Brazil: a Historic Opportunity for the Global Oil and Gas Industry

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Director General

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Outline

1. O&G in Brazil: a historic opportunity
2. Bidding Rounds Schedule
3. Potential Results
4. Final Remarks
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The risk contracts and the Oil Act were not able to significantly change Petrobras’ dominance.

**Upstream**

- 1953: End of monopoly (Oil Act)
- 1975: Risk contracts: minimal impact
- 1997: Petrobras monopoly
- 2016: Production share by operator: 94% Petrobras

No significant private operations in the **downstream, logistics and natural gas areas**
The country is going through the greatest transformation in its Energy Sector since the foundation of Petrobras in 1953, leading to a competitive market
Companies other than Petrobras can now operate blocks in the pre-salt (Law 13.365/16)

New E&P Policies under public consultation

Ongoing Government Programs:

• REATE (Onshore revitalization)
• Gás para Crescer (Gas to Grow)
• Renovabio (Biorenews)
• Combustível Brasil (Brazil Fuel)

CNPE has announced a new local content policy for the 14th Bidding Round

Source: Ministry of Mines and Energy
✓ Encourage oil and gas exploration and production

✓ Carry out the bidding rounds

✓ Stimulate field life extension and maximize recovery

✓ Improve contracts, simplify regulations and speed processes

✓ Act to develop a gas market that meets the society’s interests

✓ Promote investment in production, distribution and resale of oil products and biofuels
<table>
<thead>
<tr>
<th>Year</th>
<th>10 Bidding Rounds</th>
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<tbody>
<tr>
<td>2017</td>
<td><strong>14th Bidding Round</strong></td>
<td>27th September</td>
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<td></td>
<td><strong>2nd Production Sharing</strong> Bidding Round</td>
<td>27th October</td>
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<td></td>
<td><strong>3rd Production Sharing</strong> Bidding Round</td>
<td>27th October</td>
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<td><strong>4th Marginal Fields</strong> Bidding Round</td>
<td>11th May</td>
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<td>2018</td>
<td><strong>15th Bidding Round</strong></td>
<td>May, 2018</td>
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<td></td>
<td><strong>4th Production Sharing</strong> Bidding Round</td>
<td>May, 2018</td>
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<td><strong>5th Marginal Fields</strong> Bidding Round</td>
<td>To be defined</td>
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<tr>
<td>2019</td>
<td><strong>16th Bidding Round</strong></td>
<td>3rd Q 2019</td>
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<td><strong>5th Production Sharing</strong> Bidding Round</td>
<td>3rd Q 2019</td>
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<td><strong>6th Marginal Fields</strong> Bidding Round</td>
<td>To be defined</td>
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287 Blocks
Total Area: 122,622 km²

Concession Contracts

New Frontier onshore Areas
Paraná
Parnaíba

Mature onshore Areas
Potiguar
Recôncavo
SEAL
Espírito Santo

Offshore Areas
Sergipe-Alagoas
Espírito Santo Campos
Santos
Pelotas

Unrisked in place volume:
~50 Bbbl
4 Unitizable Areas

Production Sharing Contracts

Carcará and Gato do Mato in Exploration Phase

Tartaruga Verde under Development (First Oil ~ 2017)

Sapinhoá in production
(250,000bpd)

Carcará estimated in place volumes: ~2.2 billion bbl
(outside the contracted area)
4 Pre-Salt Areas

Production Sharing Contracts

Peroba
Unrisked in place volume: 5.3 Bbbl

Pau Brasil
Unrisked in place volume: 4.1 Bbbl

Alto de Cabo Frio Oeste
Alto de Cabo Frio Central
7 Pre-Salt Areas

Production Sharing Contracts

- Saturno: C-M-537
- Três Marias: C-M-655
- Uirapuru: C-M-657
- C-M-709
3 Pre-Salt Areas

Production Sharing Contracts

Aram
SE Lula, South and SW Júpiter
Bumerangue
Contract and tender protocol improvements under construction for the 14th Bidding Round:

- A single exploration phase, excluding the well obligation in the second period
- Possibility of extending the exploratory phase for technical reasons
- Local Content withdrawal as an offer criteria
- Royalties adjusted to new frontier and mature areas that present greater geological, logistic and economic risk
- Reduction of the minimum net worth required for non-operators (from 50% to 25% of the amount required for operators)
- Stimulate the indirect participation of investment funds
- Several other measures to reduce entry costs and simplify the contract
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Current production/reserves

Production (March, 2017)
Oil – 2.5 million bpd
Gas – 101 million m³/day

Proven Reserves (Dec, 2016)
Oil – 12.7 billion bbl
Gas – 378 billion m³

Expected potential (next 10 Bidding Rounds)

US$ 83 billions in new investments
+ 10 billion bbl of Recoverable Volumes

+ 300 offshore wells
+ Up to 20 drilling rigs working simultaneously

+ 17 new production units
+ 1,100 km of flowlines

+ 600 km of gas pipelines
+ 2 million bpd in 2027
Final Remarks

• Ten new bidding rounds are planned for 2017-2019 offering acreages containing billion barrels of oil in place and creating opportunities for all types of exploration and production companies.

• Some of the blocks in offer are among the most attractive exploration opportunities available in the world.

• The development of the new O&G fields will have a very relevant impact in the services and supply industry in Brazil in the next few years.

• Companies interested in investing in E&P, in the supply chain and in the service industry in Brazil have the largest window of opportunity in decades.
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www.brasil-rounds.gov.br