding the ability of Petrobras to sustain the overwhelming investments needed for the exploration of the pre-salt reserves. At the moment, Brazil’s Federal Senate discusses a bill that proposes to alter the Pre-Salt Law (Law 12,351/2010)\(^\text{42}\), removing Petrobras’ obligation to be the sole operator of the pre-salt fields and to have a mandatory minimum 30 per cent participating interest in every consortium to be awarded with the production-sharing contracts.


\(^{42}\) Brazilian Federal Senate Bill 131/2015, which alters Law 12,361/2010.
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According to the bill’s explanatory report, the exploration of the pre-salt is urgent, because Brazil’s domestic supply will depend on it as of 2020. It also cites the on-going investigations related to corruption scandals involving the company, its difficulties in acquiring financing on the international market, and questions the economical viability of the exploration model put forth by the Law 12,351/2010.

However, the bill does not enjoy full support within the Senate and labour unions. During a Senate Public Hearing to discuss the bill’s proposal, union members described the text of the bill as anti-nationalist, opposed to national sovereignty and counter-productive, since in their opinion Petrobras is the only company that possesses the necessary expertise to develop the pre-salt reserves. The bill would also endanger the transfer of the pre-salt revenues to health and education. This position is shared by Senators from the government side.

4. Participation of foreign investment in the pre-salt

In spite of the current measures to improve the financial management, governance and compliance of the company, Petrobras has still a long way to go before it regains the international credibility it used to have. It has to do so at a time when it faces overwhelming technical and financial challenges in the development of the pre-salt fields, a project defined by the International Energy Agency as ‘highly complex and capital-intensive’.

Discussions regarding legal regimes aside, the efforts to attract international investors and partners to the exploration and exploitation of the pre-salt oil blocs must be fully supported by the Brazilian government. The country needs to demonstrate its will to restore its image as a reliable and

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43 Renan recebe manifesto contra projeto que flexibiliza a exploração do pré-sal. TV Senado, 8 July 2015. Available at: http://www12.senado.leg.br/noticias/videos/2015/07/renan-recebe-manifesto-contra-projeto-que-flexibiliza-exploracao-do-pre-sal


46 Implications of Brazil’s energy development: what does it mean for Brazil and the World?, World Energy Outlook 2013, OCDE/IEA, p. 397.
stable destination for foreign investments, given the negative impact of the involvement of several high ranking officials from different branches of the Brazilian government and congress in scandals related to Petrobras operations.

This scenario may open the possibility for the adoption of more concrete steps by Brazil toward investment promotion in the energy sector. Even though the country has recently developed its own investment agreement model, a more decisive gesture for the international market would be the adoption of the International Energy Charter—a political declaration that is consistent with many of the principles of Brazil’s foreign policy.

5. Brazil and the international energy charter: a possible match

In May 2015, more than seventy countries gathered in The Hague, at the Ministerial Conference to formally adopt the International Energy Charter, a declaration of political intention aiming at strengthening energy cooperation between the signatory states and which does not contain any legally binding obligation or financial commitment. From South America, both Chile and Colombia were present, adopted and signed the political declaration.

Brazil has not adopted the International Energy Charter yet. In fact, the country is not a signatory to the Energy Charter Treaty and had until recently kept a safe distance from the international investment system.

However, the country has signed investment agreements named ‘Cooperation and Facilitation Investment Agreements’ (“CFIAs”) with Angola, Malawi, Mexico and Mozambique in 2015. Although the CFIAs do not provide for either investor-state arbitration provisions or fair and equitable treatment, they include provisions for national and most-favoured-nation treatment, regulatory transparency, observance of undertakings and pro-

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47 The International Energy Charter is a declaration of political intention aiming at strengthening energy cooperation between the signatory states and which does not bear any legally binding obligation or financial commitment. It is a first layer of involvement with the Energy Charter. Signatories of the political declaration are eligible for observer status with the Energy Charter Conference, with access to all meetings and documents. See the Agreed Text of the International Energy Charter in http://www.energycharter.org/fileadmin/DocumentsMedia/Legal/IEC_EN.pdf

hibits direct expropriation; in relation to the settlement of disputes, the instruments provide for amicable settlement procedures and inter-state arbitration. 48

The CFIAs share many of the values of the International Energy Charter: both instruments seek to enhance international cooperation, recognize the State’s sovereignty and its right to regulate, providing for stable and transparent markets based on the principle of non-discrimination, taking into account environmental concerns. They share the ultimate goal of facilitating and promoting investment, through a transparent legal framework and the access to dispute settlement procedures.

Whereas the CFIAs are a noteworthy effort to promote investments and to stimulate bilateral cooperation, they do not have the multilateral character, political effect and scope of the International Energy Charter. The latter represents the shared values of a network of 75 countries, including many advanced economies, but also transiting and developing countries, with regard to international cooperation in the field of energy. The adoption of the International Energy Charter by Brazil will allow the country to advance its views on investment promotion and cooperation to a wider audience, contributing to the formation of a more plural global energy governance architecture.

Besides, Brazil’s ambitious pre-salt project, which needs an overwhelming volume of investment in order to be fully explored, would benefit from a political gesture that demonstrates commitment to principles aiming to promote a climate favourable to the operation of enterprises and the flow of investments and technologies. The involvement of Brazil in the discussions of the Energy Charter Conference, which has the participation of capital-exporting countries such as the United States, Japan and China, would demonstrate the country’s openness for dialogue in the energy sector and contribute to Petrobras current efforts to reassure investors of its capability to carry on such a huge project.

As demonstrated, Brazil and Petrobras have a great challenge ahead in order to fulfil the potential of the vast pre-salt reserves. Even though Petrobras has worldwide recognition in off-shore oil production, the pre-salt project is complex and costly, demanding huge investments in technology and infrastructure as well as a strong positive agenda by the government. As former President Lula stated in 2009, what should a free, responsible and sovereign people do upon receiving such a god’s gift? Guarantee that this wealth does not slip through one’s fingers, looking for more efficient ways to explore it and to modernize its laws in order not to repeat other countries mistakes. The numbers demonstrate that Brazil is far from failing in exploring and exploiting the pre-salt reserves, however signing the International Energy Charter would represent a strong political commitment to the international energy market, providing assurances to much needed investors interested in continuing the development of this remarkable project.

References


50 “For the third time, Petrobras is set to receive the highest award that an oil company can be given, bestowed by the Offshore Technology Conference (OTC) committee, based in Houston, USA. The OTC Distinguished Achievement Award for Companies, Organizations, and Institutions provides recognition for the set of technologies developed for oil and gas production in the pre-salt layer off the Brazilian coast, where the company achieved a new daily production record on December 21, 2014, extracting 713,000 barrels of oil”. Petrobras News, 6 February 2015. Available at: http://www.petrobras.com.br/en/news/petrobras-receives-highest-award-in-global-oil-industry.htm

51 Independence Day 2009 speech, note supra no. 3.
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